



State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

Request for Quotation

REQ NUMBER
LOT493

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
SHELLY MURRAY 304-558-8801

RFQ COPY
TYPE NAME/ADDRESS HERE
Grandview Systems Inc.
4200 1st Ave. Suite 114
Nitro, WV 25143

WEST VIRGINIA LOTTERY
900 PENNSYLVANIA AVE
CHARLESTON, WV
25302 304-558-0500

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	REIGHT/TERMS
04/30/2012	NET 30	DELIVER & INSTALL	Destination	DDP
BID OPENING DATE: 06/06/2012		BID OPENING TIME 01:30PM		

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		840-99	\$ 79,335.00	\$ 79,335.00
THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA LOTTERY, IS SOLICITING BIDS FOR AUDIO-VISUAL EQUIPMENT TO INCLUDE ALL MATERIAL AND LABOR FOR INSTALLATION AT 900 PENNSYLVANIA AVENUE, CHARLESTON, WV PER THE ATTACHED SPECIFICATIONS.						
MANDATORY PRE-BID						
A MANDATORY PRE-BID WILL BE HELD ON 05/16/2012 AT 1:00 PM AT THE WV LOTTERY, 900 PENNSYLVANIA AVENUE. ALL INTERESTED PARTIES ARE REQUIRED TO ATTEND THIS MEETING. FAILURE TO ATTEND THE MANDATORY PRE-BID SHALL RESULT IN DISQUALIFICATION OF THE BID. NO ONE PERSON MAY REPRESENT MORE THAN ONE BIDDER.						
AN ATTENDANCE SHEET WILL BE MADE AVAILABLE FOR ALL POTENTIAL BIDDERS TO COMPLETE. THIS WILL SERVE AS THE OFFICIAL DOCUMENT VERIFYING ATTENDANCE AT THE MANDATORY PRE-BID. FAILURE TO PROVIDE YOUR COMPANY AND REPRESENTATIVE NAME ON THE ATTENDANCE SHEET WILL RESULT IN DISQUALIFICATION OF THE BID. THE STATE WILL NOT ACCEPT ANY OTHER DOCUMENTATION TO VERIFY ATTENDANCE. THE BIDDER IS RESPONSIBLE FOR ENSURING THEY HAVE COMPLETED THE INFORMATION REQUIRED ON THE ATTENDANCE						

RECEIVED
2012 JUN -4 AM 10:42
WV PURCHASING
DIVISION

SIGNATURE <i>[Signature]</i>		SEE REVERSE SIDE FOR TERMS AND CONDITIONS		TELEPHONE 304-204-1392	DATE 6-1-2012
TITLE President		FEIN 20-5423060		ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

**GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)**

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
4. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for those services or goods this Purchase Order/Contract becomes void and of no effect after June 30.
5. Payment may only be made after the delivery and acceptance of goods or services.
6. Interest may be paid for late payment in accordance with the *West Virginia Code*.
7. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
10. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern the purchasing process.
11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
12. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
13. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at www.state.wv.us/admin/purchase/vrc/hipaa.html and is hereby made part of the agreement provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
14. **CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.
15. **LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, and the West Virginia Insurance Commission. The vendor must provide all necessary releases to obtain information to enable the director or spending unit to verify that the vendor is licensed and in good standing with the above entities.
16. **ANTITRUST:** In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the State of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.
2. Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as EQUAL to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
4. All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications; Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130.
5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W. Va. C.S.R. §148-1-6.6).



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ADDRESS CORRESPONDENCE TO ATTENTION OF
SHELLY MURRAY 304-558-8801

VENDOR	RFQ COPY
	TYPE NAME/ADDRESS HERE

SHIP TO	WEST VIRGINIA LOTTERY
	900 PENNSYLVANIA AVE
	CHARLESTON, WV
	25302 304-558-0500

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS		
04/30/2012						
BID OPENING DATE: 06/06/2012		BID OPENING TIME 01:30PM				
LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>SHEET. THE PURCHASING DIVISION AND THE STATE AGENCY WILL NOT ASSUME ANY RESPONSIBILITY FOR A BIDDER-S FAILURE TO COMPLETE THE PRE-BID ATTENDANCE SHEET. IN ADDITION, WE REQUEST THAT ALL POTENTIAL BIDDERS INCLUDE THEIR E-MAIL ADDRESS AND FAX NUMBER.</p> <p>ALL POTENTIAL BIDDERS ARE REQUESTED TO ARRIVE PRIOR TO THE STARTING TIME FOR THE PRE-BID. BIDDERS WHO ARRIVE LATE, BUT PRIOR TO THE DISMISSAL OF THE TECHNICAL PORTION OF THE PRE-BID, WILL BE PERMITTED TO SIGN IN. BIDDERS WHO ARRIVE AFTER CONCLUSION OF THE TECHNICAL PORTION OF THE PRE-BID, BUT DURING ANY SUBSEQUENT PART OF THE PRE-BID WILL NOT BE PERMITTED TO SIGN THE ATTENDANCE SHEET.</p> <p>TECHNICAL QUESTIONS MUST BE SUBMITTED IN WRITING TO SHELLY MURRAY IN THE WEST VIRGINIA PURCHASING DIVISION VIA MAIL AT THE ADDRESS SHOWN AT THE TOP OF THIS RFQ, VIA FAX AT 304-558-4115, OR VIA E-MAIL AT SHELLY.L.MURRAY@WV.GOV. DEADLINE FOR ALL TECHNICAL QUESTIONS IS 05/18/2012 AT THE CLOSE OF BUSINESS. ALL TECHNICAL QUESTIONS RECEIVED, IF ANY, WILL BE ADDRESSED BY ADDENDUM AFTER THE DEADLINE.</p> <p>THE MODEL/BRAND/SPECIFICATIONS NAMED HEREIN ESTABLISH THE ACCEPTABLE LEVEL OF QUALITY ONLY AND ARE NOT INTENDED TO REFLECT A PREFERENCE OR FAVOR ANY PARTICULAR BRAND OR VENDOR. VENDORS WHO ARE BIDDING ALTERNATES SHOULD SO STATE AND INCLUDE PERTINENT LITERATURE AND SPECIFICATIONS. FAILURE TO PROVIDE INFORMATION FOR ANY ALTERNATES MAY BE GROUNDS FOR REJECTION OF THE BID. THE STATE RESERVES THE RIGHT TO WAIVE MINOR IRREGULARITIES IN BIDS OR SPECIFICATIONS IN ACCORDANCE WITH SECTION 148-1-4(F) OF THE WEST VIRGINIA LEGISLATIVE RULES AND REGULATIONS.</p>						
SEE REVERSE SIDE FOR TERMS AND CONDITIONS						
SIGNATURE		TELEPHONE		DATE		
TITLE		FAX		ADDRESS CHANGES TO BE NOTED ABOVE		

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ADDRESS CORRESPONDENCE TO ATTENTION OF
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304-558-8801

V E N D O R	RFQ COPY
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S H E L L Y M U R R A Y	WEST VIRGINIA LOTTERY
	900 PENNSYLVANIA AVE CHARLESTON, WV 25302 304-558-0500

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS		
04/30/2012						
BID OPENING DATE: 06/06/2012		BID OPENING TIME 01:30PM				
LINE	QUANTITY	UOE	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>ANY INDIVIDUAL SIGNING THIS BID IS CERTIFYING THAT: (1) HE OR SHE IS AUTHORIZED BY THE BIDDER TO EXECUTE THE BID OR ANY DOCUMENTS RELATED THERE TO ON BEHALF OF THE BIDDER, (2) THAT HE OR SHE IS AUTHORIZED TO BIND THE BIDDER IN A CONTRACTUAL RELATIONSHIP, AND (3) THAT THE BIDDER HAS PROPERLY REGISTERED WITH ANY STATE AGENCIES THAT MAY REQUIRE REGISTRATION.</p> <p>EXHIBIT 5</p> <p>WEST VIRGINIA CODE 21-1D-5 PROVIDES THAT: ANY SOLICITA- TION FOR A PUBLIC IMPROVEMENT CONSTRUCTION CONTRACT REQUIRES EACH VENDOR THAT SUBMITS A BID FOR THE WORK TO SUBMIT AT THE SAME TIME AN AFFIDAVIT OF COMPLIANCE WITH THE BID. THE ENCLOSED DRUG-FREE WORKPLACE AFFIDAVIT MUST BE SIGNED AND SUBMITTED WITH THE BID AS EVIDENCE OF THE VENDOR'S COMPLIANCE WITH THE PROVISIONS OF ARTI- CLE 1D, CHAPTER 21 OF THE WEST VIRGINIA CODE. FAILURE TO SUBMIT THE SIGNED DRUG-FREE WORKPLACE AFFIDAVIT WITH THE BID SHALL RESULT IN DISQUALIFICATION OF SUCH BID.</p> <p>NOTICE TO PROCEED: THIS CONTRACT IS TO BE PERFORMED WITHIN 30 CALENDAR DAYS AFTER THE NOTICE TO PROCEED IS RECEIVED). UNLESS OTHERWISE SPECIFIED, THE FULLY EXECUTED PURCHASE ORDER WILL BE CONSIDERED NOTICE TO PROCEED.</p> <p>CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE MATERIALS OR WORKMANSHIP SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM WITH THE SPECIFICATIONS OF THE BID AND CONTRACT HERE IN.</p> <p>WAGE RATES: THE CONTRACTOR OR SUBCONTRACTOR SHALL PAY THE HIGHER OF THE U.S. DEPARTMENT OF LABOR MINIMUM WAG</p>						
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TITLE		FIRM		ADDRESS CHANGES TO BE NOTED ABOVE		

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WEST VIRGINIA LOTTERY

900 PENNSYLVANIA AVE
CHARLESTON, WV
25302 304-558-0500

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
04/30/2012				

BID OPENING DATE: 06/06/2012 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
RATES AS ESTABLISHED FOR KANAWHA COUNTY, PURSUANT TO WEST VIRGINIA CODE 21-5A, ET, SEQ. (PREVAILING WAGE RATES APPLY TO THIS PROJECT)						
ARBITRATION: ANY REFERENCES MADE TO ARBITRATION OR INTEREST FOR PAYMENTS DUE (EXCEPT FOR ANY INTEREST REQUIRED BY STATE LAW) CONTAINED IN THIS CONTRACT OR IN ANY AMERICAN INSTITUTE OF ARCHITECTS DOCUMENTS PERTAINING TO THIS CONTRACT ARE HEREBY DELETED.						
WORKERS' COMPENSATION: VENDOR IS REQUIRED TO PROVIDE A CERTIFICATE FROM WORKERS' COMPENSATION IF SUCCESSFUL						
ALL OF THE ITEMS CHECKED BELOW WILL BE A REQUIREMENT OF THIS CONTRACT:						
(XX) INSURANCE: SUCCESSFUL VENDOR SHALL FURNISH PROOF OF COMMERCIAL GENERAL LIABILITY INSURANCE PRIOR TO ISSUANCE OF CONTRACT. UNLESS OTHERWISE SPECIFIED IN THE BID DOCUMENTS, THE MINIMUM AMOUNT OF INSURANCE COVERAGE REQUIRED IS \$250,000.						
() BUILDERS RISK INSURANCE: SUCCESSFUL VENDOR SHALL FURNISH PROOF OF BUILDERS RISK - ALL RISK INSURANCE IN AN AMOUNT EQUAL TO 100% OF THE AMOUNT OF THE CONTRACT.						
(XX) BONDS: FIVE PERCENT (5%) OF THE TOTAL AMOUNT OF THE BID PAYABLE TO THE STATE OF WEST VIRGINIA, SHALL BE SUBMITTED WITH EACH BID AS A BID BOND. THE SUCCESSFUL BIDDER SHALL ALSO FURNISH A PERFORMANCE BOND AND LABOR MATERIAL BOND FOR 100% OF THE AMOUNT OF THE CONTRACT. BONDS MAY BE PROVIDED IN THE FORM OF A CERTIFIED CHECK, IRREVOCABLE LETTER OF CREDIT, OR BOND FURNISHED BY A SOLVENT SURETY COMPANY AUTHORIZED TO DO BUSINESS IN THE STATE OF WEST VIRGINIA. A LETTER OF CREDIT SUBMITTED IN LIEU OF A BOND WILL ONLY BE ALLOWED FOR PROJECTS						

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Request for Quotation

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LOT423

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ADDRESS CORRESPONDENCE TO ATTENTION OF
SHELLY MURRAY 304-558-8801

V E N D O R	RFQ COPY
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S T I P U L A T I O N	WEST VIRGINIA LOTTERY
	900 PENNSYLVANIA AVE CHARLESTON, WV 25302 304-558-0500

DATE PRINTED	TERMS OF SALE	S. IR. YR.	FOB	FREIGHT TERMS		
04/30/2012						
BID OPENING DATE: 06/06/2012		BID OPENING TIME 01:30PM				
LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
	UNDER \$100,000. PERSONAL OR BUSINESS CHECKS ARE NOT ACCEPTABLE IN LIEU OF THE 5% BID BOND, PERFORMANCE BOND, OR LABOR AND MATERIAL BOND.					
	() MAINTENANCE BOND; A TWO (2) YEAR MAINTENANCE BOND COVERING THE ROOFING SYSTEM WILL BE A REQUIREMENT OF THE SUCCESSFUL VENDOR.					
	REV. 11/00					
	EXHIBIT 7					
	DOMESTIC ALUMINUM, GLASS & STEEL IN PUBLIC WORKS PROJECTS					
	IN ACCORDANCE WITH WEST VIRGINIA CODE 5-19-1 ET., SEQ., EVERY CONTRACT FOR CONSTRUCTION, RECONSTRUCTION, ALTERATION, REPAIR, IMPROVEMENT OR MAINTENANCE OF PUBLIC WORKS, WHERE THE COST IS MORE THAN \$50,000 AND, IN THE CASE OF STEEL ONLY, WHERE THE COST OF STEEL IS MORE THAN \$50,000 OR WHERE MORE THAN 10,000 POUNDS OF STEEL ARE REQUIRED, THE STATE WILL ACCEPT ONLY ALUMINUM GLASS, OR STEEL PRODUCTS PRODUCED IN THE UNITED STATES IN ADDITION, ITEMS OF MACHINERY OR EQUIPMENT PURCHASED FOR USE AT THE SITE OF PUBLIC WORKS SHALL BE MADE OF DOMESTIC ALUMINUM, GLASS OR STEEL, UNLESS THE COST OF THE PRODUCT IS LESS THAN \$50,000 OR LESS THAN 10,000 POUNDS OF STEEL ARE USED IN PUBLIC WORKS PROJECTS.					
	FOREIGN MADE ALUMINUM, GLASS OR STEEL PRODUCTS MAY BE ACCEPTED ONLY IF THE COST OF DOMESTIC PRODUCTS IS FOUND TO BE UNREASONABLE. SUCH COST IS UNREASONABLE IF IT IS 20% OR MORE HIGHER THAN THE BID PRICE FOR FOREIGN MADE PRODUCTS. IF THE DOMESTIC ALUMINUM, GLASS OR STEEL PRODUCTS TO BE SUPPLIED OR PRODUCED IN A "SUBSTANTIAL					
SEE REVERSE SIDE FOR TERMS AND CONDITIONS						
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ADDRESS CORRESPONDENCE TO ATTENTION OF
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VENDOR

WEST VIRGINIA LOTTERY
900 PENNSYLVANIA AVE
CHARLESTON, WV
25302 304-558-0500
BUYER

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS		
04/30/2012						
BID OPENING DATE: 06/06/2012		BID OPENING TIME 01:30PM				
LINE	QUANTITY	U.S.P.	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>LABOR SURPLUS AREA", AS DEFINED BY THE UNITED STATES DEPARTMENT OF LABOR, FOREIGN PRODUCTS MAY BE SUPPLIED ONLY IF DOMESTIC PRODUCTS ARE 30% OR MORE HIGHER IN PRICE THAN THE FOREIGN MADE PRODUCTS.</p> <p>IF, PRIOR TO THE AWARD OF A CONTRACT UNDER THE ABOVE PROVISIONS, THE SPENDING OFFICER OF THE SPENDING UNIT DETERMINES THAT THERE EXISTS A BID FOR LIKE FOREIGN ALUMINUM, GLASS OR STEEL THAT IS REASONABLE AND LOWER THAN THE LOWEST BID DOMESTIC PRODUCTS, THE SPENDING OFFICE MAY REQUEST, IN WRITING, A REEVALUATION AND REDUCTION IN THE LOWEST BID FOR SUCH DOMESTIC PRODUCTS ALL VENDORS MUST INDICATE IN THEIR BID IF THEY ARE SUPPLYING FOREIGN ALUMINUM, GLASS OR STEEL.</p> <p>REV. 3/88</p> <p>EXHIBIT 9</p> <p>NOTICE FOR ISSUANCE & ACKNOWLEDGEMENT OF CONSTRUCTION PROJECT ADDENDA</p> <p>THE ARCHITECT/ENGINEER AND/OR AGENCY SHALL BE REQUIRED TO ABIDE BY THE FOLLOWING SCHEDULE IN ISSUING CONSTRUCTION PROJECT ADDENDA FOR STATE AGENCIES:</p> <p>(1) THE ARCHITECT/ENGINEER SHALL PREPARE THE ADDENDUM AND A LIST OF ALL PARTIES THAT HAVE PROCURED DRAWINGS AND SPECIFICATIONS FOR THE PROJECT. THE ADDENDUM AND LIST SHALL BE FORWARDED TO THE BUYER IN THE STATE PURCHASING DIVISION. THE ARCHITECT/ENGINEER SHALL ALSO SEND A COPY OF THE ADDENDUM TO THE STATE AGENCY FOR WHICH THE CONTRACT IS ISSUED.</p> <p>(2) THE BUYER SHALL SEND THE ADDENDUM TO ALL</p>						
SEE REVERSE SIDE FOR TERMS AND CONDITIONS						
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SHELLY MURRAY 304-558-8801

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S H I P T O	WEST VIRGINIA LOTTERY
	900 PENNSYLVANIA AVE
	CHARLESTON, WV
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DATE PRINTED	TERMS OF SALE	SHIP VIA	FOR	FREIGHT TERMS		
04/30/2012						
BID OPENING DATE: 06/06/2012		BID OPENING TIME 01:30PM				
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<p>INTERESTED PARTIES AND, IF NECESSARY, EXTEND THE BID OPENING DATE. ANY ADDENDUM SHOULD BE RECEIVED BY THE BUYER WITHIN FOURTEEN (14) DAYS PRIOR TO THE BID OPENING DATE.</p> <p>(3) ALL ADDENDA SHOULD BE FORMALLY ACKNOWLEDGED BY ALL BIDDERS AND SUBMITTED TO THE STATE PURCHASING DIVISION. THE SAME RULES AND REGULATIONS THAT APPLY TO THE ORIGINAL BIDDING DOCUMENT SHALL ALSO APPLY TO AN ADDENDUM DOCUMENT. THE ONLY EXCEPTION MAY BE FOR AN ADDENDUM THAT IS ISSUED FOR THE SOLE PURPOSE OF CHANGING A BID OPENING TIME AND/OR DATE.</p> <p>REV. 11/96</p> <p>EXHIBIT 10</p> <p>ADDENDUM ACKNOWLEDGEMENT</p> <p>I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.</p> <p>ADDENDUM NOS.:</p> <p>NO. 1 .. <i>Received - TCS</i> ..</p> <p>NO. 2 ..</p> <p>NO. 3 ..</p> <p>NO. 4 ..</p> <p>NO. 5 ..</p>						
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900 PENNSYLVANIA AVE
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SHIP TO

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LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF THE BIDS.</p> <p>VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.</p> <p><i>[Signature]</i>.....SIGNATURE Grandview Systems Inc.....COMPANY 6-1-2012.....DATE</p> <p>REV. 11/96</p> <p>CONTRACTORS LICENSE</p> <p>WEST VIRGINIA STATE CODE 21-11-2 REQUIRES THAT ALL PERSONS DESIRING TO PERFORM CONTRACTING WORK IN THIS STATE MUST BE LICENSED. THE WEST VIRGINIA CONTRACTORS LICENSING BOARD IS EMPOWERED TO ISSUE THE CONTRACTORS LICENSE. APPLICATIONS FOR A CONTRACTORS LICENSE MAY BE MADE BY CONTACTING THE WEST VIRGINIA DIVISION OF LABOR CAPITOL COMPLEX, BUILDING 3, ROOM 319, CHARLESTON, WV 25305. TELEPHONE: (304) 558-7890.</p> <p>WEST VIRGINIA STATE CODE 21-11-11 REQUIRES ANY PROSPECTIVE BIDDER TO INCLUDE THE CONTRACTORS LICENSE NUMBER ON THEIR BID.</p>						
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V
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WEST VIRGINIA LOTTERY

900 PENNSYLVANIA AVE
CHARLESTON, WV
25302

304-558-0500

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DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
04/30/2012				

BID OPENING DATE 06/06/2012 BID OPENING TIME 01:30PM

QTY	QUANTITY	UOP	QAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
	BIDDER TO COMPLETE:					
	CONTRACTORS NAME: Grandview Systems Inc.					
	CONTRACTORS LICENSE NO.: WV041651					
	THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FURNISH A COPY OF THEIR CONTRACTORS LICENSE PRIOR TO ISSUANCE OF A PURCHASE ORDER/CONTRACT					
	APPLICABLE LAW					
	THE WEST VIRGINIA STATE CODE, PURCHASING DIVISION RULES AND REGULATIONS, AND THE INFORMATION PROVIDED IN THE "REQUEST FOR QUOTATION" ISSUED BY THE PURCHASING DIVISION IS THE SOLE AUTHORITY GOVERNING THIS PROCUREMENT.					
	ANY INFORMATION PROVIDED IN SPECIFICATION MANUALS, OR ANY OTHER SOURCE, VERBAL OR WRITTEN, WHICH CONTRADICTS OR ALTERS THE INFORMATION PROVIDED FROM THE SOURCES AS DESCRIBED IN THE ABOVE PARAGRAPH IS VOID AND OF NO EFFECT.					
	BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THE CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.					
	REV. 5/2009					
	NOTICE					
	A SIGNED BID MUST BE SUBMITTED TO:					

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FAX	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
LOT493

PAGE
10

ADDRESS CORRESPONDENCE TO ATTENTION OF
SHELLY MURRAY
304-558-8801

RFQ COPY
TYPE NAME/ADDRESS HERE

WEST VIRGINIA LOTTERY

900 PENNSYLVANIA AVE
CHARLESTON, WV
25302 304-558-0500

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
04/30/2012				

BID OPENING DATE: 06/06/2012 BID OPENING TIME 01:30 PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
	DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130					
	THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:					
	SEALED BID					
	BUYER:			SHELLY MURRAY		
	REQ. NO.:			LOT493		
	BID OPENING DATE:			06/06/2012		
	BID OPENING TIME:			1:30 PM		
	PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:					
	-----304 204-1394-----					
	PLEASE PRINT OR TYPE NAME OF PERSON TO CONTACT CONCERNING THIS QUOTE:					
	-----Tom Sizemore-----					

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FAX	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

**REQUEST FOR QUOTATION
WEST VIRGINIA LOTTERY
LOT493**

TABLE OF CONTENTS

- Section 1:** General Information
Section 2: Project Specifications
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SECTION ONE: GENERAL INFORMATION

- 1.1 Purpose: The Purchasing Division, hereinafter referred to as "State," is soliciting bids pursuant to West Virginia Code §5A-3-10b for the Department of Revenue, West Virginia Lottery, hereinafter referred to as "Agency," to provide various audio, video, data projection and communications equipment and components (A/V equipment) to be installed, tested, implemented, accepted and training conducted at 900 Pennsylvania Avenue, Charleston, WV 25302.

- 1.2 By signing and submitting its bid, the successful Vendor agrees to be bound by all the terms contained in this RFQ.

- 1.2.1 Compliance with Laws and Regulations: The Vendor shall procure all necessary permits and licenses to comply with all applicable Federal, State, or municipal laws, along with all regulations, and ordinances of any regulating body.

The Vendor shall pay any applicable sales, use or personal property taxes arising out of this contract and the transactions contemplated thereby. Any other taxes levied upon this contract shall be borne by the Vendor. It is clearly understood that the State of West Virginia is exempt from any taxes regarding performance of the scope of work of this contract.

- 1.3 Schedule of Events:

Mandatory Pre-bid Conference.....	05/16/2012
Bidder's Written Questions Submission Deadline.....	05/18/2012
Addendum Issued	TBD
Bid Opening Date.....	06/08/2012

- 1.4 **Mandatory Pre-bid Conference:** A mandatory pre-bid will be conducted on the date listed below:

Date:	05/16/2012
Time:	1:30 PM
Location:	900 Pennsylvania Avenue, Charleston, WV 25302
Telephone Number:	304-558-0500

All interested Vendors are required to be represented at this meeting. Failure to attend the mandatory pre-bid shall result in the disqualification of the bid. No one person may represent more than one Vendor.

All potential Vendors are requested to arrive prior to the starting time for the pre-bid conference. Vendors who arrive late, but prior to the dismissal of the technical portions of the pre-bid conference will be permitted to sign in. Vendors who arrive after conclusion of the technical portion of the pre-bid, but during any subsequent part of the pre-bid will not be permitted to sign the attendance sheet.

An attendance sheet will be made available for all potential Vendors to complete. This will serve as the official document verifying attendance at the mandatory pre-bid. Failure to provide your company and representative name on the attendance sheet will result in the disqualification of your bid. The State will not accept any other documentation to verify attendance. The Vendor is responsible for ensuring they have completed the information required on the attendance sheet. The Purchasing Division and the State Agency will not assume any responsibility for a Vendor's failure to complete the pre-bid attendance sheet. In addition, all potential Vendors are asked to include their email address and fax number.

- 1.5 **Inquiries:** Inquiries regarding specifications of this RFQ must be submitted in writing to the State Buyer with the exception of questions regarding the bid submission which may be oral. The deadline for written inquiries is identified in the Schedule of Events, Section 1.3. All inquiries of specification clarification must be addressed to:

Shelly Murray, Buyer Supervisor
Purchasing Division
2019 Washington Street, East
P.O. Box 50130
Charleston, WV 25305-0130
Fax: (304) 558-4115

No contact between the Vendor and the Agency is permitted without the express written consent of the State Buyer. Violation may result in rejection of the bid. The State Buyer named above is the sole contact for any and all inquiries after this RFQ has been released.

- 1.6 **Verbal Communication:** Any verbal communication between the Vendor and any State personnel is **not** binding, including that made at the mandatory pre-bid conference. Only information issued in writing and added to the RFQ specifications by an official written addendum by Purchasing is binding.
- 1.7 **Addenda:** If it becomes necessary to revise any part of this RFQ, an official written addendum will be issued by the Purchasing Division.

SECTION TWO: PROJECT SPECIFICATIONS

- 2.1 **Location:** Agency is located at 900 Pennsylvania Avenue, Charleston, WV 25302.
- 2.2 **Background and Current Operating Environment:**

2.2.1 **Commissioners' Conference Room (10th floor):** The A/V equipment for this conference room will consist of two (2) separate/combinable A/V systems. The first system will engage a large screen video projector in conjunction with two owner-furnished electric ceiling mounted screens and ceiling mounted projector lifts. The lifts and the screens will be installed by the owner's electrical subcontractor. Lift locations will be determined by the successful bidder. Sources will include a VGA/composite video and audio plate located at the front and rear of the

room for implementation of PC presentations and/or video presentations from a composite video source. This system will include a rack mount Audio Codec/DSP for audio conferencing, Blu-Ray Disc player for high resolution video playback, recording device and wireless microphones. The audio conferencing codec will be used in conjunction with table top wireless microphones which will be housed on the docking/charging station when not in use. Two (2) handheld wireless microphones are being provided for audience participation in meetings and events. An SD/USB recording device will be rack mounted for remote recording of any meeting or events.

The control portion of this system will be provided via an Ethernet control processor capable of controlling all available functionality of all hardware via bi-directional communications. Bi-directional communications will provide full feedback to and functionality of all aspects of the A/V system in the room, including the OFE CRESTRON lighting controller. A 5.7" wireless touch panel connected via wireless access point will control all user available functions of the A/V system. This will include output volume control, MACRO functions for powering on and off the A/V equipment, all recording functions, dialing functions and microphone controls, and separation of microphone functions from each half of the room for multi-room use purposes.

2.2.2 Conference Room 1036 (10th floor). This system will consist of a 60" LCD display, along with a control processor/switcher, a 5.7" touch panel, and ceiling mounted speakers, and an audio conferencing/DSP with ceiling mounted microphones. The remaining rack mounted gear will be located in a network closet on the same floor in the adjacent hallway. The owner will provide a location in the existing network rack to mount the equipment. All cables must be run in existing cable trays through the hallway/wall penetrations. This room will also have six (6) ceiling mounted speakers to provide sound reinforcement for audio conferences and other general audio requirements

The control portion of this system will be provided via control processor capable of controlling all available functionality of all gear with bi-directional communications. Bi-directional communications will provide full feedback to and functionality of all aspects of the A/V system in the room. A 5.7" wireless touch panel connected via wireless access point will control all user available functions of the A/V system. This will include, output volume control, MACRO functions for powering on and off the A/V equipment, dialing functions and microphone controls. The control system will include amplification and the ability to receive audio and video via CAT5 Cable. A CAT5 transmitter is included to send audio and video from any of the table location CAT5 floor jacks.

2.2.3 Conference Room 1214 (12th floor). This system will consist of a 60" LCD display, along with a control processor/switcher, a 5.7" touch panel, wall mounted smart board with a ceiling mounted projector, ceiling mounted speakers, and an audio conferencing/DSP with ceiling mounted microphones. The remaining rack mounted gear will be located in a network closet on the same floor in the adjacent hallway. The owner will provide a location in the existing network rack to mount the equipment. All cables must be run in existing cable trays through the hallway/wall penetrations. This room will also have 6 ceiling mounted speakers to provide sound reinforcement for audio conferences and other general audio requirements

The control portion of this system will be provided via control processor capable of controlling all available functionality of all gear with bi-directional communications. Bi-directional communications will provide full feedback to and functionality of all aspects of the A/V system in the room. A 5.7" wireless touch panel connected via wireless access point will control all user available functions of the A/V system. This will include, output volume control, MACRO functions for powering on and off the A/V equipment, dialing functions, and microphone controls. The control system will include amplification and the ability to receive audio and video via CAT5 Cable. A CAT5 transmitter is included to send audio and video from any of the table location CAT5 floor jacks.

2.2.4 Director's Conference Room (13th floor). The 13th Floor Conference Room will consist of a 60" LCD display, along with a control processor/switcher, a 5.7" touch panel and ceiling mounted speakers, and an audio conferencing/DSP with ceiling mounted microphones. All hardware will be located in the existing mill work. The 60" LCD will be wall mounted in the center of the conference room at the head of the table above the credenza.

The control portion of this system will be provided via control processor capable of controlling all available functionality of all gear with bi-directional communications. Bi-directional communications will provide full feedback to and functionality of all aspects of the A/V system in the room. A 5.7" wireless touch panel connected via wireless access point will control all user available functions of the A/V system. This will include, output volume control, MACRO functions for powering on and off the A/V equipment, dialing functions and microphone controls.

2.3 Mandatory Requirements

The following mandatory requirements must be met by the Vendor as a part of the submitted bid. Failure on the part of the Vendor to meet any of the mandatory specifications shall result in the disqualification of the bid. The terms "must", "will", "shall", "minimum", "maximum", or "is/are required" identify a mandatory item or factor. Decisions regarding compliance with any mandatory requirements shall be at the sole discretion of the State.

2.3.1 Project shall include procurement, installation, testing, training and acceptance within sixty (60) days of issuance of purchase order.

2.3.2 Bidders must attend a mandatory pre-bid walk-through of the facility on **05/16/2012 at 1:30 PM** at 900 Pennsylvania Ave, Charleston WV 25302.

2.3.3 Pricing shall include all labor and materials for proper installation of equipment.

2.3.4 Pricing shall include cost of Crestron (or equal) and related control programming.

2.3.5 Pricing shall be all-inclusive of delivery, installation and system testing and training.

2.3.6 Bidder shall provide with its bid a written schematic or plan for the installation of the equipment.

2.3.7 Bidder shall provide a projected delivery, installation, system testing and training timeline to detail how the sixty (60) day installation will be met.

2.3.8 Bidder shall maintain manufacturers' certifications required for resellers installation, programming, warranty and maintenance support.

2.3.9 Access above the ceiling and AC power outlets to restricted points shall be coordinated by a staff member of the West Virginia Lottery Commission.

2.3.10 Installation shall include all cable access and cable raceways and cable access to all equipment. The Bidder will be responsible for installing all bidder provided hardware into the existing structure, and for providing the necessary electrical and cable connections. The bidder will provide a single point of contact to assist in readying the site for system

installation. The bidder will then be responsible for mounting, installing and connecting all components, including complete testing of the equipment.

2.3.11 A minimum of one day (eight hours) of training and documentation on operation and maintenance procedures shall be provided to designated Lottery personnel upon completion and acceptance of installation.

2.3.12 All equipment must be new, not used or refurbished. Delivery and installation must be completed within sixty (60) days of issuance of purchase order. The fully executed purchase order shall serve as the Notice to Proceed, and the date of the purchase order will determine the start of the sixty (60) day installation period.

2.3.13 All equipment must carry a minimum of a one (1) year warranty (with the exception of the Video Codec's, which shall have a three (3) year warranty on parts and labor) with on-site support as required. Bids must be all inclusive of travel expense.

2.3.14 Bidder will guarantee microphones will have no feedback.

2.3.15 Bidder will provide support response within twenty-four (24) hours of call for support.

2.3.16 Bidder must have at least 5 years of experience and have successfully completed at least 3 projects in the last 5 years of similar or larger scope. References will be required upon issue of the purchase order. Bidders will provide in **Attachment A: Bidder Response Sheet** information regarding their firm, such as staff qualifications and experience in completing similar projects; references; copies of any staff certifications or degrees applicable to this project; proposed staffing plan; descriptions of past projects completed entailing the location of the project, project manager name and contact information, type of project, and what the project goals and objectives were and how they were met.

2.3.17 The model/brand/specification named herein establishes the acceptable level of quality only and is not intended to reflect a preference or favor any particular Bidder. The following specifications are to be considered minimum acceptable specification unless otherwise noted in this document. Manufacturer specification sheets must be provided with the bid. Failure to provide the manufacturer specifications may result in bidder disqualification.

As used herein, (EC)= Electrical Contractor installed.

Commissioners' Conference Room (10th Floor)

Qty. Item Description

2 OFE Draper screen (EC)

2 OFE Draper Orbiter lift (EC)

2 Draper Low Voltage Control LVCIII (EC)

Input: 115 VAC +/- 10%, 50/60 Hz

Output: 115 VAC, 5 Amps, 50/60 Hz. Fused with 250 VAC, 6.3 Amps UL and c-UL recognized. Two double-gang electrical boxes bolted together. One box contains the actual module, while the empty box is useful for making connections. The module contains a 3-screw terminal block for a wall switch (up, down, common), IR receiver jack, RF

receiver jack, and a user-serviceable 6.3A fuse. A spare fuse is included. There is a 6-wire pigtail for Hot, Neutral, Ground, Common, Up and Down.

2 Christie Digital LCD Projector LW555

Image brightness • 4000 ANSI lumens (single lamp) contrast • 1000:1 (full on/off) uniformity • 90% brightness uniformity (corner to center) Display tech type • 3 x 0.75" Inorganic LCDs native resolution • WXGA (1366 x 800) Native aspect ratio 16:10, selectable aspect ratios 16:9; 4:3; 14:9 Lamp type • 275W UHB lamp lfo • Normal mode: up to 2000hrs • Eco mode: up to 3000hrs Input signals • VGA through XGA (1600 x 1200) • Accepts current HDTV/DTV formats (480i up to 1080p) • NTSC, NTSC 4.43, PAL, PAL M, SECAM, PAL-N, PAL 60 pixel clock • 150MHz scan rates • Horizontal frequency range 31.5-106kHz • Vertical frequency range 56-120Hz Inputs, control and networking input • HDMI x 1 (HDCP Compliant) • HD 15 x 1 (with HD15 loop-through) • BNC x 5 (R,G,B,H,V & Y, Pb/Cb, Pr/Cr & Composite) • YPbPr (component video RCA x 3) • 1 RCA composite video • Mini DIN 4-pin (S-video) • Audio input (x 4) • Dsub-9 x 1 • LAN port • R/C Jack – Mini jack x 1 • Output HD 15 x 1 (loop-through) • Audio output x 1 mini jack output • Speakers 4W x 4 Optical system • Manual zoom, focus and lens shift Lenses fixed • Short 0.8:1 (121-100102-XX) zoom • Ships with standard lens 1.5-1.8:1 (N/A) • Short 1.2-1.9:1 (121-101103-XX) • Long 1.9-3.8:1 (121-102104-XX) • Ultra Long 3.9-7.3:1 (121-103105-XX) offsets • Vertical and Horizontal lens shift** Accessories standard • Computer cable (Dsub15) • Wireless/wired remote control • AC line cord UL type (NEMA 6-20P plug type) • European 2P plug type optional • Filter cartridge (003-002119-01) • 275W UHB lamp (003-120457-01) Enhanced feature sets • Auto Detect • Auto Digital keystone (vertical) feature • Anti-theft: Kensington style slot and security bar • Support for closed caption video display (NTSC) • RJ45 LAN connection with network control and SNMP monitoring • Dynamic iris control • Customizable start-up logo Power requirements operating voltage • 90-132 VAC $\pm 10\%$ • 198-264 VAC $\pm 10\%$ operating current • 5.0A max (AC100V) • 2.1A max (AC200V) power • 460W max dissipation • 1570BTU/hr max Dimensions: size • Body with lens (LxWxH): 12.52 x 16.46 x 5.47" (318 x 418 x 139mm) weight • 15.8lbs (7.2kg) with lens shipping weight • 25.57lbs (11.6kg) shipping size • (LxWxH): 18.8 x 21.9 x 9.6" (478 x 555 x 244mm) Noise • Standard mode: 37dBA • Eco mode: 31dBA Operating environment • Operating temperature: 40-95°F (5-35°C) • Storage temperature: 14-140°F (-10-60°C) • Humidity (non-condensing): 10-85% Regulatory approvals • This product should conform to the following regulations related to product safety, environmental requirements and electromagnetic compatibility (EMC): • FCC Part 15, Subpart B Class A • CISPR22/EN55022 • CISPR24/EN55024 • UL 60950-1 first edition • CAN/CSA-C22.2 No 60950-1-03 first edition • IEC60950-1:2001 • 2002/95/EC RoHS Limited warranty projector • 3 years parts and labor lamp • 500hrs or 120 days (whichever comes first)

10 JBL Ceiling mounted loud speaker Control 24 CT

Freq. Range (-10 dB): 80 Hz - 20 kHz
 Power Capacity 2: 80 Watts Continuous Program Power 40 Watts Continuous Pink Noise
 Nominal Sensitivity 3: 86 dB SPL @ 1 m (3.3 ft)
 Nominal Coverage Angle 4: 130° conical coverage
 Directivity Factor (Q): 2.4 averaged 500 Hz to 4 kHz
 Directivity Index (DI): 3.8 averaged 500 Hz to 4 kHz Rated
 Maximum SPL: 102 dB @ 1 m (3.3 ft)
 Nominal Impedance (24C): 16 ohms (Min Z 16.1 Ω @ 320 Hz)
 Transformer Taps (24CT): 70V: 30W, 15W, 7.5W & 3.7W taps 100V: 30W, 15W, & 7.5W taps Transducers: Low-Frequency: 100 mm (4.0 in) Polypropylene-coated, 1" coil on

aluminum former. High-Frequency: 19 mm (0.75 in) Titanium coated polyester.
Physical: Enclosure: Backcan: Formed steel Baffle/Rim: Medium Impact polystyrene, fire rated UL94V-0

Overload Protection: Full-range power limiting to protect network and transducers. (On Control 24C, not on Control 24CT)

Termination: Removable locking connector with screw-down terminals. 2 input terminals and 2 loop-thru output terminals. Max. wire size 12 AWG (2.5 mm²)

Safety Agency Rating: Suitable for use in air handling spaces per UL1480, UL2043, NFPA90 & NFPA 70, S7232/UL Listed, Signaling Speaker. Transformer UL registered per UL1876. In accordance with IEC60849/EN60849.

Outside Dimensions (H x Dia): 200 x 195 mm (7.9 x 7.7 in) 184 mm (7.2 in) front of ceiling tile to back of backcan Cutout Size: 168 mm (6.6 in) Net Weight (ea): 2.7 kg (6 lb) CT: 3.5 kg (8 lb)

Shipping Weight (pair): 6.4 kg (15 lb) CT: 8.0 kg (18 lb)

Included Accessories: C-shaped support backing plate 2 tile support rails (fits both 2 x 4 ft or 600 x 1200 mm tiles) Cutout template Paint shield Removable locking wiring connector.

1 QSC 8 Channel Amplifier CX108V

8 Ω / 20 Hz – 20 kHz / 0.05% THD 200 W, Signal to Noise (20 Hz – 20 kHz) > -107 dB, Input Sensitivity at 8 Ω 1.26 Vrms, Gain at 8 Ω 30 dB, Output Circuitry Class AB+BDistortion (typical) 20 Hz – 20 kHz: 10 dB below rated power < 0.01% THD 1.0 kHz and below: full rated power < 0.01% THD Frequency Response 20 Hz - 20 kHz, \pm 0.2 dB Damping Factor > 500 Input Impedance 6k ohms unbalanced, 12k ohms balanced Input Clipping 10 Vrms (+22 dBu) Cooling Variable-speed fan, rear-to-front air flow

Connectors Input: 3-pin XLR & 3-pin detachable terminal blocks (1 each per channel) Output: Safety shrouded barrier strip Amplifier Protection Full short circuit, open circuit, thermal, ultrasonic, RF protection. Stable into reactive or mismatched loads Load Protection On/off muting, DC-fault power supply shutdown

Dimensions (HWD) 3.5" (8.9 cm) 2 RU x 19" (48.3 cm) rack mounting x 14" (35.6 cm) from front mounting rails

Weight - Net / Shipping 21 lb (9.5 kg) / 27 lb (12.3 kg)

1 Denon USB Recording Device DN-F650R

Compatible recording media SD/SDHC card, USB flash memory, external USB recording media Recording format MP3 MPEG1 Layer III audio compression WAV 16/24-bit linear PCM Recording MP3 bitrate(selectable) MONO 160, 128, 96, 64, 32 kbps STEREO 320, 256, 192, 128, 64 kbps Sampling frequency 96 kHz, (PCM recording only), Number of channels 2 (STEREO)1 (MONO)

Audio frequency characteristics 20 – 40,000 Hz \pm 1.0 dB (Fs=96kHz)

S/N ratio, IEC-A filter 96 dB(0dBFS During playback at 1 kHz)

Total harmonic distortion (at 0 (AES-17 20kHz filter) VU (PCM))

Dynamic range 96 dB Variable pitch width -40% – +20%

INPUT

Balanced in L/R Type XLR (1:GND, 2:Hot, 3:Cold)

Input sensitivity +24 dBu,+20 dBu,+18 dBu,0 dBu / 24 k Ω (0dBFS Reference) Line in L/R

Type RCA terminal Input sensitivity 500 mVrms/22 k Ω Unbalanced digital in Type RCA

terminal Input impedance 75 Ω Standard input level 0.5 Vp-p Format IEC-60958 (SPDIF)

Balanced digital in Type XLR (1:GND, 2:Hot, 3:Cold) Input impedance 110 Ω Standard

input level 3.5 Vp-p Format IEC-60958 (AES/EBU)

1 Biamp Digital Signal Processor Nexia TC

8 wide-band AEC balanced mic/line inputs • 2 standard balanced mic/line inputs • 4 balanced mic/line outputs • telephone interface with line & sot connections • Ethernet port for software configuration/control • serial port for third-party RS-232 remote control • NexLink ports for multi-unit system designs • Nexia software for Windows® XP Professional/Vista • pre-configured I/O with definable processing • RoHS compliance and AES grounding practices • CE marked and UL/C-UL listed • covered by Biamp Systems' five-year warranty • Ability to select, view, and calibrate: Mixers, Equalizers, Filters, Crossovers, Dynamics, Routers, Delays, Controls, Meters, Generators, Diagnostics • Telephone Interface capabilities include: • initiation of outgoing calls • detection and answering of incoming calls • line echo cancellation • TouchTone™ decoding • caller ID reception • call progress detection • line intrusion detection • continuous line status and fault monitoring Frequency Response (20Hz~20kHz @ +4dBu): +0/-0.4dB THD+N (20Hz~20kHz @ +4dBu): line level < 0.006% mic level < 0.05% Equivalent Input Noise (20Hz~20kHz, 66dB gain, 150 ohm): -125dBu Dynamic Range 20Hz~20kHz, 0dB: > 105dB Maximum Gain (input channels): 66dB

Crosstalk (channel-to-channel @ 1kHz): line level < -80dB mic level < -75dB Output Impedance (balanced): 200 ohms Input Impedance (mic/line balanced): 8k ohms Input Gain Range (variable trim): 0dB ~ +66dB Maximum Output (balanced): +24dBu Maximum Input (mic/line): +24dBu Full Scale Output Level (six selections) -31dBu ~ +24dBu Telephone Interface: ringer equivalency number 0.0B dynamic range 67dBu frequency response 250Hz ~ 3.4kHz

THD < 0.3% transhybrid balance 30dB Tail Length: up to 300ms

Convergence: up to 100dB/sec Phantom Power: +48 VDC (7mA/input)

Sampling Rate: 48kHz A/D - D/A Converters: 24-bit Power Consumption (100~240VAC 50/60Hz): 65 watts

Dimensions: height 1.75 inches (45mm) width 19 inches (483mm) depth 11.15 inches (283mm) Weight: 8.6 lbs. (3.9kg) Compliance: AES48-2005 Grounding & EMC practices EU Directive 2002/95/EC, RoHS directive CE marked UL listed

2 Telox Wireless Microphone FMR500HD-A

Receiver Type Synthesized PLL Frequency Range (RF) A Band 648 – 676 MHz B Band 696 – 724 MHz Number of Channels 1112 possible frequencies Programmable in 25 kHz steps Modulation +/- 40 kHz

Diversity Digital Posi-Phase™ True Diversity RF Sensitivity < 1.0 mV for 12 dB SINAD Image Rejection > 60dB Squelch Tone Code plus Amplitude Ultimate Quieting > 100dB FCC Certification Approved under Part 15 Power Requirements 12 V AC/DC 300mA Operating Temperature -7° to 49° C (20° to 120° F) Dimensions 1.72" H x 7.5" W x 5.9" D 43.69mm H x 190.50mm W x 150mm D

AUDIO PARAMETERS:

Frequency Response 50 – 15kHz +/- 2dB Balanced Output (max @ 40kHz deviation) Mic Position -10dBV Line Position adjustable 10mV - 2V RMS Unbalanced Output adjustable 10mV - 1V RMS Distortion <1.0%, 0.5% typical (ref 1kHz, 40kHz deviation) Signal-to-Noise Ratio >100dB A Weighted Dynamic Range >100dB Radiated Output 30 mW typical Microphone Head ElectroVoice 767a N/D 767a supercardioid N/DYM Dynamic Microphone Head ElectroVoice RE410 cardioid condenser Standard Lavalier Microphone ELM-22S MicroMini™ Omni-Directional Condenser TA4 Connector Wiring Pin 1: Ground; Pin 2 Mic Input; Pin 3: +5V bias; Pin 4: +5V bias through a 3k Ohm resistor Audio Gain Adjustment 40 dB (26dB HT500) Power Requirements 9 Volt Alkaline Battery Battery Life (Typical) > 8 hours with 9-Volt Alkaline Typical Bodypack Antenna Flexible external 1/4 wave Handheld Antenna Internal 1/2 wave Dimensions (Handheld) 9.4 in. (24.0cm) Long Dimensions

(Bodypack) 3.8 in. H x 2.38 in. W x 0.92 in. D 96.5 mm H x 60.5 mm W x 23.4 mm D

**1 Revo Labs Wireless Microphone system
01-HDEXEC-NM**

Audio Bandwidth 50-20,000 Hz Selectable 50-12,000 Hz mode

Channels 4 or 8 channels per system North America 32 channels maximum (4 systems)
International 40 channels maximum (5 systems)

Radio Frequency North America 1.92 to 1.93 GHz (UPCS North America) International
1.88 to 1.90 GHz (DECT EU)

Range 300' (91 meters) approx. (no obstructions) Out-of-range alarm

Executive HD Base Station Dimensions 16.9" (43.03 cm) x 8.0" (20.32 cm) x 1.7" (4.42
cm) 2.9 lbs (1.31 kg)

HD Charger Base Dimensions 8.3" (21.1 cm) x 4.3" (10.9 cm) x 1.0" (2.56 cm) 1.1 lb (.49
kg) **HD Charger Base Connectors** USB port DC power input port Proprietary 4 pin
microphone charge jacks

HD Charger Base Power Requirements 20W

Battery Lithium Polymer Up to 8 hours of talk time **Charge Time** 2 hours

Encryption 128-bit proprietary (per microphone channel)

Environmental Requirements Temperature 40° to 100° F (5° to 40° C) operating Humidity
20% to 85%

**8 Revo Labs Directional Microphone
01-HDTBLMIC-DR-11**

HD Wireless Microphone Features Mute Button for muting and pairing LED Display for
muting and pairing Audio Out port— 2.5 mm unbalanced Power/Charging Port— Requires
Revolabs HD Charger Base

Audio Bandwidth 50 20,000 Hz

Radio Frequency North America

1.92 to 1.93 GHz (UPCS North America) International 1.88 to 1.90 GHz (DECT EU)

Encryption 128-bit proprietary (per microphone channel)

Battery Lithium Polymer Up to 8 hours of talk time **Charge Time** 2 hours

HD Directional Wireless Microphone 3.54" (9 cm) x 1.0" (2.5 cm) x .69" (1.75 cm) 0.07 lb
(.03 kg)

HD

**1 Crestron Wireless Access Point
CEN-WAP-ABG-Cm**

Wireless Transceiver: IEEE 802.11a/b/g Wi-Fi (5.8 or 2.4 GHz 2-way RF); 64, 128, & 152-bit
WEP encryption; WPA & WAP2 with TKIP & AES Transmit Power: Up to 19 dBm
Ethernet 10BaseT/100BaseTX, auto-switching, auto-negotiating, auto-discovery, full/ half
duplex, TCP/IP, UDP/IP, DHCP client and server; SNMP, IEEE 802.3u &
802.3af compliant

Controls and LED Indicators

LAN: (1) Green LED, indicates wired Ethernet activity and link status

Wi-Fi: (1) Green LED, indicates Wi-Fi activity and connection status

Reset: (1) Recessed miniature pushbutton for hardware reset

Connectors - Rear Panel NETWORK PoE: (1) 8-wire RJ45, female;

10BaseT/100BaseTX Ethernet port, 802.3af Power over Ethernet compliant; Connects to
LAN via a 802.3af compliant PoE power source

Power Requirements Power over Ethernet: IEEE 802.3af Class 1 PoE Powered Device

Enclosure Injection-molded plastic, paintable white matte finish, ceiling mountable using a 1-gang plaster ring or electrical box (2 inch deep minimum)

Environmental Temperature: 32° to 104°F (0° to 40°C) Humidity: 10% to 90% RH (non-condensing) Heat Dissipation: 11 BTU/Hr

Dimensions Height: 2.54 in (65 mm)

Diameter: 4.73 in (120 mm)

Weight 6.0 oz (168 g) Available Models CEN-WAP-ABG-CM: Ceiling Mount 802.11a/b/g Wireless Access Point CEN-WAP-ABG-POE-PWE-CM: Ceiling Mount 802.11a/b/g Wireless Access Point w/PoE Injector Included Accessories PWE-4803RU PoE Injector [Included Quantity for CEN-WAP-ABG-POE-PWECM: 1] Available Accessories PWE-4803RU: PoE Injector CEN-SW-POE-5: 5-Port PoE Switch CEN-SWPOE-24: 24-Port Managed PoE Switch

1 **Crestron Control Processor** **MPS300** **Processor**

CPU: 32-bit Freescale ColdFire® Microprocessor **Memory** 32 MB SDRAM, 256 KB NVRAM, 16 MB Flash **Operating System** Real-time, preemptive, multitasking kernel, multi-threaded; FAT3 filesystem with long names; supports SIMPL™ Windows® and SIMPL+®

Ethernet 10/100BaseT, static IP or DHCP/DNS, SSL, auto-negotiating, full duplex TCP/IP, UDP/IP, CIP, SMTP, SNMP, built-in Web server and e-mail client; supports Crestron e-Control®2 XPanel and RoomView® applications

Video Switcher: 8x7 crosspoint matrix including 3x3 QM signal routing, local QM delay skew compensation, RGB pass-thru mode (multi-format via RGB output connection)

Signal Types: RGB and composite, S-Video, or component video (does not transcode)

Video/HDTV Formats: NTSC or PAL, HDTV up to 1080i/1080p **RGB Formats:** RGBHV, RGBS, RGsB **Maximum Resolution:** 2048 X 1536 @ 60Hz (1920 X 1200 @ 60Hz via QM)

Blanking Time: < 0.1 second **Sync Rise/Fall Time:** 3.5 ns maximum

Sync Latency: < 30 ns **Gain:** 0dB (75 ohms terminated) **QM Cable Compensation:** 10-bit digitally controlled PEAK (bandwidth) and BOOST (frequency); 4-bit digitally controlled SKEW delay, 0 to 22 ns (independent for R, G, and B) **Audio Switcher/Preamp:** 8x4 stereo crosspoint matrix including 3x3 QM signal routing, 2-channel gated mic preamp with compressor & limiter, 8-channels mic EQ, 10X5 mic/program matrix mixer, 8x2 mic matrix mixer per each of 3 QM outputs, stereo volume/tone control and EQ per each of PROGRAM and RECORD outputs, mono volume/tone control and EQ/delay on SPEECH output, integrated power amplifier, QM auto-compensation with self-peaking **A-D/D-A Conversion:** 24-bit, 48 kHz **Volume Range:** -80 to +20 dB, 0.1dB steps (output); -80 to 0 dB, 0.1dB steps (mixer)

Mute: -100dB (electronic), -120dB (relay) **Input Compensation:** ±10dB, 0.1dB steps **Mic Input Gain:** 0 to 100 % (40dB range) plus mute **Gate Level (Threshold):** 0 to 100 % **Gate Attack:** 0 to 100 mS

Gate Decay (Release): 0 to 5000 mS **Gate Depth:** -80dB (mute) to 0dB, 0.1dB steps **Compression Threshold:** -80dB to +20dB, 0.1dB steps **Limit Threshold:** 0dB to 20dB, 0.1dB steps **Comp/Lim Attack:** Separately adjustable 0.1 to 300 mS **Comp/Lim Release:** Separately adjustable 1 to 500 mS **Compression Ratio:** 1.0:1 to 10.0:1 **Comp/Lim Curve:** Separately selectable hard or soft knee **Mic EQ:** ±12dB, 0.1 dB steps at 160, 500, 1.2k, and 3k Hz **Bass/Treble:** ±12dB, 0.5dB steps at 100Hz and 10kHz **Output Equalization:** 10-band graphic (GEQ) + 2-band parametric (PEQ) **GEQ:** ±12dB, 0.1dB steps at 31, 63, 125, 250, 500, 1k, 2k, 4k, 8k, and 16k Hz **PEQ Filter Gain/Center Frequency:** ±12dB, 0.1dB steps at 25Hz to 20kHz, 0.5Hz steps **PEQ Filter Bandwidth:** 0.1 to 3.0 octaves, 0.1 octave steps **PEQ Filter Types:** Low Pass, High Pass, Peaking Eq, Notch, Treble Shelf, Bass Shelf **Speech Output Delay:** 0 to 40 mS, 1mS steps **Frequency Response:** 20Hz to 20kHz

±0.5dB (PROG/REC OUT), 50Hz to 20kHz ±0.5dB (SPEECH OUT), 20Hz to 20kHz ±0.5dB (SPEAKER @ 8 ohms), 100Hz to 20kHz ±1.5dB (SPEAKER @ 70V or 100V) S/N Ratio: 95dB (PROG/REC OUT @ 10dBV, 20Hz to 20kHz A-weighted), 95dB (SPEECH OUT @ 10dBV, 50Hz to 20kHz A-weighted), 90dB (SPEAKER @ 8 ohms, full output, 20Hz to 20kHz A-weighted), 90dB (SPEAKER @ 70V or 100V, full output, 20Hz to 20kHz A-weighted) THD+N: 0.02% (PROG/REC OUT @ 10dBV, 20Hz to 20kHz), 0.02% (SPEECH OUT @ 10dBV, 50Hz to 20kHz), 0.7% (SPEAKER @ 8 ohms, full output, 20Hz to 20kHz), 0.7% (SPEAKER @ 70V or 100V, full output, 100Hz to 20kHz A-weighted) Stereo Separation: -80dB (PROG/REC OUT @ 10dBV, 20Hz to 20kHz), -60dB (SPEAKER @ 8 ohms, full output, 20Hz to 20kHz) Channel Crosstalk: -80dB (AUD IN @ 10dBV, 20Hz to 20kHz)

1 Crestron Touch Panel TPS-6X

Touchscreen Display

Display Type: TFT Active matrix color LCD Size: 5.7 inch (145 mm) diagonal Aspect Ratio: 4:3 VGA Resolution: 640 x 480 pixels

Brightness: 350 nits (cd/m²) Contrast: 400:1 Color Depth: 18-bit, 256k colors

Illumination: Backlit fluorescent Viewing Angle: ±80° horizontal, +80°/-70° vertical

Touchscreen: Resistive membrane

Buttons & Switches Sleep: (1) Programmable top-mounted pushbutton (left); normally initiates "Sleep" mode when docked, turns power on/off when undocked; also resets touchpanel if held for 5 seconds Brightness: (1) Programmable top-mounted pushbutton (right), normally sets display brightness level Hard Keys: (8) Optional programmable pushbuttons, engravable backlit text [2] (default engraving included) Up/Down: (2) Optional programmable "up/down" pushbuttons, backlit, engravable backlit text [2] on bezel (default engraving included) Thumbpad: (5) Optional programmable pushbuttons for 4-way directional navigation and "enter", backlit

Battery: (1) Rear panel recessed DIP switch, shuts off battery for long-term storage LED Indicators Battery: (1) Green LED, indicates battery condition and charging status when docked

Connectors Docking Connector: (1) multi-pin connector; Mates with the docking port on the docking station [6] See the TPS-6X-IMCW interface module [6] specification for other connectors

Memory SDRAM: 32 MB Flash: 32 MB Maximum Project Size: 28 MB

Graphic Engine Isys engine; 16-bit non-palette graphics; 65,536 colors; Synapse image rendering algorithm; multi-mode objects, DNav dynamic menu objects, dynamic graphics, PNG translucency, full-motion (60 fps) animation, color key video windowing

RF Wireless RF Transceiver: 2-way RF, 2.4 GHz ISM Channels 11-26 (2400 to 2483.5 MHz), IEEE 802.15.4 compliant Transmitting Power: 75 mW (Ch.11), 100 mW (Ch.12-23), 15 mW (Ch.24), 3.5 mW (Ch.25), 1 mW (Ch.26) @ High Setting; 1 mW (Ch.11-25), 0.5 mW (Ch.26) @ Low Setting Range (typical): 100 to 200 feet maximum indoor, 1000 feet outdoor, subject to site-specific conditions Gateway: Requires a CEN-HPRFGW Extended Range RF Gateway [5] Roaming: Supports roaming amongst up to 8 RF gateways

IR Wireless [1] IR Transmitter: 38 kHz, RC5 format

Range: 50 feet typical

2 Crestron QMWWC

Video Signal Types: RGB and composite, S-Video, or component [2] video Video/HDTV Formats: NTSC or PAL, HDTV up to 1080i/1080p [2]

RGB Formats: RGBHV, RGBS, or RGsB Gain: 0dB (75 ohms terminated)

Maximum Resolution: 1920 x 1200 @ 60Hz (at unity gain) with maximum cable length of 450 feet and maximum compensation at receiver

Audio A-D Conversion: 24-bit, 48 kHz **Frequency Response:** 20Hz to 20kHz

Communications QuickMedia: QM origination point device[1] **Cresnet:** Cresnet slave device

Connectors - Front Panel **S-VIDEO:** (1) 4-pin mini DIN female, S-Video (Y/C) input; Input Impedance: 75 Ohms; Maximum Input: 1 Vp-p; Signal sensing on Y **S-VIDEO AUDIO R, L:** (2) RCA female; Unbalanced stereo line-level audio input; Input Impedance: 10k Ohms; Maximum Input Level: 2 Vrms **VIDEO:** (1) RCA female, composite video input; Input Impedance: 75 Ohms; Maximum Input: 1 Vp-p; Includes signal sensing **VIDEO AUDIO R, L:** (2) RCA female; Unbalanced stereo line-level audio input; Input Impedance: 10k Ohms; Maximum Input Level: 2 Vrms **COMPUTER:** (1) DB15HD female; RGB(VGA)/component video input[2]; Formats: RGBHV, RGBS, RGB, YPbPr; Input Impedance: 75 Ohms; H Sync Impedance: 1k Ohms; V Sync Impedance: 2.2k Ohms; Maximum Input Level: 1 Vp-p; Maximum Sync Level: 5 Vp-p; Signal sensing on H-SYNC only **AUDIO (computer):** (1) 3.5mm TRS mini phone jack; Unbalanced stereo line-level audio input; Input Impedance: 10k Ohms; Maximum Input Level: 1 Vrms **MONITOR:** (1) DB15HD female, buffered RGBHV pass-thru

Connectors - Rear Panel **QM:** (1) 8-wire RJ45 female, QuickMedia output port; Connects to QM input port of any QuickMedia device via CresCAT-QM or CresCAT-IM cable[1] **NET:** (2) 4-pin 3.5mm detachable terminal blocks; Cresnet slave ports, paralleled; connect to Cresnet control network via CresCAT-QM or Cresnet cable **GROUND:** (1) Flying lead, grounding wire **TO MIC:** (1) 14-pin header; Accepts connection from optional QM-WMIC (sold separately) **Controls & Indicators** **PWR:** (1) green LED, indicates 24 Volts DC power supplied from Cresnet network **NET:** (1) yellow LED, indicates communication with Cresnet system **SETUP:** (1) miniature pushbutton and red LED, used for touch-settable ID (TSID) **COMP:** (1) red LED, indicates a signal at the COMPUTER input **VIDEO:** (1) red LED, indicates a signal at the VIDEO input **S-VID:** (1) red LED, indicates signal at the S-VIDEO input

Power Requirements **Cresnet Power Usage:** 5 Watts (0.21 Amp @ 24 Volts DC); 8 Watts (0.33 Amp) with QM-WMIC installed

Environmental **Temperature:** 41° to 104°F (5° to 40°C) **Humidity:** 10% to 90% RH (non-condensing) **Heat Dissipation:** 17 BTU/Hr

Enclosure Construction: Metal with black finish **Flush Wall Mount:** 2-gang mountable in a standard electrical box (2-1/2 inch deep minimum); requires decorator style faceplate (not included)

Dimensions **Height:** 4.12 in (105 mm) **Width:** 3.50 in (89 mm) **Depth:** 2.61 in (67 mm)

Weight 8.0 oz (230 g) **Available Models** QM-WMC: QuickMedia Wall Plate Media Center

Available Accessories CRESCAT-QM-NP-SP500: QuickMedia® Cable, Low-skew CAT5e & Cresnet, non-plenum, 500 ft spool CRESCAT-QM-P-SP500: QuickMedia® Cable, Low-skew CAT5e & Cresnet, plenum, 500 ft spool QM-WMIC: Microphone Input Module.

1 Sony Blu Ray Player

BDP-S480s

Video DVD ☒ DVD 24p output : Yes **BD** ☐ HD (24Hz) (24p True Cinema) : Yes ☐ HD (50Hz) : No ☐ HD (60Hz) : 480i/480p/720p/1080i/1080p ☐ HD 24Hz to 60Hz conversion : Yes

General Features ☐ Region Code (BD) : A ☐ Region Code (DVD) : 1

Convenience Features ☐ USB Keyboard : Yes (standard 101 Key)

☐ BRAVIA® Sync™ : Yes ☐ Bit Rate Indicator (Video) : Yes

☐ Child Lock : Yes ☐ Easy Setup : Yes

☐ File System : FAT32/NTSF USB and HDD (Read Only)

☐ Media Remote : Yes (Media Remote 1.1, 2.0 and above)

Weights and Measurements ☐ Dimensions (Approx.) : 17" x 1.4" x 7.8" (430 x 36 x 199mm)

Power ☐ Power Consumption (in Operation) : 20W ☐ Power Requirements (frequency) :

60Hz ☐ Power requirements (voltage) : 120V **Inputs and Outputs** ☐ HDMI Output(s) : 1

(Rear) ☐ Composite Video Output(s) : 1 (Rear) ☐ Component Video Output(s) : 1 (Rear) ☐ Digital Audio Output(s) : 1 (Rear) ☐ USB Input(s) : 2 (1 Rear/ 1 Front) ☐ Ethernet Connection(s) : 1 (Rear) ☐ Analog Audio 2ch Output(s) : 1 (Rear) Function ☐ PREV/NEXT : Yes ☐ Parental Control : Yes ☐ Play / Stop / Pause : Yes ☐ REV/ FWD : Yes ☐ Repeat (All/ 1title) : Yes ☐ Screen Saver : Yes Video Features ☐ Preset Picture mode Cinema tuned : Yes (Theater room/Brighter room/Standard room/Film/Anime/Auto) ☐ 24p True Cinema™ Technology : Yes

☐ 3D Playback : Yes ☐ BD-R/RE Read Compatibility : Yes (BD-R / BD-RE) ☐ BD-ROM : Bonus View(Profile1.1); BD-Live(Profile2.0); BD-ROM (SL/DL) ☐ DVD Camcorder 8cm DVD : Yes RW/R (+VR) ☐ DVD Playback : Yes ☐ DVD+R Read Compatibility : Yes (+VR) ☐ DVD+RW Read Compatibility : Yes (+VR) ☐ DVD-R Read Compatibility : Yes ☐ DVD-RW Read Compatibility : Yes (+VR) ☐ JPEG Playback : BD/DVD/CD/USB/DLNA ☐ Noise Reduction : Yes (BNR on DVDs Only)

☐ PhotoTV HD : Yes L. x.v.Color™ Technology : Yes Audio Features

☐ Music : BD/DVD/CD/USB/DLNA (non secured) ☐ DTS : D/DVD/CD/USB/DLNA (non secured) ☐ LPCM : BD/DVD/CD/USB/DLNA (non secured) ☐ MP3 Playback : BD/DVD/CD/USB/DLNA (non secured) ☐ SA-CD : Yes Video ☐ Deep Color : Yes ☐ Precision Cinema HD Upscale : Yes Network Features/SEN Wi-fi ☐ USB Wi-Fi Ready : Yes (UWA-BR100 adapter not supplied) Supported Media Video ☐ MPEG-1 Video/PS (.mpg, .mpeg, .m2ts, .mts) : BD/DVD/CD/USB/DLNA

☐ MPEG-2 Video/PS, TS (.mpg, .mpeg, .m2ts, .mts) : BD/DVD/CD/USB/DLNA

1 Misc. Audio/Video cable and Connectors

1 Middle Atlantic Equipment Rack (24RU) WRK-24SA-27

Stand-alone equipment rack shall be Middle Atlantic Products model # WRK-2SA-27 (see chart for available models). Overall dimensions of rack shall be 48.125"H x 24.25"W x 27.6"D (refer to chart). Useable height shall be 24 rackspaces, useable depth shall be 25.75" (refer to chart). Fully welded construction shall provide a static load capacity of 10,000 lbs. and a UL Listed 2,500 lb. weight capacity. Top and bottom shall be 14-gauge steel, horizontal braces shall be 16-gauge steel welded to integral structural side panels of 16-gauge steel giving an 1/8" thick structure, all structural elements shall be finished in a durable black powder coat. Rack shall include a locking, latching rear door. Rack shall come equipped with two pairs of 11-gauge steel rackrail with tapped 10-32 mounting holes in universal EIA spacing.

Rackrail shall be finished in black e-coat with numbered rackspaces. Top and bottom of rack shall have a vertical slotted vent pattern. The WRK shall have a solid locking rear door. Rack shall have removable split rear knockout panels with 1/2", 3/4", 1", and 1-1/2" electrical knockouts installed in base, and removable split rear knockout panels with electrical knockouts and BNC knockouts for UHF/VHF antennae installed in top. Fully welded sides shall feature vertical vent pattern at top and bottom. Grounding and bonding stud shall be 1/4-20 threaded, installed in base of enclosure. WRK-24MDK shall additionally include a 3/4" thick, graphite-marbled laminate top, skirted wheel-base, latching front plexi door, latching vented rear door and front and rear rackrail. WRK-SA Series enclosures shall satisfy the 2007 & 2010 CBC; 2006, 2009 & 2012 IBC; ASCE 7-05 (2005 Edition) & ASCE 7-10 (2010 Edition) and the 2006 & 2009 editions of NFPA 5000 for use in areas of high seismicity, Seismic Use Group III, Zone 4 or Seismic Design Category (SDC) "D" with lateral force requirements for protecting 900 lbs. of essential equipment in locations with the highest level of seismicity and top floor or rooftop installations with an Importance factor (Ip) of 1.5 when used with WRK-24 seismic floor anchor bracket. WRK shall be UL Listed in the US and Canada. WRK shall be GREENGUARD Indoor Air Quality Certified for Children and Schools. WRK shall be RoHS EU Directive 2002/95/EC compliant. WRK shall be manufactured by an

ISO 9001 and ISO 14001 registered company. Rack shall be warranted to be free from defects in material or workmanship under normal use and conditions for the lifetime of the product.

1 Labor

Conference Room 1036

1 **iBiaMP Digital Signal Processor Nexia TC**

8 wide-band AEC balanced mic/line inputs • 2 standard balanced mic/line inputs • 4 balanced mic/line outputs • telephone interface with line & set connections • Ethernet port for software configuration/control • serial port for third-party RS-232 remote control • NexLink ports for multi-unit system designs • Nexia software for Windows® XP Professional/Vista • pre-configured I/O with definable processing • RoHS compliance and AES grounding practices • CE marked and UL/C-UL listed • covered by Biamp Systems' five-year warranty • Ability to select, view, and calibrate: Mixers, Equalizers, Filters, Crossovers, Dynamics, Routers, Delays, Controls, Meters, Generators, Diagnostics • Telephone Interface capabilities include: ° initiation of outgoing calls ° detection and answering of incoming calls ° line echo cancellation ° TouchTone™ decoding ° caller ID reception ° call progress detection ° line intrusion detection ° continuous line status and fault monitoring Frequency Response (20Hz~20kHz @ +4dBu): +0/-0.4dB THD+N (20Hz~20kHz @ +4dBu): line level < 0.006% mic level < 0.05% Equivalent Input Noise (20Hz~20kHz, 66dB gain, 150 ohm): -125dBu Dynamic Range 20Hz~20kHz, 0dB): > 105dB Maximum Gain (input channels): 66dB

Crosstalk (channel-to-channel @ 1kHz): line level < -80dB mic level < -75dB Output Impedance (balanced): 200 ohms Input Impedance (mic/line balanced): 8k ohms Input Gain Range (variable trim): 0dB ~ +66dB Maximum Output (balanced): +24dBu Maximum Input (mic/line): +24dBu Full Scale Output Level (six selections) -31dBu ~ +24dBu Telephone Interface: ringer equivalency number 0.0B dynamic range 67dBu frequency response 250Hz ~ 3.4kHz

THD < 0.3% transhybrid balance 30dB Tail Length: up to 300ms

Convergence: up to 100dB/sec Phantom Power: +48 VDC (7mA/input)

Sampling Rate: 48kHz A/D - D/A Converters: 24-bit Power Consumption (100~240VAC 50/60Hz): 65 watts

Dimensions: height 1.75 inches (45mm) width 19 inches (483mm) depth 11.15 inches (283mm) Weight: 8.6 lbs. (3.9kg) Compliance: AES48-2005 Grounding & EMC practices EU Directive 2002/95/EC, RoHS directive CE marked UL listed

3 **CROWN PZM-10**

Polar pattern, hemispherical.

Frequency range PZM@-10: 80 to 20,000 Hz; PZM@-10LL: 100 to 20,000 Hz

Sensitivity PZM@-10: 2.5 mV/Pa (-52 dBV); PZM@-10 LL: 1.4 V/Pa (+3 dBV) Max. SPL 120 dB

Equivalent noise level 26 dB-A Signal/noise ratio 68 dB (A-weighted)

Impedance PZM@-10: 240 ohms; PZM@-10 LL: 75 ohms

Connector PZM@-10: 3-pin XLR; PZM@-10 LL: stripped and tinned leads

Finish Off-white. May be painted any color.

Dimensions ø 3.9 cm x 7.2 cm (ø 1.53 x 2.829 in.)

Net weight PZM@-10: 74 g (22.6 oz.); PZM@-10 LL: 93 g (3.3 oz.) ROHS OK

1 **Denon USB Recording Device DN-F650R**

Compatible recording media SD/SDHC card, USB flash memory, external USB recording media Recording format MP3 MPEG1 Layer III audio compression WAV 16/24-bit linear PCM Recording MP3 bitrate (selectable) MONO 160, 128, 96, 64, 32 kbps STEREO 320, 256, 192, 128, 64 kbps Sampling frequency 96 kHz, (PCM recording only), Number of channels 2 (STEREO)1 (MONO)
 Audio frequency characteristics 20 – 40,000 Hz \pm 1.0 dB (Fs=96kHz)
 S/N ratio, IEC-A filter 96 dB(0dBFS During playback at 1 kHz)
 Total harmonic distortion (at 0 (AES-17 20kHz filter) VU (PCM))
 Dynamic range 96 dB Variable pitch width -40% – +20%

INPUT

Balanced in L/R Type XLR (1:GND, 2:Hot, 3:Cold)
 Input sensitivity +24 dBu,+20 dBu,+18 dBu,0 dBu / 24 k Ω (0dBFS Reference) Line in L/R Type RCA terminal Input sensitivity 500 mVrms/22 k Ω Unbalanced digital in Type RCA terminal Input impedance 75 Ω Standard input level 0.5 Vp-p Format IEC-60958 (SPDIF) Balanced digital in Type XLR (1:GND, 2:Hot, 3:Cold) Input impedance 110 Ω Standard input level 3.5 Vp-p Format IEC-60958 (AES/EBU)

1 LG 60" Display 60PV450C

PLASMA MODULE Screen Size 60" class (59.8" measured diagonally) Native Display Resolution 1920 x 1080 Brightness 1,500 cd/m² Dynamic Contrast Ratio 3,000,000:1 Protective Skin Glass Yes Color Reproduction (Panel Output) 16 Bit ISM (Image Sticking Minimization) White Wash / Orbiter / Color Wash 600Hz Sub-Field Driving Yes (600Hz Max Sub-Field Driving) Life Span (typical) 100,000 Hours

VIDEO Built-In tuner ATSC/NTSC/Clear QAM - 1 Tuner Dual XD Engine Yes Aspect Ratio 16:9 Aspect Ratio Correction 6 Modes (16:9 Just Scan, Set by Program, 4:3, Zoom1, Cinema Zoom1) Just Scan (1:1 Pixel matching) HDMI 1080p/1080i/720p (0% overscan) Component 1080p/1080i/720p RF 1080i/720p Enhanced Noise Reduction 3D & MPEG Color Temperature Control 3 Modes (Warm, Medium, Cool) 24p Real Cinema (3:3 Pulldown) Yes (HDMI 1080 24p) Cinema 3:2/2:2 Pulldown Mode Yes Picture Reset Yes AV Mode (Picture & Mode) Yes Picture Mode 8 Modes (Vivid, Standard, APS, Cinema, Game, Sports, Expert 1, Expert 2) XD Color (Active Color Management) Yes ISFccc Ready Yes Intelligent Sensor Mode Yes xvYCC Yes DTV Signal Strength (Digital) Yes PC Resolution 1920 x 1080 @ 120Hz or better Color Reproduction (Chassis Output) 10-Bit

AUDIO Mono/Stereo/Dual (MTS/SAP) Yes Audio Output (Watts - THD 10%) 10W + 10W Speaker System Invisible Speaker (1 Way 2 Speaker) Dolby Digital 5.1 Decoder Yes Surround System Infinite Sound Bass/Treble/Balance Yes Smart Volume Leveler (Auto Volume Loveler) Yes Clear Voice II Yes Auto Volume Leveler II Yes Sound Mode 5 Modes (Standard, Music, Cinema, Sports, Game) Mute Yes

SPECIAL FEATURES USB 2.0 MP3 & JPEG Public Display Settings Yes (V 2.5) Intelligent Sensor Yes Auto Demo Yes Picture Wizard II Yes A/V Input Navigation / EZ Input Toggle Yes Input Labeling Yes Quick View (Flashback) Yes Picture Freeze Yes Parental Control w/V-Chip Yes Key Lock Yes Closed Caption Yes Simplink™ (HDMI CEC) Yes

CONVENIENCE FEATURES Language 3 (English, Spanish, French) Quick Menu Yes Auto Tuning / Programming Yes Program (Channel) Edit (Add / Delete) Yes Favorite Channel Programming Yes Auto/Manual Clock Yes On/Off Timer Yes Sleep Timer Yes Auto Off / Auto Sleep Yes

JACK PACK TV – SIDE AV In Yes (1) HDMI/HDCP Input Yes, 2D: (480i/480p/720p/1080i/1080p), 1 Port PC Mode, SIMPLINK USB 2.0 Yes, (MP3, JPEG) TV – REAR RF In Yes (1) AV In Yes (1) Component In (Y,Pb,Pr) + Audio Yes (2) (480i/480p/720p/1080i/1080p) Digital Audio Out (Optical) Yes, (1, Optical) HDMI/HDCP Input Yes, 2D: (480i/480p/720p/1080i/1080p), 1 Port PC Mode, SIMPLINK RGB In (D-sub 15pin) - PC Yes (1) PC Audio Input Yes (1) RS-232C In Yes, (1, Control & Service)Remote

Control In Yes (1) Wired IR Jack Yes

CABINET/ACCESSORIES TruSlim Frame Yes Cabinet Color Gloss Black Speaker Invisible Speaker Table Stand Included Detachable (20°/20°) Swivel VESA™ Compliant 600 x 400 (60") Local Key Type Touch Sensitive Keys Remote Control Yes, Illuminated Quick Setup Guide Yes Power Cord Yes

POWER EcoSmart - Energy Savings Intelligent Sensor (auto) Yes (automatic) 3 Mode Power Saving Levels Yes (manual) Voltage, Hz 100~240V, 50/60Hz Power Consumption (IEC62087 dynamic 201W (60"), broadcast-content video signal) Stand by Mode Under 0.2W

REQUIRED APPROVALS RoHS Compliant Yes UL, c-UL, FCC Yes

DIMENSIONS & WEIGHT 60PV450C Dimensions without Stand (W×H×D) 54.6" x 32.9" x 2.0" with Stand (W×H×D) 54.6" x 35.6" x 13.2" packaging (W×H×D) 60.8" x 38.2" x 13.0" Weight without Stand 84.9 lbs with Stand 94.0 lbs with packaging 108.2 lbs

LIMITED WARRANTY 2 Years (Parts/Labor)

UPC 60PV450C 7 19192 90245 9

1 Chief LTA5536

Flat Panel Wall Mount

Certifications: UL Listed Color:Black Lateral Shift 16" (406.4mm) Maximum Screen Thickness 6" Minimum Depth : 1.99" (50.5mm)

Mounting Pattern Compatibility (Universal Versions): 100 x 100mm- 895 x 505mm

Orientation: Landscape Overall Dimensions (H x W x D): 13.2" x 34.4" x 2.0" (335 x 875 x 51mm) **Solution Type:** Custom Tilt: + 0° , - 12° **Typical Screen Sizes** 37 - 63" **Wall Stud Compatibility (inches):** 12 - 34" **Weight Capacity :** 200 lbs (90.7kg)

1 Crestron QM transmitter

QM-TX

Video Signal Types: RGB and composite, S-Video, or component video

Video/HDTV Formats: NTSC or PAL, HDTV up to 1080i/1080p **RGB Formats:** RGBHV, RGBS, or RGsB **Gain:** 0dB (75 ohms terminated) **Maximum Resolution:** 1920 x 1200 @ 60Hz (at unity gain) with maximum cable length of 450 feet and maximum compensation at receiver

Audio A-D Conversion : 24-bit, 48 kHz **Frequency Response :** 20Hz to 20kHz

Connectors R/C/Pr, G/Y/Y, B/COMP/Pb, H, V: (5) BNC female, Multi-format RGB/Video input; **Formats:** RGBHV, RGBS, RGsB, YPbPr, S-Video (Y/C), composite; **Input Impedance:** 75 ohms; **H/V Sync Impedance:** 620 ohms; **Maximum Input Level:** 0.7 Vp-p for RGB and C of S-Video; 1 Vp-p for composite and Y of S-Video; **Maximum H/V Sync Level:** 5 Vp-p; **Signal sensing on** G/Y/Y, B/COMP/Pb, and HG: (1) 6-32 screw, chassis ground lug **AUDIO:** (1) 5-pin 3.5mm detachable terminal block; **Balanced/unbalanced stereo line-level audio input;** **Maximum Input Level:** 4 Vrms balanced, 2 Vrms unbalanced; **Input Impedance:** 10k ohms balanced, 5k ohms unbalanced **QM OUT :** (1) 8-wire RJ45 female, QuickMedia output port; **Connects to** QM input port of any QuickMedia device via CresCAT-QM or CresCAT-IM cable* **NET:** (2) 4-pin 3.5mm detachable terminal blocks; **Cresnet slave ports, paralleled;** **Connect to** Cresnet control network via CresCAT-QM or Cresnet cable

Buttons & LED Indicators **PWR:** (1) green LED, indicates 24 Volts DC power supplied from Cresnet control network **NET:** (1) yellow LED, indicates communication with Cresnet system **VIDEO ACT :** (1) red LED, Indicates signal at the G/Y/Y, B/COMP/PB, or H connectors

SETUP (rear) : (1) miniature pushbutton and red LED, used for touch-settable ID (TSID)

Power Requirements **Cresnet Power Usage:** 5 Watts (0.21 Amp @ 24 Volts DC)

Environmental Temperature: 41° to 104°F (5° to 40°C) **Humidity:** 10% to 90% RH (non-condensing)

Enclosure Chassis: Steel, black matte powder coat finish **Faceplate:** Extruded aluminum, black matte powder coat finish with polycarbonate label overlay **Mounting:** Freestanding or 0.5U 19-inch rack-mountable (adhesive feet included, ST-RMK rack kit sold separately)

1 Crestron Control Processor **MPS300** **Processor**

CPU: 32-bit Freescale ColdFire® Microprocessor **Memory** 32 MB SDRAM, 256 KB NVRAM, 16 MB Flash **Operating System** Real-time, preemptive, multitasking kernel, multi-threaded; FAT3 filesystem with long names; supports SIMPL™ Windows® and SIMPL+®

Ethernet 10/100BaseT, static IP or DHCP/DNS, SSL, auto-negotiating, full duplex TCP/IP, UDP/IP, CIP, SMTP, SNMP, built-in Web server and e-mail client; supports Crestron e-Control®2 XPanel and RoomView® applications

Video Switcher: 8x7 crosspoint matrix including 3x3 QM signal routing, local QM delay skew compensation, RGB pass-thru mode (multi-format via RGB output connection)

Signal Types: RGB and composite, S-Video, or component video (does not transcode)

Video/HDTV Formats: NTSC or PAL, HDTV up to 1080i/1080p **RGB Formats:** RGBHV, RGBS, RGsB **Maximum Resolution:** 2048 X 1536 @ 60Hz (1920 X 1200 @ 60Hz via QM)

Blanking Time: < 0.1 second **Sync Rise/Fall Time:** 3.5 ns maximum

Sync Latency: < 30 ns **Gain:** 0dB (75 ohms terminated) **QM Cable Compensation:** 10-bit digitally controlled PEAK (bandwidth) and BOOST (frequency); 4-bit digitally controlled SKEW delay, 0 to 22 ns (independent for R, G, and B) **Audio Switcher/Proamp:** 8x4 stereo crosspoint matrix including 3x3 QM signal routing, 2-channel gated mic preamp with compressor & limiter, 8-channels mic EQ, 10X5 mic/program matrix mixer, 8x2 mic matrix mixer per each of 3 QM outputs, stereo volume/tone control and EQ per each of PROGRAM and RECORD outputs, mono volume/tone control and EQ/delay on SPEECH output, integrated power amplifier, QM auto-compensation with self-peaking **A-D/D-A Conversion:** 24-bit, 48 kHz **Volume Range:** -80 to +20 dB, 0.1dB steps (output); -80 to 0 dB, 0.1dB steps (mixer)

Mute: -100dB (electronic), -120dB (relay) **Input Compensation:** ±10dB, 0.1dB steps **Mic Input Gain:** 0 to 100 % (40dB range) plus mute **Gate Level (Threshold):** 0 to 100 % **Gate Attack:** 0 to 100 mS

Gate Decay (Release): 0 to 5000 mS **Gate Depth:** -80dB (mute) to 0dB, 0.1dB steps **Compression Threshold:** -80dB to +20dB, 0.1dB steps **Limit Threshold:** 0dB to 20dB, 0.1dB steps **Comp/Lim Attack:** Separately adjustable 0.1 to 300 mS **Comp/Lim Release:** Separately adjustable 1 to 500 mS **Compression Ratio:** 1.0:1 to 10.0:1 **Comp/Lim Curve:** Separately selectable hard or soft knee **Mic EQ:** ±12dB, 0.1 dB steps at 160, 500, 1.2k, and 3k Hz **Bass/Treble:** ±12dB, 0.5dB steps at 100Hz and 10kHz **Output Equalization:** 10-band graphic (GEQ) + 2-band parametric (PEQ) **GEQ:** ±12dB, 0.1dB steps at 31, 63, 125, 250, 500, 1k, 2k, 4k, 8k, and 16k Hz **PEQ Filter Gain/Center Frequency:** ±12dB, 0.1dB steps at 25Hz to 20kHz, 0.5Hz steps **PEQ Filter Bandwidth:** 0.1 to 3.0 octaves, 0.1 octave steps **PEQ Filter Types:** Low Pass, High Pass, Peaking Eq, Notch, Treble Shelf, Bass Shelf **Speech Output Delay:** 0 to 40 mS, 1mS steps **Frequency Response:** 20Hz to 20kHz ±0.5dB (PROG/REC OUT), 50Hz to 20kHz ±0.5dB (SPEECH OUT), 20Hz to 20kHz ±0.5dB (SPEAKER @ 8 ohms), 100Hz to 20kHz ±1.5dB (SPEAKER @ 70V or 100V) **S/N Ratio:** 95dB (PROG/REC OUT @ 10dBV, 20Hz to 20kHz A-weighted), 95dB (SPEECH OUT @ 10dBV, 50Hz to 20kHz A-weighted), 90dB (SPEAKER @ 8 ohms, full output, 20Hz to 20kHz A-weighted), 90dB (SPEAKER @ 70V or 100V, full output, 20Hz to 20kHz A-weighted) **THD+N:** 0.02% (PROG/REC OUT @ 10dBV,

20Hz to 20kHz), 0.02% (SPEECH OUT @ 10dBV, 50Hz to 20kHz), 0.7% (SPEAKER @ 8 ohms, full output, 20Hz to 20kHz), 0.7% (SPEAKER @ 70V or 100V, full output, 100Hz to 20kHz A-weighted) **Stereo Separation:** -80dB (PROG/REC OUT @ 10dBV, 20Hz to 20kHz), -60dB (SPEAKER @ 8 ohms, full output, 20Hz to 20kHz) **Channel Crosstalk:** -80dB (AUD IN @ 10dBV, 20Hz to 20kHz)

1 Crestron Quick Media Receiver QMRX

Video Signal Types RGB and composite, S-Video, or component† video Video/HDTV Formats NTSC or PAL, HDTV up to 1080i/1080p†

RGB Formats RGBHV, RGBS, or RGsB Gain 0dB (75 ohms terminated) Maximum Resolution 1920 x 1200 @ 60Hz (at unity gain) with maximum cable length of 450 feet and maximum compensation

QM Cable Compensation 10-bit digitally controlled PEAK (bandwidth) and BOOST (frequency); 4-bit digitally controlled SKEW delay, 0 to 22 ns (independent for R/Pr, G/Y, and B/Pb) Connectors – Front Panel

QM (1) 8-wire RJ45 female, QuickMedia input port; Connects to QM output port of any QuickMedia device via CresCAT-QM or CRESCAT-IM cable* NET (2) 4-pin 3.5mm detachable terminal blocks; Cresnet ports (paralleled), Master/Slave selectable; Connect to Cresnet control network via CresCAT-QM or Cresnet cable Connectors – Rear Panel RGBHV (1) DB15HD female, RGB(VGA)/component video† output; Formats: RGBHV, RGBS, RGsB, YPbPr; Output Level: 1 Vp-p nominal; Sync Level: 5 Vp-p nominal; Output Impedance: 75 ohms; H/V Sync Impedance: 100 ohms S-VIDEO (1) 4-pin mini DIN female, S-Video (Y/C) output; Output Level: 1.0 Vp-p (luma), 0.7 Vp-p (chroma); Output Impedance: 75 ohms VIDEO (1) BNC female, composite video output; Output Level: 1.0 Vp-p; Output Impedance: 75 ohms G 6-32 screw, chassis ground lug COM

(1) DB9 male, bidirectional RS-232 port; Up to 115.2k baud, hardware and software handshaking support IR (1) 2-pin 3.5mm detachable terminal block; IR/Serial port; IR output up to 1.2 MHz; 1-way serial TTL/RS-232 (0-5 Volts) up to 9600 baud INPUT 1 (1) 2-pin 3.5mm detachable terminal block;

Digital/contact closure input. Rated for 0-24 Volts DC, referenced to GND; Input Impedance: 2.2k ohms pulled up to 5 Volts DC; Logic Threshold: 2.5 Volts DC nominal with 1 Volt hysteresis band LED Indicators PWR (green) Indicates 24 Volts DC power supplied from Cresnet control network NET (yellow) Indicates communication with Cresnet system SETUP (red) Used for touch-settable ID (TSID) Buttons SETUP Used for touch-settable ID (TSID)

Power Requirements Cresnet Power Usage 8 Watts (0.33 Amp @ 24 Volts DC) Environmental Temperature 41° to 104°F (5° to 40°C) Humidity 10% to 90% RH (non-condensing) Enclosure Chassis Steel, black matte powder coat finish Mounting Free-standing, surface-mount, or pole-mount (adhesive feet and [4] "L" brackets included, MK-QM-RMCRX pole mount kit sold separately) Dimensions Height 1.71 in (4.34 cm) Width 6.96 in (17.68 cm) Depth 5.83 in (14.81 cm) Weight 1.1 lbs (0.5 kg)

1 Crestron Touch Panel TPS-6X

Touchscreen Display

Display Type: TFT Active matrix color LCD Size: 5.7 inch (145 mm) diagonal Aspect Ratio: 4:3 VGA Resolution: 640 x 480 pixels Brightness: 350 nits (cd/m²) Contrast: 400:1 Color Depth: 18-bit, 256k colors

Illumination: Backlit fluorescent **Viewing Angle:** +80° horizontal, +80°/-70° vertical
Touchscreen: Resistive membrane

Buttons & Switches **Sleep:** (1) Programmable top-mounted pushbutton (left); normally initiates "Sleep" mode when docked, turns power on/off when undocked; also resets touchpanel if held for 5 seconds **Brightness:** (1) Programmable top-mounted pushbutton (right), normally sets display brightness level **Hard Keys:** (8) Optional programmable pushbuttons, engravable backlit text [2] (default engraving included) **Up/Down:** (2) Optional programmable "up/down" pushbuttons, backlit, engravable backlit text[2] on bezel (default engraving included) **Thumbpad:** (5) Optional programmable pushbuttons for 4-way directional navigation and "enter", backlit **Battery:** (1) Rear panel recessed DIP switch, shuts off battery for long-term storage **LED Indicators** **Battery:** (1) Green LED, indicates battery condition and charging status when docked

Connectors **Docking Connector:** (1) multi-pin connector; Mates with the docking port on the docking station[6] See the TPS-6X-IMCW interface module[6] specification for other connectors

Memory SDRAM: 32 MB **Flash:** 32 MB **Maximum Project Size:** 28 MB

Graphic Engine Isys engine; 16-bit non-palette graphics; 65,536 colors; Synapse image rendering algorithm; multi-mode objects, DNav dynamic menu objects, dynamic graphics, PNG translucency, full-motion (60 fps) animation, color key video windowing **RF Wireless** **RF Transceiver:** 2-way RF, 2.4 GHz ISM Channels 11-26 (2400 to 2483.5 MHz), IEEE 802.15.4 compliant **Transmitting Power:** 75 mW (Ch.11), 100 mW (Ch.12-23), 15 mW (Ch.24), 3.5 mW (Ch.25), 1 mW (Ch.26) @ High Setting; 1 mW (Ch.11-25), 0.5 mW (Ch.26) @ Low Setting **Range (typical):** 100 to 200 feet maximum indoor, 1000 feet outdoor,

subject to site-specific conditions **Gateway:** Requires a CEN-HPRFGW Extended Range RF Gateway[5] **Roaming:** Supports roaming amongst up to 8 RF gateways **IR Wireless[1]** **IR Transmitter:** 38 kHz, RC5 format **Range:** 50 feet typical

1 Crestron Wireless Access Point

CEN-WAP-ABG-Cm

Wireless Transceiver: IEEE 802.11a/b/g Wi-Fi (5.8 or 2.4 GHz 2-way RF); 64, 128, & 152-bit WEP encryption; WPA & WAP2 with TKIP & AES **Transmit Power:** Up to 19 dBm **Ethernet** 10BaseT/100BaseTX, auto-switching, auto-negotiating, auto-discovery, full/ half duplex, TCP/IP, UDP/IP, DHCP client and server, SNMP, IEEE 802.3u & 802.3af compliant

Controls and LED Indicators

LAN: (1) Green LED, indicates wired Ethernet activity and link status

Wi-Fi: (1) Green LED, indicates Wi-Fi activity and connection status

Reset: (1) Recessed miniature pushbutton for hardware reset

Connectors - Rear Panel **NETWORK PoE:** (1) 8-wire RJ45, female; 10BaseT/100BaseTX Ethernet port, 802.3af Power over Ethernet compliant; Connects to LAN via a 802.3af compliant PoE power source

Power Requirements **Power over Ethernet:** IEEE 802.3af Class 1 PoE Powered Device

Enclosure Injection-molded plastic, paintable white matte finish, ceiling mountable using a 1-gang plaster ring or electrical box (2 inch deep minimum)

Environmental **Temperature:** 32° to 104°F (0° to 40°C) **Humidity:** 10% to 90% RH (non-condensing)

Heat Dissipation: 11 BTU/Hr

Dimensions **Height:** 2.54 in (65 mm)

Diameter: 4.73 in (120 mm)

Weight 6.0 oz (168 g) **Available Models** CEN-WAP-ABG-CM: Ceiling Mount 802.11a/b/g

Wireless Access Point CEN-WAP-ABG-POE-PWE-CM: Ceiling Mount 802.11a/b/g
Wireless Access Point w/PoE Injector Included Accessories PWE-4803RU PoE Injector
(Included Quantity for CEN-WAP-ABG-POE-PWECM: 1) Available Accessories PWE-
4803RU: PoE Injector CEN-SW-POE-5: 5-Port PoE Switch CEN-SWPOE-24: 24-Port
Managed PoE Switch

6 JBL Ceiling mounted loud speaker

Control 24 CT

Freq. Range (-10 dB)1: 80 Hz - 20 kHz

Power Capacity2: 80 Watts Continuous Program Power 40 Watts Continuous Pink Noise

Nominal Sensitivity3: 86 dB SPL @ 1 m (3.3 ft)

Nominal Coverage Angle4: 130° conical coverage Directivity Factor (Q): 2.4 averaged 500
Hz to 4 kHz Directivity Index (DI): 3.8 averaged 500 Hz to 4 kHz Rated Maximum SPL: 102

dB @ 1 m (3.3 ft) Nominal Impedance (24C): 16 ohms (Min Z 16.1 Ω @ 320 Hz)

Transformer Taps (24CT): 70V: 30W, 15W, 7.5W & 3.7W taps 100V: 30W, 15W, & 7.5W
taps Transducers: Low-Frequency: 100 mm (4.0 in) Polypropylene-coated, 1" coil on

aluminum former High-Frequency: 19 mm (0.75 in) Titanium coated polyester. Physical:

Enclosure: Backcan: Formed steel Baffle/Rim: Medium impact polystyrene, fire rated

UL94V-0 Overload Protection: Full-range power limiting to protect network and transducers.

(On Control 24C, not on Control 24CT) Termination: Removable locking connector with
screw-down terminals. 2 input terminals and 2 loop-thru output terminals. Max. wire size 12

AWG (2.5 mm²) Safety Agency Rating: Suitable for use in air handling spaces per UL1480,

UL2043, NFPA90 & NFPA 70. S7232/UL Listed, Signaling Speaker. Transformer UL

registered per UL1876. In accordance with IEC60849/EN60849. Outside Dimensions (H x

Dia): 200 x 195 mm (7.9 x 7.7 in) 184 mm (7.2 in) front of ceiling tile to back of backcan

Cutout Size: 168 mm (6.6 in) Net Weight (ea): 2.7 kg (6 lb) CT: 3.5 kg (8 lb) Shipping

Weight (pair): 6.4 kg (15 lb) CT: 8.0 kg (18 lb) Included Accessories: C-shaped support

backing plate 2 tile support rails (fits both 2 x 4 ft or 600 x 1200 mm tiles) Cutout template

Paint shield Removable locking wiring connector.

1 Misc. Audio/Video Cabling and Connectors

1 Labor

Conference Room 1214

Qty. Item Description

- 1 Biamp Digital Signal Processor Nexia TC**
8 wide-band AEC balanced mic/line inputs • 2 standard balanced mic/line outputs • 4
balanced mic/line outputs • telephone interface with line & set connections • Ethernet
port for software configuration/control • serial port for third-party RS-232 remote control
• NexLink ports for multi-unit system designs • Nexia software for Windows® XP
Professional/Vista • pre-configured I/O with definable processing • RoHS compliance
and AES grounding practices • CE marked and UL/C-UL listed • covered by Biamp
Systems' five-year warranty • Ability to select, view, and calibrate: Mixers, Equalizers,
Filters, Crossovers, Dynamics, Routers, Delays, Controls, Meters, Generators,
Diagnostics • Telephone Interface capabilities include: ° Initiation of outgoing calls °
detection and answering of incoming calls ° line echo cancellation ° TouchTone™
decoding ° caller ID reception ° call progress detection ° line intrusion detection °
continuous line status and fault monitoring Frequency Response (20Hz~20kHz @
+4dBu): +0/-0.4dB THD+N (20Hz~20kHz @ +4dBu): line level < 0.006% mic level <
0.05% Equivalent Input Noise (20Hz~20kHz, 66dB gain, 150 ohm): -125bBu Dynamic

Range 20Hz~20kHz, 0dB); > 105dB Maximum Gain (input channels); 66dB
 Crosstalk (channel-to-channel @ 1kHz): line level < -80dB mic level < -75dB Output
 Impedance (balanced): 200 ohms Input Impedance (mic/line balanced): 8k ohms Input
 Gain Range (variable trim): 0dB ~ +66dB Maximum Output (balanced): +24dBu
 Maximum Input (mic/line): +24dBu Full Scale Output Level (six selections) -31dBu ~
 +24dBu Telephone Interface: ringer equivalency number 0.0B dynamic range 67dBu
 frequency response 250Hz ~ 3.4kHz
 THD < 0.3% transhybrid balance 30dB Tail Length: up to 300ms
 Convergence: up to 100dB/sec Phantom Power: +48 VDC (7mA/input)
 Sampling Rate: 48kHz A/D - D/A Converters: 24-bit Power Consumption (100~240VAC
 50/60Hz): 65 watts
 Dimensions: height 1.75 inches (45mm) width 19 inches (483mm) depth 11.15 inches
 (283mm) Weight: 8.6 lbs. (3.9kg) Compliance: AES48-2005 Grounding & EMC
 practices EU Directive 2002/95/EC, RoHS directive CE marked UL listed

3 CROWN PZM-10

Polar pattern, hemispherical. Frequency range PZM@-10: 80 to 20,000 Hz; PZM@-
 10LL: 100 to 20,000 Hz Sensitivity PZM@-10: 2.5 mV/Pa (-52 dBV); PZM@-10 LL: 1.4
 V/Pa (+3 dBV) Max. SPL 120 dB Equivalent noise level 26 dB-A Signal/noise ratio
 68 dB (A-weighted) Impedance PZM@-10: 240 ohms; PZM@-10 LL: 75 ohms
 Connector PZM@-10: 3-pin XLR; PZM@-10 LL: stripped and tinned leads Finish
 Off-white. May be painted any color. Dimensions ϕ 3.9 cm x 7.2 cm (ϕ 1.53 x
 2.829 in.) Net weight PZM@-10: 74 g (22.6 oz.); PZM@-10 LL: 93 g (3.3 oz.) ROHS
 OK

1 LG 60" Display 60PV450C

PLASMA MODULE Screen Size 60" class (59.8" measured diagonally) Native Display
 Resolution 1920 x 1080 Brightness 1,500 cd/m² Dynamic Contrast Ratio 3,000,000:1
 Protective Skin Glass Yes Color Reproduction (Panel Output) 16 Bit ISM (Image
 Sticking Minimization) White Wash / Orbiter / Color Wash 600Hz Sub-Field Driving Yes
 (600Hz Max Sub-Field Driving) Life Span (typical) 100,000 Hours
VIDEO Built-In tuner ATSC/NTSC/Clear QAM - 1 Tuner Dual XD Engine Yes Aspect
 Ratio 16:9 Aspect Ratio Correction 6 Modes (16:9 Just Scan, Set by Program, 4:3,
 Zoom1, Cinema Zoom1) Just Scan (1:1 Pixel matching) HDMI 1080p/1080i/720p (0%
 overscan) Component 1080p/1080i/720p RF 1080i/720p Enhanced Noise Reduction
 3D & MPEG Color Temperature Control 3 Modes (Warm, Medium, Cool) 24p Real
 Cinema (3:3 Pulldown) Yes (HDMI 1080 24p) Cinema 3:2/2:2 Pulldown Mode Yes
 Picture Reset Yes AV Mode (Picture & Mode) Yes Picture Mode 8 Modes (Vivid,
 Standard, APS, Cinema, Game, Sports, Expert 1, Expert 2) XD Color (Active Color
 Management) Yes ISF-ccc Ready Yes Intelligent Sensor Mode Yes xvYCC Yes DTV
 Signal Strength (Digital) Yes PC Resolution 1920 x 1080 @ 120Hz or better Color
 Reproduction (Chassis Output) 10-Bit
AUDIO Mono/Stereo/Dual (MTS/SAP) Yes Audio Output (Watts - THD 10%) 10W +
 10W Speaker System Invisible Speaker (1 Way 2 Speaker) Dolby Digital 5.1 Decoder
 Yes Surround System Infinite Sound Bass/Treble/Balance Yes Smart Volume Leveler
 (Auto Volume Leveler) Yes Clear Voice II Yes Auto Volume Leveler II Yes Sound Mode
 5 Modes (Standard, Music, Cinema, Sports, Game) Mute Yes
SPECIAL FEATURES USB 2.0 MP3 & JPEG Public Display Settings Yes (V 2.5)
 Intelligent Sensor Yes Auto Demo Yes Picture Wizard II Yes A/V Input Navigation / EZ
 Input Toggle Yes Input Labeling Yes Quick View (Flashback) Yes Picture Freeze Yes
 Parental Control w/V-Chip Yes Key Lock Yes Closed Caption Yes SimpLink™ (HDMI
 CEC) Yes
CONVENIENCE FEATURES Language 3 (English, Spanish, French) Quick Menu Yes

Auto Tuning / Programming Yes Program (Channel) Edit (Add / Delete) Yes Favorite Channel Programming Yes Auto/Manual Clock Yes On/Off Timer Yes Sleep Timer Yes Auto Off / Auto Sleep Yes

JACK PACK TV – SIDE AV In Yes (1) HDMI/HDCP Input Yes, 2D: (480i/480p/720p/1080i/1080p), 1 Port PC Mode, SIMPLINK USB 2.0 Yes, (MP3, JPEG) TV – REAR RF In Yes (1) AV In Yes (1) Component In (Y,Pb,Pr) + Audio Yes (2) (480i/480p/720p/1080i/1080p) Digital Audio Out (Optical) Yes, (1, Optical) HDMI/HDCP Input Yes, 2D: (480i/480p/720p/1080i/1080p), 1 Port PC Mode, SIMPLINK RGB In (D-sub 15pin) - PC Yes (1) PC Audio Input Yes (1) RS-232C In Yes, (1, Control & Service) Remote Control In Yes (1) Wired IR Jack Yes

CABINET/ACCESSORIES TruSlim Frame Yes Cabinet Color Gloss Black Speaker Invisible Speaker Table Stand Included Detachable (20°/20°) Swivel VESA™ Compliant 600 x 400 (60") Local Key Type Touch Sensitive Keys Remote Control Yes, Illuminated Quick Setup Guide Yes Power Cord Yes

POWER EcoSmart - Energy Savings Intelligent Sensor (auto) Yes (automatic) 3 Mode Power Saving Levels Yes (manual) Voltage, Hz 100~240V, 50/60Hz Power Consumption (IEC62087 dynamic 201W (60"), broadcast-content video signal) Stand by Mode Under 0.2W

REQUIRED APPROVALS RoHS Compliant Yes UL, c-UL, FCC Yes

DIMENSIONS & WEIGHT 60PV450C Dimensions without Stand (W×H×D) 54.6" x 32.9" x 2.0" with Stand (W×H×D) 54.6" x 35.6" x 13.2" packaging (W×H×D) 60.8" x 38.2" x 13.0" Weight without Stand 84.9 lbs with Stand 94.0 lbs with packaging 108.2 lbs

LIMITED WARRANTY 2 Years (Parts/Labor)

UPC 60PV450C 7 19192 90245 9

1

Chief LTA5536

Flat Panel Wall Mount

Certifications: UL Listed Color:Black Lateral Shift 16" (406.4mm) Maximum Screen Thickness 6" Minimum Depth : 1.99" (50.5mm)

Mounting Pattern Compatibility (Universal Versions): 100 x 100mm- 895 x 505mm

Orientation: Landscape Overall Dimensions (H x W x D): 13.2" x 34.4" x 2.0" (335 x 875 x 51mm) Solution Type: Custom Tilt: + 0° , - 12° Typical Screen Sizes 37 - 63" Wall Stud Compatibility (Inches): 12 - 34" Weight Capacity : 200 lbs (90.7kg)

1

Crestron QM transmitter

QM-TX

Video Signal Types: RGB and composite, S-Video, or component video

Video/HDTV Formats: NTSC or PAL, HDTV up to 1080i/1080p **RGB Formats:** RGBHV, RGBS, or RGsB **Gain:** 0dB (75 ohms terminated) **Maximum Resolution:** 1920 x 1200 @ 60Hz (at unity gain) with maximum cable length of 450 feet and maximum compensation at receiver

Audio A-D Conversion : 24-bit, 48 kHz **Frequency Response :** 20Hz to 20kHz

Connectors R/C/Pr, G/Y/Y, B/COMP/Pb, H, V: (5) BNC female, Multi-format RGB/Video input; **Formats:** RGBHV, RGBS, RGsB, YPbPr, S-Video (Y/C), composite; **Input Impedance:** 75 ohms; **H/V Sync Impedance:** 620 ohms; **Maximum Input Level:** 0.7 Vp-p for RGB and C of S-Video; 1 Vp-p for composite and Y of S-Video; **Maximum H/V Sync Level:** 5 Vp-p; **Signal sensing on** G/Y/Y, B/COMP/Pb, and H

G: (1) 6-32 screw, chassis ground lug **AUDIO:** (1) 5-pin 3.5mm detachable terminal block; **Balanced/unbalanced stereo line-level audio input;** **Maximum Input Level:** 4 Vrms balanced, 2 Vrms unbalanced; **Input Impedance:** 10k ohms balanced, 5k ohms unbalanced **QM OUT :** (1) 8-wire RJ45 female, QuickMedia output port; **Connects to** QM input port of any QuickMedia device via CresCAT-QM or CresCAT-IM cable[^] **NET:**

(2) 4-pin 3.5mm detachable terminal blocks; Cresnet slave ports, paralleled; Connect to Cresnet control network via CresCAT-QM or Cresnet cable

Buttons & LED Indicators PWR: (1) green LED, indicates 24 Volts DC power supplied from Cresnet control network NET: (1) yellow LED, indicates communication with Cresnet system VIDEO ACT: (1) red LED, indicates signal at the G/Y/Y, B/COMP/PB, or I1 connectors

SETUP (rear): (1) miniature pushbutton and red LED, used for touch-settable ID (TSID) **Power Requirements** Cresnet Power Usage: 5 Watts (0.21 Amp @ 24 Volts DC) **Environmental** Temperature: 41° to 104°F (5° to 40°C) Humidity: 10% to 90% RH (non-condensing)

Enclosure Chassis: Steel, black matte powder coat finish Faceplate: Extruded aluminum, black matte powder coat finish with polycarbonate label overlay Mounting: Freestanding or 0.5U 19-inch rack-mountable (adhesive foot included, ST-RMK rack kit sold separately)

1

Creston Control Processor

MPS300

CPU: 32-bit Freescale ColdFire® Microprocessor **Memory** 32 MB SDRAM, 256 KB NVRAM, 16 MB Flash **Operating System** Real-time, preemptive, multitasking kernel, multi-threaded; FAT3 filesystem with long names; supports SIMPL™ Windows® and SIMPL+® Ethernet 10/100BaseT, static IP or DHCP/DNS, SSL, auto-negotiating, full duplex TCP/IP, UDP/IP, CIP, SMTP, SNMP, built-in Web server and e-mail client; supports Creston e-Control® XPanel and RoomView® applications **Video Switcher:** 8x7 crosspoint matrix including 3x3 QM signal routing, local QM delay skew compensation, RGB pass-thru mode (multi-format via RGB output connection) **Signal Types:** RGB and composite, S-Video, or component video (does not transcode) **Video/HDTV Formats:** NTSC or PAL, HDTV up to 1080i/1080p **RGB Formats:** RGBIIV, RGBS, RGsB **Maximum Resolution:** 2048 X 1536 @ 60Hz (1920 X 1200 @ 60Hz via QM)

Blanking Time: < 0.1 second **Sync Rise/Fall Time:** 3.5 ns maximum **Sync Latency:** < 30 ns **Gain:** 0dB (75 ohms terminated) **QM Cable Compensation:** 10-bit digitally controlled PEAK (bandwidth) and BOOST (frequency); 4-bit digitally controlled SKEW delay, 0 to 22 ns (independent for R, G, and B) **Audio Switcher/Preamp:** 8x4 stereo crosspoint matrix including 3x3 QM signal routing, 2-channel gated mic preamp with compressor & limiter, 8-channels mic EQ, 10X5 mic/program matrix mixer, 8x2 mic matrix mixer per each of 3 QM outputs, stereo volume/tone control and EQ per each of PROGRAM and RECORD outputs, mono volume/tone control and EQ/delay on SPEECH output, integrated power amplifier, QM auto-compensation with self-peaking **A-D/D-A Conversion:** 24-bit, 48 kHz **Volume Range:** -80 to +20 dB, 0.1dB steps (output); -80 to 0 dB, 0.1dB steps (mixer) **Mute:** -100dB (electronic), -120dB (relay) **Input Compensation:** ±10dB, 0.1dB steps **Mic Input Gain:** 0 to 100 % (40dB range) plus mute **Gate Level (Threshold):** 0 to 100 % **Gate Attack:** 0 to 100 mS **Gate Decay (Release):** 0 to 5000 mS **Gate Depth:** -80dB (mute) to 0dB, 0.1dB steps **Compression Threshold:** -80dB to +20dB, 0.1dB steps **Limit Threshold:** 0dB to 20dB, 0.1dB steps **Comp/Lim Attack:** Separately adjustable 0.1 to 300 mS **Comp/Lim Release:** Separately adjustable 1 to 500 mS **Compression Ratio:** 1.0:1 to 10.0:1 **Comp/Lim Curve:** Separately selectable hard or soft knee **Mic EQ:** ±12dB, 0.1 dB steps at 160, 500, 1.2k, and 3k Hz **Bass/Treble:** ±12dB, 0.5dB steps at 100Hz and 10kHz **Output Equalization:** 10-band graphic (GEQ) + 2-band parametric (PEQ) **GEQ:** ±12dB, 0.1dB steps at 31, 63, 125, 250, 500, 1k, 2k, 4k, 8k, and 16k Hz **PEQ Filter Gain/Center Frequency:** ±12dB, 0.1dB steps at 25Hz to 20kHz, 0.5Hz steps **PEQ Filter Bandwidth:** 0.1 to 3.0 octaves, 0.1 octave steps **PEQ Filter Types:** Low Pass, High Pass, Peaking Eq, Notch, Treble Shelf, Bass Shelf **Speech Output Delay:**

0 to 40 mS, 1mS steps **Frequency Response:** 20Hz to 20kHz ± 0.5 dB (PROG/REC OUT), 50Hz to 20kHz ± 0.5 dB (SPEECH OUT), 20Hz to 20kHz ± 0.5 dB (SPEAKER @ 8 ohms), 100Hz to 20kHz ± 1.5 dB (SPEAKER @ 70V or 100V) **S/N Ratio:** 95dB (PROG/REC OUT @ 10dBV, 20Hz to 20kHz A-weighted), 95dB (SPEECH OUT @ 10dBV, 50Hz to 20kHz A-weighted), 90dB (SPEAKER @ 8 ohms, full output, 20Hz to 20kHz A-weighted), 90dB (SPEAKER @ 70V or 100V, full output, 20Hz to 20kHz A-weighted) **THD+N:** 0.02% (PROG/REC OUT @ 10dBV, 20Hz to 20kHz), 0.02% (SPEECH OUT @ 10dBV, 50Hz to 20kHz), 0.7% (SPEAKER @ 8 ohms, full output, 20Hz to 20kHz), 0.7% (SPEAKER @ 70V or 100V, full output, 100Hz to 20kHz A-weighted) **Stereo Separation:** -80dB (PROG/REC OUT @ 10dBV, 20Hz to 20kHz), -60dB (SPEAKER @ 8 ohms, full output, 20Hz to 20kHz) **Channel Crosstalk:** -80dB (AUD IN @ 10dBV, 20Hz to 20kHz)

2

Creston Quick Media Receiver QMRX

Video Signal Types RGB and composite, S-Video, or component† video Video/HDTV Formats NTSC or PAL, HDTV up to 1080i/1080p†

RGB Formats RGBHV, RGBS, or RGsB Gain 0dB (75 ohms terminated) Maximum Resolution 1920 x 1200 @ 60Hz (at unity gain) with maximum cable length of 450 feet and maximum compensation

QM Cable Compensation 10-bit digitally controlled PEAK (bandwidth) and BOOST (frequency); 4-bit digitally controlled SKEW delay, 0 to 22 ns (independent for R/Pr, G/Y, and B/Pb) Connectors – Front Panel

QM (1) 8-wire RJ45 female, QuickMedia input port; Connects to QM output port of any QuickMedia device via CresCAT-QM or CRESCAT-IM cable* NET (2) 4-pin 3.5mm detachable terminal blocks; Cresnet ports (paralleled), Master/Slave selectable; Connect to Cresnet control network via CresCAT-QM or Cresnet cable Connectors – Rear Panel RGBHV (1) DB15HD female, RGB(VGA)/component video† output; Formats: RGBHV, RGBS, RGsB, YPbPr; Output Level: 1 Vp-p nominal; Sync Level: 5 Vp-p nominal; Output Impedance: 75 ohms;

H/V Sync Impedance: 100 ohms S-VIDEO (1) 4-pin mini DIN female, S-Video (Y/C) output; Output Level: 1.0 Vp-p (luma), 0.7 Vp-p (chroma);

Output Impedance: 75 ohms VIDEO (1) BNC female, composite video output; Output Level: 1.0 Vp-p; Output Impedance: 75 ohms G 6-32 screw, chassis ground lug COM (1) DB9 male, bidirectional RS-232 port; Up to 115.2k baud, hardware and software handshaking support IR (1) 2-pin 3.5mm detachable terminal block; IR/Serial port; IR output up to 1.2 MHz; 1-way serial TTL/RS-232 (0-5 Volts) up to 9600 baud INPUT 1 (1) 2-pin 3.5mm detachable terminal block;

Digital/contact closure Input. Rated for 0-24 Volts DC, referenced to GND; Input Impedance: 2.2k ohms pulled up to 5 Volts DC; Logic Threshold: 2.5 Volts DC nominal with 1 Volt hysteresis band LED Indicators PWR (green) Indicates 24 Volts DC power supplied from Cresnet control network NET (yellow) Indicates communication with Cresnet system SETUP (red) Used for touch-settable ID (TSID) Buttons SETUP Used for touch-settable ID (TSID) Power Requirements

Cresnet Power Usage 8 Watts (0.33 Amp @ 24 Volts DC) Environmental Temperature 41° to 104°F (5° to 40°C) Humidity 10% to 90% RH (non-condensing)

Enclosure Chassis Steel, black matte powder coat finish Mounting Free-standing, surface-mount, or pole-mount (adhesive feet and [4] "L" brackets included, MK-QM-RMCRX pole mount kit sold separately) Dimensions Height 1.71 in (4.34 cm) Width 6.96 in (17.68 cm) Depth 5.83 in (14.81 cm) Weight 1.1 lbs (0.5 kg)

1

Creston Touch Panel TPS-6X

Touchscreen Display

Display Type: TFT Active matrix color LCD Size: 5.7 inch (145 mm) diagonal Aspect Ratio: 4:3 VGA Resolution: 640 x 480 pixels

Brightness: 350 nits (cd/m²) Contrast: 400:1 Color Depth: 18-bit, 256k colors

Illumination: Backlit fluorescent Viewing Angle: ±80° horizontal, +80°/-70° vertical

Touchscreen: Resistive membrane

Buttons & Switches Sleep: (1) Programmable top-mounted pushbutton (left); normally initiates "Sleep" mode when docked, turns power on/off when undocked; also resets touchpanel if held for 5 seconds Brightness: (1) Programmable top-mounted pushbutton (right), normally sets display brightness level Hard Keys: (8) Optional

programmable pushbuttons, engravable backlit text [2] (default engraving included) Up/Down: (2) Optional programmable "up/down" pushbuttons, backlit, engravable

backlit text[2] on bezel (default engraving included) Thumbpad: (5) Optional programmable pushbuttons for 4-way directional navigation and "enter", backlit

Battery: (1) Rear panel recessed DIP switch, shuts off battery for long-term storage

LED Indicators Battery: (1) Green LED, indicates battery condition and charging status when docked

Connectors Docking Connector: (1) multi pin connector; Mates with the docking port on the docking station[6] See the TPS-6X-IMCW interface module[6] specification for other connectors

Memory SDRAM: 32 MB Flash: 32 MB Maximum Project Size: 28 MB

Graphic Engine

Isys engine; 16-bit non-palette graphics; 65,536 colors; Synapse image rendering algorithm; multi-mode objects, DNav dynamic menu objects, dynamic graphics, PNG translucency, full-motion (60 fps) animation, color key video windowing

RF Wireless RF Transceiver: 2-way RF, 2.4 GHz ISM Channels 11-26 (2400 to 2483.5 MHz), IEEE 802.15.4 compliant Transmitting Power: 75 mW (Ch.11), 100 mW (Ch.12-23), 15 mW (Ch.24), 3.5 mW (Ch.25), 1 mW (Ch.26) @ High Setting; 1 mW (Ch.11-25), 0.5 mW (Ch.26) @ Low Setting Range (typical): 100 to 200 feet maximum indoor, 1000 feet outdoor, subject to site-specific conditions Gateway: Requires a CEN-HPRTGW Extended Range RF Gateway[5] Roaming: Supports roaming amongst up to 8 RF gateways **IR Wireless**[1] IR Transmitter: 38 kHz, RC5 format Range: 50 feet typical

2

Creston QMWMC

Video Signal Types: RGB and composite, S-Video, or component[2] video Video/HDTV Formats: NTSC or PAL, HDTV up to 1080i/1080p[2]

RGB Formats: RGBHV, RGBS, or RGsB Gain: 0dB (75 ohms terminated)

Maximum Resolution: 1920 x 1200 @ 60Hz (at unity gain) with maximum cable length of 450 feet and maximum compensation at receiver **Audio** A-D Conversion: 24-bit, 48 kHz Frequency Response: 20Hz to 20kHz

Communications QuickMedia: QM origination point device[1] Cresnet: Cresnet slave device

Connectors - Front Panel S-VIDEO: (1) 4-pin mini DIN female, S-Video (Y/C) Input; Input Impedance: 75 Ohms; Maximum Input: 1 Vp-p; Signal sensing on Y S-VIDEO AUDIO R, L: (2) RCA female; Unbalanced stereo line-level audio input; Input Impedance: 10k Ohms; Maximum Input Level: 2 Vrms VIDEO: (1) RCA female, composite video input; Input Impedance: 75 Ohms; Maximum Input: 1 Vp-p; Includes signal sensing VIDEO AUDIO R, L: (2) RCA female; Unbalanced stereo line-level audio input; Input Impedance: 10k Ohms; Maximum Input Level: 2 Vrms COMPUTER: (1) DB15HD female; RGB(VGA)/component video input[2]; Formats: RGBHV, RGBS, RGsB, YPbPr; Input Impedance: 75 Ohms; H Sync Impedance: 1k Ohms; V Sync Impedance: 2.2k Ohms; Maximum Input Level: 1 Vp-p; Maximum Sync Level: 5 Vp-p; Signal sensing on H-SYNC only AUDIO (computer): (1) 3.5mm TRS mini phone jack;

Unbalanced stereo line-level audio input; Input Impedance: 10k Ohms; Maximum Input Level: 1 Vrms MONITOR: (1) DB15HD female, buffered RGBHV pass-thru

Connectors - Rear Panel

QM: (1) 8-wire RJ45 female, QuickMedia output port; Connects to QM input port of any QuickMedia device via CresCAT-QM or CresCAT-IM cable[1] NET: (2) 4-pin 3.5mm detachable terminal blocks; Cresnet slave ports, paralleled; connect to Cresnet control network via CresCAT-QM or Cresnet cable GROUND: (1) Flying lead, grounding wire TO MIC: (1) 14-pin header, Accepts connection from optional QM-WMIC (sold separately)

Controls & Indicators

PWR: (1) green LED, indicates 24 Volts DC power supplied from Cresnet network NET: (1) yellow LED, indicates communication with Cresnet system SETUP: (1) miniature pushbutton and red LED, used for touch-settable ID (TSID) COMP: (1) red LED, indicates a signal at the COMPUTER input VIDEO: (1) red LED, indicates a signal at the VIDEO input S-VID: (1) red LED, indicates signal at the S-VIDEO input

Power Requirements Cresnet Power Usage : 5 Watts (0.21 Amp @ 24 Volts DC); 8 Watts (0.33 Amp) with QM-WMIC installed

Environmental Temperature: 41° to 104°F (5° to 40°C) Humidity: 10% to 90% RH (non-condensing) Heat Dissipation: 17 BTU/Hr

Enclosure Construction: Metal with black finish Flush Wall Mount: 2-gang mountable in a standard electrical box (2-1/2 inch deep minimum); requires decorator style faceplate (not included)

Dimensions Height: 4.12 in (105 mm) Width: 3.50 in (89 mm) Depth: 2.61 in (67 mm)

Weight 8.0 oz (230 g) Available Models QM-WMC: QuickMedia Wall Plate Media Center Available Accessories CRESCAT-QM-NP-SP500: QuickMedia® Cable, Low-skew CAT5e & Cresnet, non-plenum, 500 ft spool CRESCAT-QM-P-SP500: QuickMedia® Cable, Low-skew CAT5e & Cresnet, plenum, 500 ft spool QM-WMIC: Microphone Input Module.

1 SMART Interactive White Board SBX885

Size 78 1/2" W x 51 1/8" H x 6 1/2" D (199.4 cm x 130 cm x 16.5 cm)

Active screen area (maximum interactive projected image)

73 7/8" W x 46 1/4" H (187.7 cm x 117.3 cm) 87" (221 cm) diagonal, 16:10 aspect ratio

Weight 60 lb. (27.2 kg) Shipping size 1 unit 56 3/4" W x 88" H x 4 3/8" D (144.1 cm x 223.5 cm x 11.1 cm) 10 units on pallet 44 1/4" W x 56 3/4" L x 92 5/8" H (112.4 cm x 144.1 cm x 235.3 cm) Shipping weight 1 unit 90 lb. (40.8 kg) 10 units on pallet 920 lb.

(417 kg) All dimensions +/- 1/8" (0.3 cm). All weights +/- 2 lb. (0.9 kg)2 | SPECIFICATIONS - SMART BOARD INTERACTIVE WHITE BOARD -

MODE L X 8 8 5 Touch and gestures Perform mouse functions with your finger, and write digital ink with a pen tray pen or erase it with the eraser. The object awareness feature enables you to pick up a pen, and then write, select or erase without putting the pen back in the tray. Dual sketch capabilities Enables two users to draw simultaneously on the interactive whiteboard surface SMART Ink™ Smooths out the appearance of the digital ink, improving the legibility of your handwriting. The ink becomes an object you can move and manipulate. Lockable pen option Hold down a pen color button on the pen tray until its light flashes to lock the interactive whiteboard in pen mode. In this mode you can use any device as a pen. Early education students and students with special needs can use an object like a tennis ball to write more easily on the surface. Pen tray Removeable end caps for optional accessories. Optical sensors in the pen tray detect when you lift a pen or eraser from the tray. Color buttons on the pen tray enable you to select a pen color. pens and eraser Two ergonomic pens

with a comfort grip and a rectangular eraser Resolution Touch resolution is approximately 4000 x 4000. Screen surface The hard-coated steel surface is durable, optimized for projection, compatible with dry-erase markers and easily cleaned with whiteboard cleaner.

Digitizing technology Four camera DVIT™ (Digital Vision Touch) technology Frame finish Two-tone gray (dark gray approximates Pantone® Charcoal Gray 18-0601 TPX) Wall-mount bracket Two 32" (81.3 cm) wide brackets with ten screws and toggle bolt anchors to support a wall-mounted interactive whiteboard Computer connection 16' (5 m) USB 2.0 cable, 6' (1.8 m) power cable Power requirements Power consumption is less than 7 W (100V to 240V AC, 50/60 Hz, 5V DC 2.0A). Environmental compliance China EIP, EU RoHS, WEEE Regulatory certifications CE, CSA (U.S./Canada), FCC Warranty Five-year limited equipment warranty upon registration. Storage and operating specifications Storage -40°F to 120°F (-40°C to 50°C) Operation 41°F to 95°F (5°C to 35°C) with up to 80% humidity, non-condensing .

1 **TecNoc**
Custom USB Pass Through Plate

1 **Christie Digital LCD Projector**
LW555

Image brightness • 4000 ANSI lumens (single lamp) contrast • 1000:1 (full on/off) uniformity • 90% brightness uniformity (corner to center) Display tech type • 3 x 0.75" Inorganic LCDs native resolution • WXGA (1366 x 800) Native aspect ratio 16:10, selectable aspect ratios 16:9; 4:3, 14:9 Lamp type • 275W UHB lamp life • Normal mode: up to 2000hrs • Eco mode: up to 3000hrs Input signals • VGA through XGA (1600 x 1200) • Accepts current HDTV/DTV formats (480i up to 1080p) • NTSC, NTSC 4.43, PAL, PAL M, SECAM, PAL-N, PAL 60 pixel clock • 150MHz scan rates • Horizontal frequency range 31.5-106kHz • Vertical frequency range 56-120Hz Inputs, control and networking input • HDMI x 1 (HDCP Compliant) • HD 15 x 1 (with HD15 loop-through) • BNC x 5 (R,G,B,H,V & Y, Pb/Cb, Pr/Cr & Composite) • YPbPr (component video RCA x 3) • 1 RCA composite video • Mini DIN 4-pin (S-video) • Audio input (x 4) • Dsub-9 x 1 • LAN port • R/C Jack – Mini jack x 1 • Output HD 15 x 1 (loop-through) • Audio output x 1 mini jack output • Speakers 4W x 4 Optical system • Manual zoom, focus and lens shift Lenses fixed • Short 0.8:1 (121-100102-XX) zoom • Ships with standard lens 1.5-1.8:1 (N/A) • Short 1.2-1.9:1 (121-101103-XX) • Long 1.9-3.8:1 (121-102104-XX) • Ultra Long 3.9-7.3:1 (121-103105-XX) offsets • Vertical and Horizontal lens shift** Accessories standard • Computer cable (Dsub15) • Wireless/wired remote control

• AC line cord UL type (NEMA 6-20P plug type) • European 2P plug type optional • Filter cartridge (003-002119-01) • 275W UHB lamp (003-120457-01) Enhanced feature sets • Auto Detect • Auto Digital keystone (vertical) feature • Anti-theft: Kensington style slot and security bar • Support for closed caption video display (NTSC) • RJ45 LAN connection with network control and SNMP monitoring • Dynamic iris control • Customizable start-up logo Power requirements operating voltage • 90-132 VAC ±10% • 198-264 VAC ±10% operating current • 5.0A max (AC100V) • 2.1A max (AC200V) power • 460W max dissipation • 1570BTU/hr max Dimensions size • Body with lens (LxWxH): 12.52 x 16.46 x 5.47" (318 x 418 x 139mm) weight • 15.8lbs (7.2kg) with lens shipping weight • 25.57lbs (11.6kg) shipping size • (LxWxH): 18.8 x 21.9 x 9.6" (478 x 555 x 244mm) Noise • Standard mode: 37dBA • Eco mode: 31dBA Operating environment • Operating temperature: 40-95°F (5-35°C) • Storage temperature: 14-140°F (-10-60°C) • Humidity (non-condensing): 10-85%

Regulatory approvals • This product conforms to the following regulations related to product safety, environmental requirements and electromagnetic compatibility (EMC): •

FCC Part 15, Subpart B Class A • CISPR22/EN55022 • CISPR24/EN55024 • UL 60950-1 first edition • CAN/CSA-C22.2 No 60950-1-03 first edition • IEC60950-1:2001 • 2002/95/EC RoHS Limited warranty projector • 3 years parts and labor lamp • 500hrs or 120 days (whichever comes first) • Contact an authorized Christie representative for full details of our limited warranty

**1 Chief Projector Mount
RPAU**

Specifications Adjustments: Roll: 4° Pitch: 25° Yaw: 360° Certifications: UL Listed Color: Black Overall Dimensions (H x W x D): 1.8" x 6.5" x 5.5" (44 x 165 x 140 mm) Solution Type: Universal Weight Capacity: 50 lbs (22.7 kg)

**1 Grestron Wireless Access Point
CEN-WAP-ABG-Cm**

Wireless Transceiver: IEEE 802.11a/b/g Wi-Fi (5.8 or 2.4 GHz 2-way RF); 64, 128, & 152-bit WEP encryption; WPA & WAP2 with TKIP & AES Transmit Power: Up to 19 dBm Ethernet 10BaseT/100BaseTX, auto-switching, auto-negotiating, auto-discovery, full/half duplex, TCP/IP, UDP/IP, DHCP client and server, SNMP, IEEE 802.3u & 802.3af compliant Controls and LED Indicators LAN: (1) Green LED, indicates wired Ethernet activity and link status Wi-Fi: (1) Green LED, indicates Wi-Fi activity and connection status Reset: (1) Recessed miniature pushbutton for hardware reset

Connectors - Rear Panel NETWORK PoE: (1) 8-wire RJ45, female; 10BaseT/100BaseTX Ethernet port, 802.3af Power over Ethernet compliant; Connects to LAN via a 802.3af compliant PoE power source

Power Requirements Power over Ethernet: IEEE 802.3af Class 1 PoE Powered Device Enclosure Injection-molded plastic, paintable white matte finish, ceiling mountable using a 1-gang plaster ring or electrical box (2 inch deep minimum)

Environmental Temperature: 32° to 104°F (0° to 40°C) Humidity: 10% to 90% RH (non-condensing)

Heat Dissipation: 11 BTU/Hr

Dimensions Height: 2.54 in (65 mm) Diameter: 4.73 in (120 mm) Weight 6.0 oz (168 g) Available Models CEN-WAP-ABG-CM: Ceiling Mount 802.11a/b/g Wireless Access Point CEN-WAP-ABG-POE-PWE-CM: Ceiling Mount 802.11a/b/g Wireless Access Point w/PoE Injector Included Accessories PWE-4803RU PoE Injector [Included Quantity for CEN-WAP-ABG-POE-PWECM: 1] Available Accessories PWE-4803RU: PoE Injector CEN-SW-POE-5: 5-Port PoE Switch CEN-SWPOE-24: 24-Port Managed PoE Switch

**6 JBL Ceiling mounted loud speaker
Control 24 CT**

Freq. Range (-10 dB): 80 Hz - 20 kHz

Power Capacity: 80 Watts Continuous Program Power 40 Watts Continuous Pink Noise Nominal Sensitivity: 86 dB SPL @ 1 m (3.3 ft)

Nominal Coverage Angle: 130° conical coverage Directivity Factor (Q): 2.4 averaged 500 Hz to 4 kHz Directivity Index (DI): 3.8 averaged 500 Hz to 4 kHz Rated Maximum SPL: 102 dB @ 1 m (3.3 ft) Nominal Impedance (24C): 16 ohms (Min Z 16.1 Ω @ 320 Hz) Transformer Taps (24CT): 70V: 30W, 15W, 7.5W & 3.7W taps 100V: 30W, 15W, & 7.5W taps Transducers: Low-Frequency: 100 mm (4.0 in) Polypropylene-coated, 1" coil on aluminum former High-Frequency: 19 mm (0.75 in) Titanium coated polyester. Physical: Enclosure: Backcan: Formed steel Baffle/Rim: Medium impact polystyrene, fire rated UL94V-0 Overload Protection: Full-range power limiting to protect network and transducers. (On Control 24C, not on Control 24CT) Termination: Removable

locking connector with screw-down terminals. 2 input terminals and 2 loop-thru output terminals. Max. wire size 12 AWG (2.5 mm²) Safety Agency Rating: Suitable for use in air handling spaces per UL1480, UL2043, NFPA90 & NFPA 70. S7232/UL Listed, Signaling Speaker. Transformer UL registered per UL1876. In accordance with IEC60849/EN60849. Outside Dimensions (H x Dia): 200 x 195 mm (7.9 x 7.7 in) 184 mm (7.2 in) front of ceiling tile to back of backcan Cutout Size: 168 mm (6.6 in) Net Weight (ea): 2.7 kg (6 lb) CT: 3.5 kg (8 lb) Shipping Weight (pair): 6.4 kg (15 lb) CT: 8.0 kg (18 lb) Included Accessories: C-shaped support backing plate 2 tile support rails (fits both 2 x 4 ft or 600 x 1200 mm tiles) Cutout template Paint shield Removable locking wiring connector.

- 1 Misc. Audio/Video Cabling and Connectors
- 1 Labor

Director's Conference Room

Qty.	Item Description
1	<p>LG 60" Display 60PV450C PLASMA MODULE Screen Size 60" class (59.8" measured diagonally) Native Display Resolution 1920 x 1080 Brightness 1,500 cd/m² Dynamic Contrast Ratio 3,000,000:1 Protective Skin Glass Yes Color Reproduction (Panel Output) 16 Bit ISM (Image Sticking Minimization) White Wash / Orbiter / Color Wash 600Hz Sub-Field Driving Yes (600Hz Max Sub-Field Driving) Life Span (typical) 100,000 Hours VIDEO Built-in tuner ATSC/NTSC/Clear QAM - 1 Tuner Dual XD Engine Yes Aspect Ratio 16:9 Aspect Ratio Correction 6 Modes (16:9 Just Scan, Set by Program, 4:3, Zoom1, Cinema Zoom1) Just Scan (1:1 Pixel matching) HDMI 1080p/1080i/720p (0% overscan) Component 1080p/1080i/720p RF 1080i/720p Enhanced Noise Reduction 3D & MPEG Color Temperature Control 3 Modes (Warm, Medium, Cool) 24p Real Cinema (3:3 Pulldown) Yes (HDMI 1080 24p) Cinema 3:2/2:2 Pulldown Mode Yes Picture Reset Yes AV Mode (Picture & Mode) Yes Picture Mode 8 Modes (Vivid, Standard, APS, Cinema, Game, Sports, Expert 1, Expert 2) XD Color (Active Color Management) Yes ISFccc Ready Yes Intelligent Sensor Mode Yes xvYCC Yes DTV Signal Strength (Digital) Yes PC Resolution 1920 x 1080 @ 120Hz or better Color Reproduction (Chassis Output) 10-Bit AUDIO Mono/Stereo/Dual (MTS/SAP) Yes Audio Output (Watts - THD 10%) 10W + 10W Speaker System Invisible Speaker (1 Way 2 Speaker) Dolby Digital 5.1 Decoder Yes Surround System Infinite Sound Bass/Treble/Balance Yes Smart Volume Leveler (Auto Volume Leveler) Yes Clear Voice II Yes Auto Volume Leveler II Yes Sound Mode 5 Modes (Standard, Music, Cinema, Sports, Game) Mute Yes SPECIAL FEATURES USB 2.0 MP3 & JPEG Public Display Settings Yes (V 2.5) Intelligent Sensor Yes Auto Demo Yes Picture Wizard II Yes A/V Input Navigation / EZ Input Toggle Yes Input Labeling Yes Quick View (Flashback) Yes Picture Freeze Yes Parental Control w/V-Chip Yes Key Lock Yes Closed Caption Yes SimLink™ (HDMI CEC) Yes CONVENIENCE FEATURES Language 3 (English, Spanish, French) Quick Menu Yes Auto Tuning / Programming Yes Program (Channel) Edit (Add / Delete) Yes Favorite Channel Programming Yes Auto/Manual Clock Yes On/Off Timer Yes Sleep Timer Yes Auto Off / Auto Sleep Yes JACK PACK TV - SIDE AV In Yes (1) HDMI/HDCP Input Yes, 2D: (480i/480p/720p/1080i/1080p), 1 Port PC Mode, SIMPLINK USB 2.0 Yes, (MP3, JPEG) TV - REAR RF In Yes (1) AV In Yes (1) Component In (Y,Pb,Pr) + Audio Yes (2)</p>

(480i/480p/720p/1080i/1080p) Digital Audio Out (Optical) Yes, (1, Optical) HDMI/HDCP Input Yes, 2D: (480i/480p/720p/1080i/1080p), 1 Port PC Mode, SIMPLINK RGB In (D-sub 15pin) - PC Yes (1) PC Audio Input Yes (1) RS-232C In Yes, (1, Control & Service) Remote Control In Yes (1) Wired IR Jack Yes

CABINET/ACCESSORIES TruSlim Frame Yes Cabinet Color Gloss Black Speaker Invisible Speaker Table Stand Included Detachable (20°/20°) Swivel VESA™ Compliant 600 x 400 (60") Local Key Type Touch Sensitive Keys Remote Control Yes, Illuminated Quick Setup Guide Yes Power Cord Yes

POWER EcoSmart - Energy Savings Intelligent Sensor (auto) Yes (automatic) 3 Mode Power Saving Levels Yes (manual) Voltage, Hz 100~240V, 50/60Hz Power Consumption (IEC62087 dynamic 201W (60"), broadcast-content video signal) Stand by Mode Under 0.2W

REQUIRED APPROVALS RoHS Compliant Yes UL, c-UL, FCC Yes

DIMENSIONS & WEIGHT 60PV450C Dimensions without Stand (W×H×D) 54.6" x 32.9" x 2.0" with Stand (W×H×D) 54.6" x 35.6" x 13.2" packaging (W×H×D) 60.8" x 38.2" x 13.0" Weight without Stand 84.9 lbs with Stand 94.0 lbs with packaging 108.2 lbs

LIMITED WARRANTY 2 Years (Parts/Labor)

UPC 60PV450C 7 19192 90245 9

1 Chief LTA5536

Flat Panel Wall Mount

Certifications: UL Listed Color: Black Lateral Shift 16" (406.4mm) Maximum Screen Thickness 6" Minimum Depth : 1.99" (50.5mm)

Mounting Pattern Compatibility (Universal Versions): 100 x 100mm- 895 x 505mm

Orientation: Landscape Overall Dimensions (H x W x D): 13.2" x 34.4" x 2.0" (335 x

875 x 51mm) Solution Type: Custom Tilt: + 0° , - 12° Typical Screen Sizes 37 - 63"

Wall Stud Compatibility (inches): 12 - 34" Weight Capacity : 200 lbs (90.7kg)

1 Crestron QM transmitter

QM-TX

Video Signal Types: RGB and composite, S-Video, or component video

Video/HDTV Formats: NTSC or PAL, HDTV up to 1080i/1080p RGB Formats: RGBHV, RGBS, or RGsB Gain: 0dB (75 ohms terminated) Maximum Resolution: 1920 x 1200 @ 60Hz (at unity gain) with maximum cable length of 450 feet and maximum compensation at receiver

Audio A-D Conversion : 24-bit, 48 kHz Frequency Response

: 20Hz to 20kHz Connectors R/C/Pr, G/Y/Y, B/COMP/Pb, H, V: (5) BNC female, Multi-

format RGB/Video input; Formats: RGBHV, RGBS, RGsB, YPbPr, S-Video (Y/C),

composite; Input Impedance: 75 ohms; H/V Sync Impedance: 620 ohms; Maximum

Input Level: 0.7 Vp-p for RGB and C of S-Video; 1 Vp-p for composite and Y of S-

Video; Maximum H/V Sync Level: 5 Vp-p; Signal sensing on G/Y/Y, B/COMP/Pb, and H

G: (1) 6-32 screw, chassis ground lug AUDIO: (1) 5-pin 3.5mm detachable terminal

block; Balanced/unbalanced stereo line-level audio input; Maximum Input Level: 4

Vrms balanced, 2 Vrms unbalanced; Input Impedance: 10k ohms balanced, 5k ohms

unbalanced QM OUT : (1) 8-wire RJ45 female, QuickMedia output port; Connects to

QM input port of any QuickMedia device via CresCAT-QM or CresCAT-IM cable* NET:

(2) 4-pin 3.5mm detachable terminal blocks; Cresnet slave ports, paralleled;

Connect to Cresnet control network via CresCAT-QM or Cresnet cable

Buttons & LED Indicators PWR: (1) green LED, indicates 24 Volts DC power supplied

from Cresnet control network NET: (1) yellow LED, indicates communication with

Cresnet system VIDEO ACT : (1) red LED, indicates signal at the G/Y/Y, B/COMP/PB,

or H connectors SETUP (rear) : (1) miniature pushbutton and red LED, used for touch-

settable ID (TSID) **Power Requirements** Cresnet Power Usage: 5 Watts (0.21 Amp @

24 Volts DC) **Environmental** Temperature: 41° to 104°F (5° to 40°C) Humidity: 10% to

90% RH (non-condensing)

Enclosure Chassis: Steel, black matte powder coat finish Faceplate: Extruded aluminum, black matte powder coat finish with polycarbonate label overlay Mounting: Freestanding or 0.5U 19-inch rack-mountable (adhesive feet included, ST-RMK rack kit sold separately)

1 Crestron Control Processor MPS300

Processor

CPU: 32-bit Freescale ColdFire® Microprocessor **Memory** 32 MB SDRAM, 256 KB NVRAM, 16 MB Flash **Operating System**

Real-time, preemptive, multitasking kernel, multi-threaded; FAT32 filesystem with long names; supports SIMPL™ Windows® and SIMPL+® Ethernet 10/100BaseT, static IP or DHCP/DNS, SSL, auto-negotiating, full duplex TCP/IP, UDP/IP, CIP, SMTP, SNMP, built-in Web server and e-mail client; supports Crestron e-Control® 2 XPanel and RoomView® applications **Video Switcher:** 8x7 crosspoint matrix including 3x3 QM signal routing, local QM delay skew compensation, RGB pass-thru mode (multi-format via RGB output connection) **Signal Types:** RGB and composite, S-Video, or component video (does not transcode) **Video/HDTV Formats:** NTSC or PAL, HDTV up to 1080i/1080p **RGB Formats:** RGBHV, RGBS, RGsB **Maximum Resolution:** 2048 X 1536 @ 60Hz (1920 X 1200 @ 60Hz via QM)

Blanking Time: < 0.1 second **Sync Rise/Fall Time:** 3.5 ns maximum

Sync Latency: < 30 ns **Gain:** 0dB (75 ohms terminated) **QM Cable Compensation:** 10-bit digitally controlled PEAK (bandwidth) and BOOST (frequency); 4-bit digitally controlled SKEW delay, 0 to 22 ns (independent for R, G, and B) **Audio Switcher/Preamp:** 8x4 stereo crosspoint matrix including 3x3 QM signal routing, 2-channel gated mic preamp with compressor & limiter, 8-channels mic EQ, 10X5 mic/program matrix mixer, 8x2 mic matrix mixer per each of 3 QM outputs, stereo volume/tone control and EQ per each of PROGRAM and RECORD outputs, mono volume/tone control and EQ/delay on SPEECH output, integrated power amplifier, QM auto-compensation with self-peaking **A/D/D-A Conversion:** 24-bit, 48 kHz **Volume Range:** -80 to +20 dB, 0.1dB steps (output); -80 to 0 dB, 0.1dB steps (mixer)

Mute: -100dB (electronic), -120dB (relay) **Input Compensation:** ±10dB, 0.1dB steps **Mic Input Gain:** 0 to 100 % (40dB range) plus mute **Gate Level (Threshold):** 0 to 100 % **Gate Attack:** 0 to 100 mS

Gate Decay (Release): 0 to 5000 mS **Gate Depth:** -80dB (mute) to 0dB, 0.1dB steps **Compression Threshold:** -80dB to +20dB, 0.1dB steps **Limit Threshold:** 0dB to 20dB, 0.1dB steps **Comp/Lim Attack:** Separately adjustable 0.1 to 300 mS **Comp/Lim Release:** Separately adjustable 1 to 500 mS **Compression Ratio:** 1.0:1 to 10.0:1 **Comp/Lim Curve:** Separately selectable hard or soft knee **Mic EQ:** ±12dB, 0.1 dB steps at 160, 500, 1.2k, and 3k Hz **Bass/Treble:** ±12dB, 0.5dB steps at 100Hz and 10kHz **Output Equalization:** 10-band graphic (GEQ) + 2-band parametric (PEQ) **GEQ:** ±12dB, 0.1dB steps at 31, 63, 125, 250, 500, 1k, 2k, 4k, 8k, and 16k Hz **PEQ Filter Gain/Center Frequency:** ±12dB, 0.1dB steps at 25Hz to 20kHz, 0.5Hz steps **PEQ Filter Bandwidth:** 0.1 to 3.0 octaves, 0.1 octave steps **PEQ Filter Types:** Low Pass, High Pass, Peaking Eq, Notch, Treble Shelf, Bass Shelf **Speech Output Delay:** 0 to 40 mS, 1mS steps **Frequency Response:** 20Hz to 20kHz ±0.5dB (PROG/REC OUT), 50Hz to 20kHz ±0.5dB (SPEECH OUT), 20Hz to 20kHz ±0.5dB (SPEAKER @ 8 ohms), 100Hz to 20kHz ±1.5dB

(SPEAKER @ 70V or 100V) **S/N Ratio:** 95dB (PROG/REC OUT @ 10dBV, 20Hz to 20kHz A-weighted), 95dB (SPEECH OUT @ 10dBV, 50Hz to 20kHz A-weighted), 90dB (SPEAKER @ 8 ohms, full output, 20Hz to 20kHz A-weighted), 90dB (SPEAKER @ 70V or 100V, full output, 20Hz to 20kHz A-weighted) **THD+N:** 0.02% (PROG/REC OUT

@ 10dBV, 20Hz to 20kHz), 0.02% (SPEECH OUT @ 10dBV, 50Hz to 20kHz), 0.7% (SPEAKER @ 8 ohms, full output, 20Hz to 20kHz), 0.7% (SPEAKER @ 70V or 100V, full output, 100Hz to 20kHz A-weighted) **Stereo Separation:** -80dB (PROG/REC OUT @ 10dBV, 20Hz to 20kHz), -60dB (SPEAKER @ 8 ohms, full output, 20Hz to 20kHz) **Channel Crosstalk:** -80dB (AUD IN @ 10dBV, 20Hz to 20kHz)

1 Crestron Touch Panel TPS-6X

Touchscreen Display

Display Type: TFT Active matrix color LCD Size: 5.7 inch (145 mm) diagonal Aspect Ratio: 4:3 VGA Resolution: 640 x 480 pixels Brightness: 350 nits (cd/m²) Contrast: 400:1 Color Depth: 18-bit, 256k colors Illumination: Backlit fluorescent Viewing Angle: 180° horizontal, +80°/-70° vertical Touchscreen: Resistive membrane

Buttons & Switches Sleep: (1) Programmable top-mounted pushbutton (left); normally initiates "Sleep" mode when docked, turns power on/off when undocked; also resets touchpanel if held for 5 seconds Brightness: (1) Programmable top-mounted pushbutton (right), normally sets display brightness level Hard Keys: (8) Optional programmable pushbuttons, engravable backlit text (2) (default engraving included) Up/Down: (2) Optional programmable "up/down" pushbuttons, backlit, engravable backlit text (2) on bezel (default engraving included) Thumbpad: (5) Optional programmable pushbuttons for 4-way directional navigation and "enter", backlit

Battery: (1) Rear panel recessed DIP switch, shuts off battery for long-term storage **LED Indicators** Battery: (1) Green LED, indicates battery condition and charging status when docked **Connectors** Docking Connector: (1) multi-pin connector; Mates with the docking port on the docking station [6] See the TPS-6X-IMCW interface module [6] specification for other connectors **Memory** SDRAM: 32 MB Flash: 32 MB Maximum Project Size: 28 MB **Graphic Engine** Isys engine; 16-bit non-palette graphics; 65,536 colors; Synapse image rendering algorithm; multi-mode objects, DNav dynamic menu objects, dynamic graphics, PNG translucency, full-motion (60 fps) animation, color key video windowing **RF Wireless** RF Transceiver: 2-way RF, 2.4 GHz ISM Channels 11-26 (2400 to 2483.5 MHz), IEEE 802.15.4 compliant Transmitting Power: 75 mW (Ch.11), 100 mW (Ch.12-23), 15 mW (Ch.24), 3.5 mW (Ch.25), 1 mW (Ch.26) @ High Setting; 1 mW (Ch.11-25), 0.5 mW (Ch.26) @ Low Setting Range (typical): 100 to 200 feet maximum indoor, 1000 feet outdoor, subject to site-specific conditions Gateway: Requires a CEN-HPRFGW Extended Range RF Gateway [5] Roaming: Supports roaming amongst up to 8 RF gateways **IR Wireless** [1] IR Transmitter: 38 kHz, RC5 format Range: 50 feet typical

1 Crestron Wireless Access Point CEN-WAP-ABG-Gm

Wireless Transceiver: IEEE 802.11a/b/g Wi-Fi (5.8 or 2.4 GHz 2-way RF); 64, 128, & 162-bit WEP encryption; WPA & WAP2 with TKIP & AES Transmit Power: Up to 19 dBm **Ethernet** 10BaseT/100BaseTX, auto-switching, auto-negotiating, auto-discovery, full/half duplex, TCP/IP, UDP/IP, DHCP client and server, SNMP, IEEE 802.3u & 802.3af compliant

Controls and LED Indicators

LAN: (1) Green LED, indicates wired Ethernet activity and link status

Wi-Fi: (1) Green LED, indicates Wi-Fi activity and connection status

Reset: (1) Recessed miniature pushbutton for hardware reset

Connectors - Rear Panel **NETWORK PoE:** (1) 8-wire RJ45, female; 10BaseT/100BaseTX Ethernet port, 802.3af Power over Ethernet compliant; Connects to LAN via a 802.3af compliant PoE power source

Power Requirements Power over Ethernet: IEEE 802.3af Class 1 PoE Powered

Device Enclosure Injection-molded plastic, paintable white matte finish, ceiling mountable using a 1-gang plaster ring or electrical box (2 inch deep minimum)
Environmental Temperature: 32° to 104°F (0° to 40°C) Humidity: 10% to 90% RH (non-condensing)

Heat Dissipation: 11 BTU/Hr **Dimensions** Height: 2.54 in (65 mm) Diameter: 4.73 in (120 mm) **Weight** 6.0 oz (168 g) **Available Models** CEN-WAP-ABG-CM: Ceiling Mount 802.11a/b/g Wireless Access Point CEN-WAP-ABG-POE-PWE-CM: Ceiling Mount 802.11a/b/g Wireless Access Point w/PoE Injector Included Accessories PWE-4803RU PoE Injector [Included Quantity for CEN-WAP-ABG-POE-PWECM: 1] Available Accessories PWE-4803RU: PoE Injector CEN-SW-POE-5: 5-Port PoE Switch CEN-SWPOE-24: 24-Port Managed PoE Switch

**1 LOGITECH Wireless Keyboard/ Mouse
MX505**

System Requirements Windows-based computer Windows® XP or Windows Vista® or Windows® 7 USB port CD-ROM drive
Warranty Information 3-year limited hardware warranty **Package Contents** Logitech® Bluetooth® MX™ Keyboard Logitech® Bluetooth® MX™ Revolution Laser Mouse USB Bluetooth® mini-receiver (can be used as Bluetooth® hub) 4 AA alkaline batteries CD with software, comfort guidelines, and help center Quick-Start guide

**6 JBL Ceiling mounted loud speaker
Control 24 CT**

Freq. Range (-10 dB)1: 80 Hz - 20 kHz
Power Capacity2: 80 Watts Continuous Program Power 40 Watts Continuous Pink Noise Nominal Sensitivity3: 86 dB SPL @ 1 m (3.3 ft)
Nominal Coverage Angle4: 130° conical coverage **Directivity Factor (Q)**: 2.4 averaged 500 Hz to 4 kHz **Directivity Index (DI)**: 3.8 averaged 500 Hz to 4 kHz **Rated Maximum SPL**: 102 dB @ 1 m (3.3 ft) **Nominal Impedance** (24C): 16 ohms (Min Z 16.1 Ω @ 320 Hz) **Transformer Taps** (24CT): 70V: 30W, 15W, 7.5W & 3.7W taps 100V: 30W, 15W, & 7.5W taps **Transducers**: Low-Frequency: 100 mm (4.0 in) Polypropylene-coated, 1" coil on aluminum former High-Frequency: 19 mm (0.75 in) Titanium coated polyester.
Physical: **Enclosure**: Backcan: Formed steel **Baffle/Rim**: Medium impact polystyrene, fire rated UL94V-0 **Overload Protection**: Full-range power limiting to protect network and transducers. (On Control 24C, not on Control 24CT) **Termination**: Removable locking connector with screw-down terminals. 2 input terminals and 2 loop-thru output terminals. Max. wire size 12 AWG (2.5 mm²) **Safety Agency Rating**: Suitable for use in air handling spaces per UL1480, UL2043, NFPA90 & NFPA 70. S7232/UL Listed, Signaling Speaker. Transformer UL registered per UL1876. In accordance with IEC60849/FN60849. **Outside Dimensions** (H x Dia): 200 x 195 mm (7.9 x 7.7 in) 184 mm (7.2 in) front of ceiling tile to back of backcan **Cutout Size**: 168 mm (6.6 in) **Net Weight** (ea): 2.7 kg (6 lb) CT: 3.5 kg (8 lb) **Shipping Weight** (pair): 6.4 kg (15 lb) CT: 8.0 kg (18 lb) **Included Accessories**: C-shaped support backing plate 2 tile support rails (fits both 2 x 4 ft or 600 x 1200 mm tiles) Cutout template Paint shield Removable locking wiring connector.

Wall Plate VGA and Video with Audio

**1 Biamp Digital Signal Processor
Nexia TC**

8 wide-band AEC balanced mic/line inputs • 2 standard balanced mic/line inputs • 4

balanced mic/line outputs • telephone interface with line & set connections • Ethernet port for software configuration/control • serial port for third-party RS-232 remote control • NexLink ports for multi-unit system designs • Nexia software for Windows® XP Professional/Vista • pre-configured I/O with definable processing • RoHS compliance and AES grounding practices • CE marked and UL/C-UL listed • covered by Blamp Systems' five-year warranty • Ability to select, view, and calibrate:

° Mixers, Equalizers, Filters, Crossovers, Dynamics, Routers, Delays, Controls, Meters, Generators, Diagnostics • Telephone Interface capabilities include: ° initiation of outgoing calls ° detection and answering of incoming calls ° line echo cancellation ° TouchTone™ decoding ° caller ID reception ° call progress detection ° line intrusion detection ° continuous line status and fault monitoring Frequency Response (20Hz~20kHz @ +4dBu): +0/-0.4dB THD+N (20Hz~20kHz @ +4dBu): line level < 0.006% mic level < 0.05% Equivalent Input Noise (20Hz~20kHz, 66dB gain, 150 ohm): -125dBu Dynamic Range 20Hz~20kHz, 0dB): > 105dB Maximum Gain (input channels): 66dB

Crosstalk (channel-to-channel @ 1kHz): line level < -80dB mic level < -75dB Output Impedance (balanced): 200 ohms Input Impedance (mic/line balanced): 8k ohms Input Gain Range (variable trim): 0dB ~ +66dB Maximum Output (balanced): +24dBu Maximum Input (mic/line): +24dBu Full Scale Output Level (six selections) -31dBu ~ +24dBu Telephone Interface: ringer equivalency number 0.0B dynamic range 67dBu frequency response 250Hz ~ 3.4kHz THD < 0.3% transhybrid balance 30dB Tail Length: up to 300ms

Convergence: up to 100dB/sec Phantom Power: +48 VDC (7mA/input

Sampling Rate: 48kHz A/D - D/A Converters: 24-bit Power Consumption (100~240VAC 50/60Hz): 65 watts

Dimensions: height 1.75 inches (45mm) width 19 inches (483mm) depth 11.15 inches (283mm) Weight: 8.6 lbs. (3.9kg) Compliance: AES48-2005 Grounding & EMC practices EU Directive 2002/95/EC, RoHS directive CE marked UL listed

3 CROWN PZM-10

Polar pattern, hemispherical. Frequency range PZM®-10: 80 to 20,000 Hz; PZM®-10LL: 100 to 20,000 Hz Sensitivity PZM®-10: 2.5 mV/Pa (-52 dBV); PZM®-10 LL: 1.4 V/Pa (+3 dBV) Max. SPL 120 dB Equivalent noise level 26 dB-A Signal/noise ratio 68 dB (A-weighted) Impedance PZM®-10: 240 ohms; PZM®-10 LL: 75 ohms Connector PZM®-10: 3-pin XLR; PZM®-10 LL: stripped and tinned leads Finish Off-white. May be painted any color. Dimensions Ø 3.9 cm x 7.2 cm (Ø 1.53 x 2.829 in.) Net weight PZM®-10: 74 g (22.6 oz.); PZM®-10 LL: 93 g (3.3 oz.) ROHS OK

1 Misc. Audio/Video Cabling and Connectors

1 Labor

SECTION THREE: VENDOR BID

- 3.1 **Economy of Preparation:** Bids should be prepared simply and economically providing a straightforward, concise description of the Vendor's abilities to satisfy the requirements of the RFQ. Emphasis should be placed on completeness and clarity of the content.
- 3.2 **Incurring Cost:** Neither the State nor any of its employees or officers shall be held liable for any expenses incurred by any Vendor responding to this RFQ, including but not limited to preparation, delivery, or travel.

3.3 **Bld Format:** Bidders must use cost forms provided in this RFQ.

3.4 **Bid Submission:**

Vendors responding to this RFQ should submit:

Two originals to:

Purchasing Division
2019 Washington Street, East
P.O. Box 50130
Charleston, WV 25305-0130

The outside of the envelope or package(s) for both the technical and the cost should be clearly marked:

Vendor: _____
Buyer: _____
Req #: _____
Opening Date: _____
Opening Time: 1:30 p.m.

3.5 **Purchasing Affidavit:** *West Virginia Code* §5A-3-10a requires that all bidders submit an affidavit regarding any debt owed to the State. The affidavit must be signed and submitted prior to award. It is preferred that the affidavit be submitted with the bid.

3.6 **Resident Vendor Preference:** In accordance with *West Virginia Code* §5A-3-37, Vendors may make application for Resident Vendor Preference. Said application must be made on the attached Resident Vendor Certification form at the time of bid submission.

SECTION FOUR: EVALUATION AND AWARD

4.1 **Evaluation Process:** Bids will be evaluated against the established criteria. The Vendor who demonstrates that they meet all of the mandatory specifications, has appropriately presented within their written bid their understanding in meeting the goals and objectives of the project; and attains the lowest cost of all Vendors shall be awarded the contract.

4.1.1 **Cost Evaluation:** The Agency will review the cost bids and make a final recommendation to the Purchasing Division.

4.3 **Independent Price Determination:** A bid will not be considered for award if the price in the bid was not arrived at independently without collusion, consultation, communication, or agreement as to any matter relating to prices with any competitor unless the bid is submitted as a joint venture.

4.4 **Rejection of Bids:** The State reserves the right to accept or reject any or all bids, in part or in whole at its discretion. The State further reserves the right to withdraw this RFQ at any time and for any reason. Submission of or receipt of bids by the State confers no rights upon the bidder nor obligates the State in any manner.

4.5 **Vendor Registration:** Vendors participating in this process should complete and file a Vendor Registration and Disclosure Statement (Form WV-1) and remit the registration fee. Vendor is not required to be a registered Vendor in order to submit a bid, but the successful

bidder must register and pay the fee prior to the award of an actual purchase order or contract.

SECTION FIVE: CONTRACT TERMS AND CONDITIONS

- 5.1 **Contract Provisions:** The RFQ and the Vendor's response will be incorporated into the contract by reference. The order of precedence shall be the contract, the RFQ and any addendum, and the vendor's bid in response to the RFQ.
- 5.2 **Public Record:** All documents submitted to the State Purchasing Division related to purchase orders or contracts are considered public records. All bids or offers submitted by Vendors shall become public information and are available for inspection during normal official business hours in the Purchasing Division Records and Distribution center after the bid opening. Certain information, such as reasons for disqualification, will not be available until after the contract award, pursuant to *West Virginia Code* §5A-3-11(h) and *West Virginia Code of State Rules* §148-1-6.2.5.
- 5.2.1 **Risk of Disclosure:** The only exemptions to disclosure of information are listed in *West Virginia Code* §29B-1-4. Any information considered a trade secret must be separated from the Vendor submission and clearly labeled as such. Primarily, only trade secrets, as submitted by a bidder, are exempt from public disclosure. The submission of any information to the State by a Vendor puts the risk of disclosure on the Vendor. The State does not guarantee non-disclosure of any information to the public.
- 5.2.2 **Written Release of Information:** All public information may be released with or without a Freedom of Information request; however, only a written request will be acted upon with duplication fees paid in advance. Duplication fees shall apply to all requests for copies of any document. Currently, the fees are 50 cents per page, or a minimum of \$10.00 per request, whichever is greater.
- 5.3 **Conflict of Interest:** Vendor affirms that neither it nor its representatives have any interest nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency.
- 5.4 **Vendor Relationship:** The relationship of the Vendor the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents.

Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this RFQ and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever.

Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, *et cetera* and the filing of all necessary documents, forms and returns pertinent to all of the foregoing.

Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns. The Vendor shall not assign, convey, transfer, or delegate any of its responsibilities and obligations under this contract to any person, corporation, partnership, association, or entity without expressed written consent of the Agency.

- 5.4.1 Subcontracts/Joint Ventures: The Vendor may, with the prior written consent of the State, enter into subcontracts for performance of work under this contract.
- 5.4.2 Indemnification: The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the contract in a manner not authorized by the contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage laws.
- 5.4.3 Governing Law: This contract shall be governed by the laws of the State of West Virginia. The Vendor further agrees to comply with the Civil Rights Act of 1964 and all other applicable laws and regulations as provided by Federal, State, and local governments.
- 5.5 **Non-Appropriation of Funds**: If funds are not appropriated for the Agency in any succeeding fiscal year for the continued use of the services covered by this contract, the State may terminate the contract at the end of the affected current fiscal period without further charge or penalty. The State shall give the Vendor written notice of such non-appropriation of funds as soon as possible after the Agency receives notice. No penalty shall accrue to the Agency in the event this provision is exercised.
- 5.6 **Changes**: If changes to the contract become necessary, a formal contract change order will be negotiated by the State, the Agency, and the Vendor.
- As soon as possible, but not to surpass thirty (30) days after receipt of a written change request from the Agency, the Vendor shall determine if there is an impact on price with the change requested and provide the Agency a written Statement identifying any price impact on the contract. The Vendor shall provide a description of any price change associated with the implementation.
- NO CHANGE SHALL BE IMPLEMENTED BY THE VENDOR UNTIL SUCH TIME AS THE VENDOR RECEIVES AN APPROVED WRITTEN CHANGE ORDER FROM THE PURCHASING DIVISION.**
- 5.7 **Price Quotations**: The price(s) quoted in the Vendor's bid will not be subject to any increase and will be considered firm for the life of the contract unless specific provisions have been provided in the original specifications.
- 5.8 **Invoices and Progress Payments**: The Vendor shall submit invoices, in arrears, to the Agency at the address on the face of the purchase order labeled "Invoice To." Progress

payments may be made at the option of the Agency on the basis of percentage of work completed if so defined in the final contract.

- 5.9 **Contract Termination:** The State may terminate any contract resulting from this RFQ immediately at any time the Vendor fails to carry out its responsibilities or to make substantial progress under the terms of this RFQ and resulting contract. The State shall provide the Vendor with advance notice of performance conditions which may endanger the contract's continuation. If after such notice the Vendor fails to remedy the conditions within the established timeframe, the State shall order the Vendor to cease and desist any and all work immediately. The State shall be obligated only for services rendered and accepted prior to the date of the notice of termination.

The contract may be terminated by the State with thirty (30) days prior notice pursuant to *West Virginia Code of State Rules* § 148-1-7.16.2.

5.10 **Special Terms and Conditions:**

- 5.10.1 **Insurance Requirements:** *Insurance certificates are required prior to award, but are not required at the time of bid.*

- Public liability: \$1,000,000.00
- Property damage: \$1,000,000.00
- Professional liability (medical, advertising, *et cetera*): \$500,000.00

- 5.10.3 **License Requirement:** All federal and state licenses required by law.

- 5.11 **Record Retention (Access and Confidentiality):** Vendor shall comply with all applicable Federal and State rules, regulations, and requirements governing the maintenance of documentation to verify any cost of services or commodities rendered under this contract by the Vendor. The Vendor shall maintain such records a minimum of five (5) years and make such records available to Agency personnel at the Vendor's location during normal business hours upon written request by the Agency within ten (10) days after receipt of the request.

Vendor shall have access to private and confidential data maintained by the Agency to the extent required for the Vendor to carry out the duties and responsibilities defined in this contract. Vendor agrees to maintain confidentiality and security of the data made available and shall indemnify and hold harmless the State and the Agency against any and all claims brought by any party attributed to actions of breach of confidentiality by the Vendor, subcontractors, or individuals permitted access by the Vendor.

Attachment A: Bidder Response Sheet

Provide a response regarding the following: firm and staff qualifications and experience in completing similar projects; 3 references; copies of any staff certifications or degrees applicable to this project; proposed staffing plan; descriptions of past projects completed entailing the location of the project, project manager name and contact information, type of project, and what the project goals and objectives were and how they were met.

Attachment A: Bidder Response Sheet

References:

1. West Virginia Public Service Commission
PO Box 812
Charleston, WV 25323
(304) 340-0778
Kevin McGraw

Main Hearing Room Project

GSI designed and built systems for display, sound reinforcement and live streaming for public hearings. The system provides automatic camera switching based on microphone gating and microphone ducking for improved audio performance. The system included dual projection display, Crestron control system with "X Panel" support via the Local Area Network, wired and wireless control Panels. The system uses "Cobranet" digital audio infrastructure to eliminate any extraneous RF interference and new ceiling speakers were provided for the hearing room as well as overflow areas.

2. St. Mary's Medical Center
2900 1st Ave.
Huntington, WV 25702
Lisa Kersey
(304) 526-1864
lisa.kersey@st-marys.org

Center for Education

GSI designed and built multiple training classrooms featuring large screen projection systems, room audio systems and Crestron control systems with QuickMedia switching and distribution.

3. West Virginia University
Robert C. Byrd Health Sciences
One Medical Center Drive
Morgantown, WV 26506
Gerard Donahue
(304) 293-7335
gdonahue@hsc.wvu.edu

GSI has supplied several dozen systems or HSC for conference rooms, high technology classrooms, Telemedicine systems that operate all over West Virginia, large screen display systems for lecture halls and many others. All feature Crestron control systems and Biamp audio processing.

Recently GSI supplied a system for the "West Virginia Room". This room is the main conference room for HSC's Chancellor. It included High Definition Video Conferencing, large screen display, Crestron control systems and room audio.

Statement of GSI Experience

The staff of Grandview Systems has more than 100 years combined experience in the design, installation and maintenance of sophisticated Audio/Visual systems throughout West Virginia. Grandview Systems Inc. provides systems for Distance Learning, Video Telemedicine, Large Venue Display Systems, Conference Meeting Rooms for Businesses, Hotels and Resorts, Universities, and State Agencies, Sound Reinforcement and Large Public Address Systems and many others types of systems.

GSI has completed hundreds of similar projects throughout the state.

Grandview Systems Inc. (GSI) is a privately owned, West Virginia based company. GSI only does business in West Virginia. GSI began operations in late 2006 at its current location in Nitro.

GSI's staff has many years of experience at GSI, as well as other AV Integration vendors in designing, installing and maintain AV systems.

Key GSI Staff

Brian McCormick, Installation Manager

Mr. McCormick has over 20 years' experience in installing systems all over West Virginia. He is certified by ICIA as a Certified Installer/Technician and has completed many seminars by vendors such as Crestron, Cisco, Biamp and others.

Kenny Watson, Software Designer

Mr. Watson has achieved the level of "Master Programmer" by Crestron.

Tom Sizemore, President

Mr. Sizemore is the owner of GSI and has been since its creation in 2006. He has more than 25 years' experience in the AV industry as a salesman, sales engineer, and sales manager.



Certified Technology Specialist

Brian McCormick

has been examined and has demonstrated competence in all technical aspects of a Certified Technology Specialist, has met the requirements of the InfoComm independent Certification Committee necessary for professional competency, is in good standing in the Directory of Certified Technology Specialists, has agreed to abide by the CTS Code of Ethics and Conduct, and is therefore entitled to use the name Certified Technology Specialist and the CTS® designation.

Effective Date
July 19, 2004

Date of Expiration
September 30, 2013

Certification Number
192265

Spencer Bullins

Spencer Bullins, CTS
Chair, InfoComm independent
Certification Committee



infoComm
INTERNATIONAL®



The InfoComm Certified Technology Specialist certification is accredited by the American National Standards Institute (ANSI) under the International Standard ISO/IEC 17024 General Requirements for Bodies Operating Certification Schemes of Persons program.

Crestron Technical Institute

Master Programmer



Kenny Watson
2010

Attachment B: Cost Bid Sheet

WEST VIRGINIA LOTTERY
REQUEST FOR QUOTATION LOT493

COMMISSIONER'S CONFERENCE ROOM

	ITEM DESCRIPTION	MANUFACTURER	MODEL NUMBER	Qty	PRICE	EXTENDED PRICE
	Screen (OFE)	Draper	16x9 Screen	2	\$ —	\$ —
	Lift (OFE)	Draper	Orbiter	2	\$ —	\$ —
	LVC	Draper	LVC III	2	\$ 200	\$ 400
Alternate *	Projector <i>Panasonic PT-EW530U</i>	CHRISTIE	LW555	2	\$ 2912	\$ 5824
Alternate *	Speakers <i>Sound Tube CM42-EZS-11</i>	JBL	Control 24cT	10	\$ 79	\$ 788
Alternate *	Amplifier 8 channel <i>BIAMP MCA8150</i>	QSC	CX108V	1	\$ 1058	\$ 1058
	USB/SD recording device (rs232)	Denon	DN-F650R	1	\$ 694	\$ 694
	DSP	BIAMP	NEXIA TC	1	\$ 2116	\$ 2116
	Wireless Hand Held (ND767 capsule)	EV	FMR500HD-A	2	\$ 508	\$ 508
	Wireless Microphone System	Revo Labs	01-HDEXEC-NM	1	\$ 4285	\$ 4285
			01-HDTBLMIC-DR-			
	Directional Table Top Mics	Revo Labs	11	8	\$ 288	\$ 2306
	Wireless AP	Crestron	CEN-WAP-ABG-CM	1	\$ 235	\$ 235
	Control System	Crestron	MP5300-70	1	\$ 3824	\$ 3824
	Wireless Touch Panel	Crestron	TPS 6X	1	\$ 1882	\$ 1882
	Wall plate VGA and Video with Audio	Crestron	OMWMC	2	\$ 647	\$ 1294
	DVD Blu Ray Payer	Sony	BDP-S480s	1	\$ 164	\$ 164
	Misc Audio Cable and Connectors	LHS/WW	Misc material	1	\$ 309	\$ 309
	Rack 24 RU Floor standing 27" Depth	Middle Atlantic	WRK-24SA-27	1	\$ 654	\$ 654
	Labor	LHS/WW	Installation/Training		\$ 3050	\$ 3050
					Total	\$ 29,664

CONFERENCE ROOM 1036

	Audio Codec	Biamp	NEXIA TC	1	\$ 2116	\$ 2116
	Pressure Zone Microphone	Crown	P2M-10	3	\$ 127	\$ 381
	USB/SD recording device (rs232)	Denon	DN-F650R	1	\$ 694	\$ 694
	LCD 60"	LG	60PV450C	1	\$ 1294	\$ 1294
	Wall Mount	Chiof	LTA5536	1	\$ 165	\$ 165
	Cat 5 RGBHV HALUN with Audio	Crestron	QM-TX	1	\$ 647	\$ 647
	Control System	Crestron	MP5300	1	\$ 3765	\$ 3765

Alternate	QuickMedia Receiver	Crestron	QM-RX	1	\$ 765	\$ 765
	Wireless TP	Crestron	TPS 6X	1	\$ 1882	\$ 1882
	Wireless AP	Crestron	CEN-WAP-ABG-CM	1	\$ 235	\$ 235
	* Speakers SoundTUBE CM42-EZS-11	JBL	Control 24cT	6	\$ 79	\$ 473
	Cable	Cat5	Belden	1	\$ 209	\$ 209
	Materials, rack screws, install hardware	LHS/WV	Misc material	1	\$ 150	\$ 150
	Labor	LHS/WV	Installation/Trainlog		\$ 2000	\$ 2000
			Total			\$ 14,777

CONFERENCE ROOM 1214

Alternate	Audio Codec	Biamp	NEXIA TC	1	\$ 2116	\$ 2116
	Pressure Zone Microphone	Crown	PZM-10	3	\$ 127	\$ 381
	LCD 60"	LG	G0PV450C	1	\$ 1294	\$ 1294
	Wall Mount	Chief	LTA5536	1	\$ 165	\$ 165
	Cat 5 RGBHV BALUN with Audio	Crestron	QM-TX	1	\$ 647	\$ 647
	Control System	Crestron	MPS300	1	\$ 3765	\$ 3765
	QuickMedia Receiver	Crestron	QMRX	2	\$ 765	\$ 1529
	Wireless TP	Crestron	TPS 6X	1	\$ 1882	\$ 1882
	Wall plate VGA and Video with Audio	Crestron	QMWMC	2	\$ 647	\$ 1294
	Wireless AP	Crestron	CEN-WAP-ABG-CM	1	\$ 235	\$ 235
	Interactive White Board	Smart	SBX885	1	\$ 1876	\$ 1876
	USB Wall Plate	TecNec	WPLUSB	1	\$ 12	\$ 12
Alternate	* Projector Panasonic PT-EW530U	Christie	LW555	1	\$ 2912	\$ 2912
	Projector Mount	Chief	RPAU	1	\$ 165	\$ 165
Alternate	* Speakers SoundTUBE CM42-EZS-11	JBL	Control 24cT	6	\$ 79	\$ 473
	Cable	Cat5	Belden	1	\$ 150	\$ 150
	Materials, rack screws, install hardware	LHS/WV	Misc material	1	\$ 209	\$ 209
	Labor	LHS/WV	Installation/Training		\$ 2300	\$ 2300
			Total			\$ 21,406

DIRECTOR'S CONFERENCE ROOM

Alternate	LCD 60"	LG	G0PV450C	1	\$ 1294	\$ 1294
	Wall Mount	Chief	LTA5536	1	\$ 165	\$ 165
	Cat 5 RGBHV BALUN with Audio	Crestron	QM-TX	1	\$ 647	\$ 647
	Control System	Crestron	MPS300	1	\$ 3765	\$ 3765
	Wireless TP 5.7 "	Crestron	TPS 6X	1	\$ 1882	\$ 1882
	Wireless AP	Crestron	CEN-WAP-ABG-CM	1	\$ 235	\$ 235
	Wireless keyboard/Mouse	Logitech	MX5050	1	\$ 156	\$ 156
Alternate	* Speakers SoundTUBE CM42-EZS-11	JBL	Control 24cT	6	\$ 79	\$ 473
	Wall plate VGA and Video with Audio	TecNec	WPL-1181	1	\$ 14	\$ 14


Audio Codec	Blamp	NEXIA TC	1	\$ <u>2116</u>	\$ <u>2116</u>
Pressure Zone Microphones	Crown	PZM10	3	\$ <u>127</u>	\$ <u>381</u>
Cable	Belden	Cat5	1	\$ <u>209</u>	\$ <u>209</u>
Materials, rack screws, install hardware	LHS/WV	Misc material	1	\$ <u>150</u>	\$ <u>150</u>
Labor	LHS/WV	Installation/Training		\$ <u>2000</u>	\$ <u>2000</u>
				Total	\$ <u>13,488</u>

BID SUMMARY TOTALS

A	COMMISSIONER'S CONFERENCE ROOM	\$ <u>29,664</u>
B	CONFERENCE ROOM 1036	\$ <u>14,777</u>
C	CONFERENCE ROOM 1214	\$ <u>21,406</u>
D	DIRECTOR'S CONFERENCE ROOM	\$ <u>13,488</u>
	TOTAL OF A+B+C+D	\$ <u>79,335</u>

NOTE: Contract award will be based on the total of A, B, C, and D.

By my signature below I certify that the bid submitted meets or exceeds all the mandatory specifications and minimum requirements of this RFQ. Additionally, I agree to provide any requested documentation and/or samples deemed necessary by the State of West Virginia to demonstrate compliance with said specifications.

SIGNATURE	
PRINT OR TYPE NAME	Tom Sizemore
COMPANY NAME	Grandview Systems Inc.
COMPANY ADDRESS	4200 1st Ave. Suite 114 Nitro, WV 25143
COMPANY ADDRESS	
CITY, STATE, ZIP	
PHONE	304-204-1392
FAX	304-204-1394
EMAIL	tsizemore@gsi.wv.com

BID BOND PREPARATION INSTRUCTIONS

53

AGENCY _____ (A)
RFQ/RFP# _____ (B)

- (A) WV State Agency
(Stated on Page 1 "Spending Unit")
Request for Quotation Number (upper
right corner of page #1)
(C) Your Company Name
(D) City, Location of your Company
(E) State, Location of your Company
(F) Surety Corporate Name
(G) City, Location of Surety
(H) State, Location of Surety
(I) State of Surety Incorporation
(J) City of Surety Incorporation
(K) Minimum amount of acceptable bid
bond is 5% of total bid. You may state
"5% of bid" or a specific amount on
this line in words.
(L) Amount of bond in figures
(M) Brief Description of scope of work
(N) Day of the month
(O) Month
(P) Year
(Q) Name of Corporation
(R) Raised Corporate Seal of Principal
(S) Signature of President or Vice
President
(T) Title of person signing
(U) Raised Corporate Seal of Surety
(V) Corporate Name of Surety
(W) Signature of Attorney in Fact of the
Surety
- NOTE: Dated, Power of Attorney with Raised
Surety Seal must accompany this bid
bond.

Bid Bond
KNOW ALL MEN BY THESE PRESENTS, That we, the undersigned,
(C) _____ of _____ (D) _____, _____ (E) _____,
as Principal, and _____ (F) _____ of _____ (G) _____,
_____ (H) _____, a corporation organized and existing under the laws
of the State of _____ (I) _____ with its principal office in the City of
_____ (J) _____, as Surety, are held and firmly bound unto The State
of West Virginia, as Obligor, in the penal sum of _____ (K) _____
(\$ _____ (L) _____) for the payment of which, well and truly to be made,
we jointly and severally bind ourselves, our heirs, administrators, executors,
successors and assigns.

The Condition of the above obligation is such that whereas the Principal
has submitted to the Purchasing Section of the Department of Administration
a certain bid or proposal, attached hereto and made a part hereof to enter into a
contract in writing for _____ (M) _____

NOW THEREFORE,
(a) If said bid shall be rejected, or
(b) If said bid shall be accepted and the Principal shall enter into a
contract in accordance with the bid or proposal attached hereto and shall furnish
any other bonds and insurance required by the bid or proposal, and shall in all
other respects perform the agreement created by the acceptance of said bid then
this obligation shall be null and void, otherwise this obligation shall remain in full
force and effect. It is expressly understood and agreed that the liability of the
Surety for any and all claims hereunder shall, in no event, exceed the penal
amount of this obligation as herein stated

The Surety for value received, hereby stipulates and agrees that the
obligations of said Surety and its bond shall be in no way impaired or affected by
any extension of time within which the Obligor may accept such bid; and said
Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, Principal and Surety have hereunto set their
hands and seals, and such of them as are corporations have caused their corporate
seals to be affixed hereto and these presents to be signed by their proper officers,
this _____ (N) _____ day of _____ (O) _____, 20 _____ (P) _____.

Principal Corporate Seal

(R)

(Name of Principal)
By _____ (S)
(Must be President or
Vice President)

(T)
Title

(U)
Surety Corporate Seal

(V)
(Name of Surety)

(W)
Attorney-in-Fact

IMPORTANT - Surety executing bonds must be licensed in West Virginia to
transact surety insurance. Raised Corporate Seals must be affixed and a Power of
Attorney must be attached.

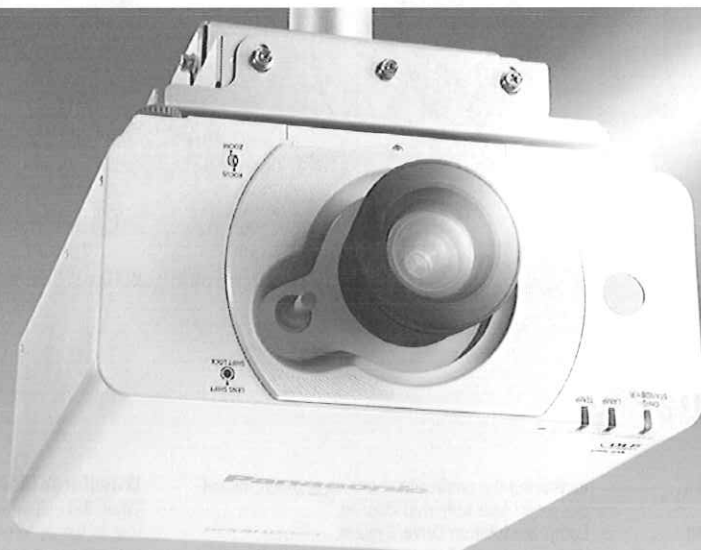
Panasonic

ideas for life

PT-DZ570 Series

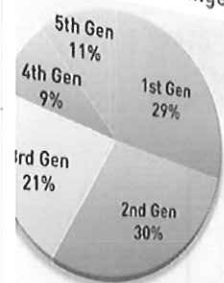
1-Chip DLP™ Projectors

PT-DZ570U
PT-DW530U
PT-DX500U



Visual Satisfaction, Dependable Solutions.

Market Share Changes



PT-DZ570U

WUXGA

4,000 lm

PT-DW530U

WXGA

4,000 lm

PT-DX500U

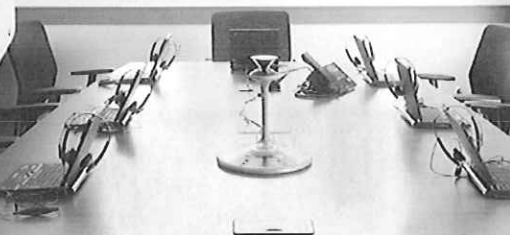
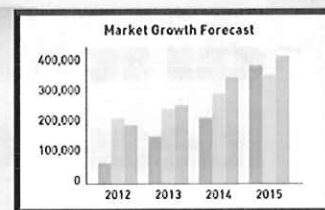
XGA

4,500 lm



High Performance and Reliability Made Affordable

The PT-DZ570 Series projectors incorporate a wealth of original Panasonic technologies to bring high-quality images to all kinds of operating conditions and applications. They offer better reliability and require less maintenance. Plus, the PT-DZ570 Series features convenient functions to facilitate either a new installation or the replacement of an existing system. They are compact, affordable 1-chip DLP™ projectors with a long list of features and functions, including optional wireless operation.



PT-DZ570U	PT-DW530U	PT-DX500U
4,000 lm	4,000 lm	4,500 lm
WUXGA (1920 × 1200)	WXGA (1280 × 800)	XGA (1024 × 768)

Excellent Image Quality

A Full 4,500/4,000 Lumens of Brightness and Contrast of 2,000:1

The 300-watt AC lamp unit features an efficient light focusing reflector. Using only a single lamp unit, the PT-DX500U achieves 4,500 lumens of brightness, while the PT-DZ570U and PT-DW530U offer 4,000 lumens. All models boast a high contrast ratio of 2,000:1.

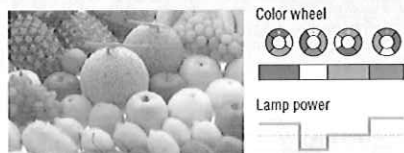
RGB Booster Significantly Improves Color Reproduction

The RGB Booster achieves high image quality with levels of color reproduction and brightness that make each color stand out. It combines Panasonic's proprietary Vivid Color Control technology with a Lamp Modulation Drive System for a 1-chip DLP™ projector that produces bright and vivid colors.

• Vivid Color Control

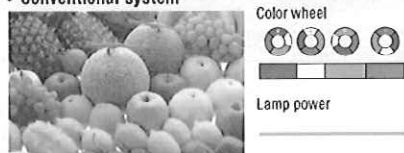
This unique control technology optimizes the use of the color segment areas of the color wheel. It increases the brightness of each RGB color by

• RGB Booster



By modulating the lamp power, we can maximize the color reproduction of each color without sacrificing brightness. Light usage is optimized, and color balance is obtained without lowering the brightness.

• Conventional system



Because the lamp power was fixed in conventional projectors, color reproduction was enhanced by sacrificing brightness.

minimizing the unallocated portions between the colors, to achieve truly vivid coloring.

• Lamp Modulation Drive System

With the advanced lamp modulation technology, the projector is now able to control the lamp intensity for each of the red, green, blue and white segments of the color wheel separately. Because the actual light output is controlled in relation to each color segment, light usage is optimized, and color balance is obtained without lowering the brightness. This results in bright, vivid images with increased color fidelity.

Detail Clarity Processor 3 Brings Depth and Clarity to Details

The frequency of the video signal is analyzed for each scene, and distribution data is extracted for the ultra high, high, medium and low-range frequencies. This unique Panasonic image correction circuit optimally enhances each area of the screen. High-precision detection is applied from 2-dimensional horizontal/vertical data to produce more natural, lifelike images with high definition.

Daylight View Premium for Better Color Perception'

This function corrects the image quality to project sharp, clear images even in brightly lit rooms. A luminance sensor measures the ambient brightness, and a real-time adjustment function optimizes sharpness and brightness according to the surroundings. This adjustment function also works together with the Detail Clarity Processor 3 to enhance the realism and vividness of projected images. This makes images easier to view and offers high contrast.



Simulated image with Daylight View Premium turned off.

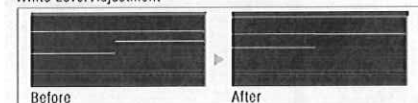


Simulated image with Daylight View Premium turned on.

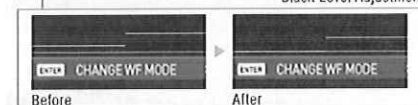
Waveform Monitor Function (PT-DZ570U)

When the output level of the source device fluctuates due to the performance of the device or its cable connections, the original black and white levels of the image content cannot be reproduced correctly. With the PT-DZ570U, you can view the waveforms on the screen and adjust the settings either automatically or manually as you prefer.

White Level Adjustment



Black Level Adjustment

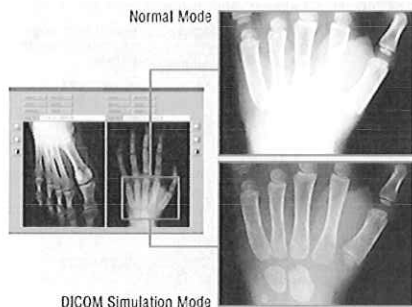


Rec. 709 Mode for HDTV Projection

Optimal color reproduction can be achieved by selecting this mode, compliant with ITU-R Recommendation BT.709, when images from an HDTV source are projected.

DICOM Simulation Mode**

This imaging mode is similar to DICOM Part 14, which is a medical imaging standard. It reproduces X-ray images with remarkable clarity. It also allows information to be shared by many viewers on a large screen, such as during conferences or training courses.



DICOM Simulation Mode

Full HD-ready WUXGA Resolution (PT-DZ570U)

In response to the increasing popularity of widescreen image viewing, including Blu-ray content, the PT-DZ570U features native WUXGA resolution for high-definition viewing. This brings you lifelike projection of intricate, highly detailed images.

Advanced Technologies for Excellent Image Quality

- 3D color management system
- Full 10-bit image processing
- Progressive cinema scan (3:2 pulldown)
- Dynamic sharpness control
- Digital noise reduction
- IP conversion
- AI scene control

Improved Reliability and Reduced Maintenance

Newly Designed Original Cooling System

The cooling system is newly designed to optimize the airflow inside the unit. As a result, it offers better cooling efficiency and allows the projector to be used in ambient temperatures up to 45°C (113°F)*.

Lamp and Lamp Air Filter Replacement Cycle of 2,000 Hours*

The new cooling system combines with a dust-resistant design based on a sealed optical block to achieve a lamp and lamp air filter replacement cycle of 2,000 hours*. This greatly reduces maintenance hassles.

Easy Lamp Replacement

For easier maintenance, you can replace the lamp from the rear. The lamp is easily replaced even after the projector is installed on the ceiling.



Quiet, 29 dB* Operation

An original cooling system enhances the compact body and enables the projector to operate at a quiet 29 dB*.

Web Browser Control over a Wired LAN

The PT-DZ570 Series can be easily operated remotely over a LAN, because it is done using the computer's Web browser. Furthermore, the projector sends an email message to notify the operator when an error has occurred, or a lamp needs to be replaced.

Multi Projector Monitoring & Control Software Ver. 2

Panasonic's original freeware "Multi Projector Monitoring

& Control Software Ver. 2" allows the user to control and monitor multiple projectors at the same time over a wired LAN. When a problem occurs, an alarm message is sent to the monitoring/controlling PC.

Installation/Operation Flexibility

H/V Lens Shift and 2x Zoom Lens

In new installations, the horizontal/vertical lens shift lets you accommodate a wide range of room sizes and shapes. And when replacing existing projectors, the 2x zoom greatly enhances your ease of installation and can reduce costs by permitting the use of existing mounting positions and cabling.

Flexible Angle Setting

The unit can be rotated 360° vertically. This means you can install it at any up-and-down angle you wish to accommodate different installation conditions.



Lens-centered Design

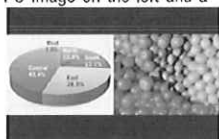
A lens-centered, symmetrical design provides ease of installation, eliminating the need for any special considerations when planning the installation site.

Multiple Terminals

Interfaces include a DVI-D and HDMI inputs. The serial terminal (RS-232C) has an Emulate function that lets you continue using existing control systems when replacing a previous Panasonic model. It is also possible to output audio during Standby mode. This is convenient when connecting an external audio system through the projector.

Side-by-Side Function**

The PT-DZ570U/DW530U can simultaneously display images from two sources onto a single screen. For example, you can display a PC image on the left and a video image on the right. Taking advantage of the wide-screen projection, this function gives you a host of new application possibilities to explore.



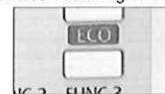
Easy Wireless Projection from Multiple PCs (Optional)

The optional Wireless Module ET-WM200U allows the PT-DZ570 Series to operate wireless projection for a smooth, hassle-free presentation. You can make the settings for wireless connection quickly and easily using Wireless Manager ME 5.5 software. When the presentation is finished, Wireless Manager restores the PC to its previous LAN settings, so the PC is ready to reconnect to your LAN. Functions include Live mode and Multi-Live mode. In Live mode, the image projected is identical to the image seen on the PC screen. In Multi-Live mode, you can wirelessly connect with multiple PCs.

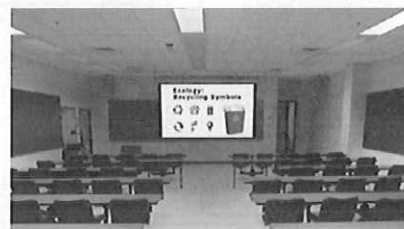


Eco Management Functions

A number of functions are provided to reduce power consumption. They adjust the brightness according to the ambient light conditions and reduce the lamp power when there is no signal input or the projector is in the AV Mute mode.



Under bright conditions.



Under dark conditions.

Other Valuable Features

- Direct Power Off
- Scheduling function
- Customizable function button
- 15m (49ft) long-range wireless remote control
- Security features: user password, text superimposing and logo (default or original)
- HDTV compatibility
- Variable audio output for the external speaker system
- AV mute for image/sound muting
- Selectable 9-language on-screen menu
- Built-in closed caption decoder



Ecology-conscious Design

Panasonic works from every angle to minimize environmental impact in the product design, production and delivery processes, and in the performance of the product during its life cycle. The PT-DZ570 Series projector reflects the following ecological considerations.

- No halogenated flame retardants are used in the cabinet.
- Non-coated cabinet for easy recycling.
- Lead-free solder is used to mount components to the printed circuit boards.
- Lamp power switching further reduces power consumption.
- "ECO" button on the remote control.
- Standby power consumption of only 0.3 W** has been achieved (standby mode: ECO).
- Auto Power Save activates standby mode when no signal is input.
- RoHS compliant

NOTES

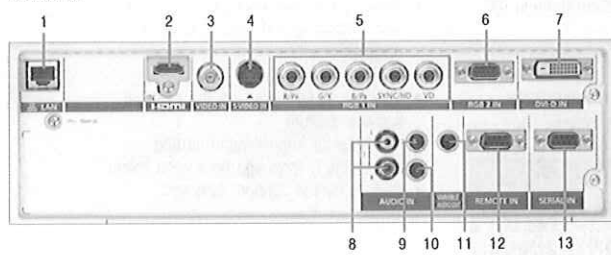
- *1 There is no actual change in the rated brightness or contrast ratio.
- *2 This product is not a medical instrument. Do not use it for actual medical diagnosis.
- *3 The operating temperature range is 0°C to 40°C (32°F to 104°F) when the fan control is set to HIGH Altitude mode (for 1,400 m [4,593 ft] to 2,700 m [8,858 ft] above sea level).
- *4 When a lamp mode is set to NORMAL. The lamp replacement cycle is 3,000 hours when the lamp mode is set to ECO. A maximum value when the lamp is used in cycles of being turned on for 2 hours and off for 0.25 hours. When the lamp is turned on and off more frequently, the lamp replacement cycle is shortened.
- *5 When the lamp mode is set to ECO; 35 dB when the lamp mode is set to Normal. Measurement, measuring conditions and method of notation all comply with ISO 21118 international standards.
- *6 This function is not effective for some source combinations.
- *7 At 100-120 V AC (0.4 W at 220-240 V AC). When the standby mode is set to ECO, network functions such as power over the LAN will not operate. Also, only certain commands can be received for external control using the serial terminal.

Specifications

Model	PT-DZ570U	PT-DW530U	PT-DX500U
Power supply	100–240 V AC, 5.0–1.9 A, 50/60 Hz		
Power consumption	415 W (500 VA) (0.3 W at 100–120 V AC, 0.4 W at 220–240 V AC with standby mode set to ECO*, 15 W with standby mode set to NORMAL)		
DLP™ chip	17.0 mm (0.67 inches) diagonal (16:10 aspect ratio) DLP™ chip x 1, DLP™ projection system 2,304,000 (1,920 x 1,200) pixels	16.5 mm (0.65 inches) diagonal (16:10 aspect ratio) DLP™ chip x 1, DLP™ projection system 1,024,000 (1,280 x 800) pixels	17.8 mm (0.70 inches) diagonal (4:3 aspect ratio) DLP™ chip x 1, DLP™ projection system 786,432 (1,024 x 768) pixels
Lens	Manual zoom (2x zoom), manual focus F 2.0–3.4, F 21.5–43.0 mm		
Lamp	300 W (max 310 W) UHM lamp		
Screen size (diagonal)	1.02–7.62 m (40–300 inches), 16:10 aspect ratio		1.02–7.62 m (40–300 inches), 4:3 aspect ratio
Brightness*	4,000 lm (lamp mode: NORMAL)		4,500 lm (lamp mode: NORMAL)
Center-to-corner uniformity*	90%		
Contrast*	2,000:1 (full on/off, all off)		
Resolution	1,920 x 1,200 pixels	1,280 x 800 pixels (input signals that exceed this resolution will be converted to 1,280 x 800 pixels)	1,024 x 768 pixels (input signals that exceed this resolution will be converted to 1,024 x 768 pixels)
Scanning frequency	HDMI/DVI-D RGB Y/PaPr (YCbCr) VideoS-Video fH 27 kHz–100 kHz, fV 24 Hz–120 Hz, dot clock 162 MHz or lower fH 15 kHz–100 kHz, fV 24 Hz–120 Hz, dot clock 162 MHz or lower fH 15.75 kHz, fV 60 Hz (480i/525p) fH 31.50 kHz, fV 60 Hz (480p/525p) fH 15.63 kHz, fV 50 Hz (576i/625p) fH 31.25 kHz, fV 50 Hz (576p/625p) fH 31.25 kHz, fV 50 Hz (720i/50p) fH 31.25 kHz, fV 50 Hz (720p/50p) fH 15.75 kHz, fV 60 Hz (NISC/NISC4.43/PAL-M/PAL60) fH 15.63 kHz, fV 50 Hz (PAL/PAL-V/SCAM)	25 MHz–162 MHz fH 45.00 kHz, fV 60 Hz (720i/50p/60p) fH 33.75 kHz, fV 60 Hz (1080i/60) fH 33.75 kHz, fV 60 Hz (1080i/50p) fH 28.13 kHz, fV 50 Hz (1080i/50p) fH 28.13 kHz, fV 25 Hz (1080i/25p) fH 15.63 kHz, fV 50 Hz (PAL/PAL-V/SCAM)	fH 27.00 kHz, fV 24 Hz (1080i/24p) fH 27.00 kHz, fV 48 Hz (1080i/24p) fH 33.75 kHz, fV 30 Hz (1080i/30p) fH 67.50 kHz, fV 60 Hz (1080i/60p) fH 56.25 kHz, fV 50 Hz (1080i/50p)
Optical axis shift	Vertical Horizontal ±60% from center of screen (manual) ±10% from center of screen (manual)	Vertical Horizontal ±70% from center of screen (manual) ±10% from center of screen (manual)	Vertical Horizontal ±60% from center of screen (manual) ±10% from center of screen (manual)
Keystone correction range	Vertical ±40°		
Installation	Ceiling/floor, front/rear		
Terminals	HDMI IN DVI-D IN RGB 1 IN RGB 2 IN VIDEO IN S-VIDEO IN AUDIO IN 1 AUDIO IN 2 AUDIO IN 3 AUDIO OUT SERIAL IN REMOTE IN LAN	HDMI 19-pin x 1 (Deep Color, compatible with HDCP) 480p, 576p, 720/60p, 720/50p, 1080/60i, 1080/50i, 1080/24p, 1080/25p, 1080/30p, 1080/60p, 1080/50p, YGA (640 x 480)–WUXGA (1,920 x 1,200)*, compatible with non-interlaced signals only, dot clock: 25–162 MHz DVI-D 24-pin x 1 (DVI 1.0 compliant, compatible with HDCP, compatible with single link only) 480p, 576p, 720/60p, 720/50p, 1080/60i, 1080/50i, 1080/24p, 1080/25p, 1080/30p, 1080/60p, 1080/50p, YGA (640 x 480)–WUXGA (1,920 x 1,200)*, compatible with non-interlaced signals only, dot clock: 25–162 MHz BNC x 5 (RGB/Y/PaPr x 1) D-sub 15-pin (female) x 1 (RGB/Y/PaPr x 1) BNC x 1 (composite video) Mini DIN 4-pin x 1 (S-Video) RCA x 2 (L, R x 1), 0.5 Vrms M3 x 1 (L, R x 1), 0.5 Vrms M3 x 1 (L, R x 1), 0.5 Vrms D-sub 9-pin (female) x 1 (monitor out, 0–2.0 Vrms, variable) D-sub 9-pin (female) x 1 for external control (RS-232C compliant) D-sub 9-pin (female) x 1 for external control (contact control) RJ-45 x 1 (for network connection, 10Base-T/100Base-TX, compliant with PoE Link™)	
Cabinet materials	Molded plastic (PC+ABS)		
Dimensions (W x H x D)	332 x 165 x 484.5 mm (13-1/16" x 6-5/8" x 19-1/16") (including the lens)		
Weight	Approximately 8.5 kg (18.7 lbs.)		
Operating environment	Operating temperature: 0°C–45°C (32°F–113°F), operating humidity: 20%–80% (no condensation)		
Supplied accessories	Power cord with security lock, wireless remote control unit, batteries for remote control (AA type x 2), wire rope, software CD-ROM (Logo Transfer Software, Multi Projector Monitoring & Control Software Ver. 2, Wireless Manager ME 5.5)		

- *1 When the standby mode is set to ECO, network functions such as power on over the LAN will not operate. Also, only certain commands can be received for external control using the serial terminal.
*2 Measurement, measuring conditions and method of notation all comply with ISO 21118 international standards.
*3 Compliant with VESA CMT-RB.
*4 With legs at shortest position.

Terminals



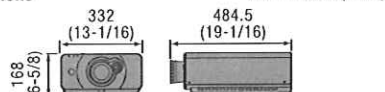
- LAN connector
- HDMI input
- Video input
- S-Video input
- Audio output
- RGB 1 input
- RGB 2 input
- DVI-D input
- Audio 1 input
- Audio 2 input
- Audio 3 input
- Audio output
- Remote input
- Serial input

The photo shows the PT-DZ570U/DW530U. Note that the DVI-D input terminal on the PT-DX500U is located between the LAN connector and the HDMI input.

NOTES ON USE

- Do not install the projector in locations that are subject to excessive water, humidity, steam or oily smoke. Doing so may result in fire, malfunction or electric shock.
- The projector uses a high-voltage mercury lamp that contains high internal pressure. This lamp may break, emitting a large sound, or fail to illuminate, due to impact or extended use.
- The projector uses a high-voltage lamp that becomes very hot during operation. Please observe the following precautions:
 - Never place objects on top of the projector while it is in operation.
 - Make sure there is an unobstructed space of 500 mm (19-11/16 in) or more around the projector's exhaust openings.
 - Do not stack projector units directly on top of one another for the purpose of multiple (stacked) projection.
 - When stacking projector units, be sure to provide the amount of space indicated between them. These space requirements also apply to installation where only one projector unit is operating at one time and the other unit is used as a backup.
 - If the projector is placed in a box or enclosure, the temperature of the air surrounding the projector must be between 0°C (32°F) and 40°C (104°F). Also, make sure the projector's intake and exhaust openings are not blocked. Take particular care to ensure that hot air from the exhaust openings is not sucked into the intake.
- The lamp replacement cycle duration becomes shorter if the projector is operated repeatedly for short periods.
 - The length of time that it takes for the lamp to break or fail to illuminate varies greatly depending on individual lamp characteristics and usage conditions.
 - The brightness of the lamp will gradually decrease with use.
- Due to natural characteristics of lamps, screen brightness may vary (flicker). This is not an indication of faulty lamp performance.

Dimensions



Projection Distance

unit: meters (feet)

PT-DZ570U (16:10 aspect ratio; throw ratio: 1.45–2.94:1)

Projection size (diagonal)	Projection distance		Height from edge of screen to center of lens
	Min (wide)	Max (telephoto)	
1.02 m 40"	1.23 (4.1)	2.51 (8.2)	-0.05–0.27 (-0.2–0.9)
1.52 m 60"	1.87 (6.2)	3.79 (12.4)	-0.08–0.40 (-0.3–1.3)
2.03 m 80"	2.51 (8.3)	5.07 (16.6)	-0.11–0.54 (-0.4–1.8)
2.54 m 100"	3.15 (10.4)	6.34 (20.8)	-0.14–0.67 (-0.4–2.2)
3.81 m 150"	4.75 (15.6)	9.53 (31.2)	-0.20–1.01 (-0.7–3.3)
5.08 m 200"	6.35 (20.9)	12.73 (41.7)	-0.27–1.35 (-0.9–4.4)
7.62 m 300"	9.55 (31.4)	19.11 (62.6)	-0.40–2.02 (-1.3–6.6)

PT-DW530U (16:10 aspect ratio; throw ratio: 1.53–3.09:1)

Projection size (diagonal)	Projection distance		Height from edge of screen to center of lens
	Min (wide)	Max (telephoto)	
1.02 m 40"	1.29 (4.3)	2.64 (8.6)	-0.11–0.27 (-0.4–0.9)
1.52 m 60"	1.96 (6.5)	3.98 (13.0)	-0.16–0.40 (-0.5–1.3)
2.03 m 80"	2.64 (8.7)	5.32 (17.4)	-0.22–0.54 (-0.7–1.8)
2.54 m 100"	3.31 (10.9)	6.66 (21.8)	-0.27–0.67 (-0.9–2.2)
3.81 m 150"	4.99 (16.4)	10.01 (32.8)	-0.40–1.01 (-1.3–3.3)
5.08 m 200"	6.67 (21.9)	13.36 (43.8)	-0.54–1.35 (-1.8–4.4)
7.62 m 300"	10.03 (33.0)	20.07 (65.8)	-0.81–2.02 (-2.7–6.6)

PT-DX500U (4:3 aspect ratio; throw ratio: 1.51–3.05:1)

Projection size (diagonal)	Projection distance		Height from edge of screen to center of lens
	Min (wide)	Max (telephoto)	
1.02 m 40"	1.20 (4.0)	2.46 (8.0)	-0.06–0.31 (-0.2–1.0)
1.52 m 60"	1.82 (6.0)	3.70 (12.1)	-0.09–0.46 (-0.3–1.5)
2.03 m 80"	2.45 (8.1)	4.95 (16.2)	-0.12–0.61 (-0.4–2.0)
2.54 m 100"	3.08 (10.1)	6.20 (20.3)	-0.15–0.76 (-0.5–2.5)
3.81 m 150"	4.64 (15.3)	9.32 (30.5)	-0.23–1.14 (-0.8–3.8)
5.08 m 200"	6.21 (20.4)	12.44 (40.8)	-0.31–1.52 (-1.0–5.0)
7.62 m 300"	9.34 (30.7)	18.68 (61.2)	-0.46–2.29 (-1.5–7.5)

Optional Accessories

ET-PKD110H
Ceiling mount bracket for high ceilings

ET-PKD110S
Ceiling mount bracket for low ceilings

ET-WM200U
Wireless module

ET-LAD60A
Replacement lamp unit

ET-LAD60AW
Replacement lamp unit (twin pack)

Panasonic

For more information about Panasonic projectors
<http://panasonic.net/avc/projector>



Factories of Systems Business Group have received ISO 14001 2004—the Environmental Management System certification (except for third parties' peripheral).

Weights and dimensions shown are approximate. Specifications are subject to change without notice. This product may be subject to export regulations. All other trademarks are the property of their respective trademark owners. Projection images simulated. DLP, DLP logo and DLP Medallion logo are trademarks or registered trademarks of Texas Instruments. © 2010 Panasonic Corporation. All rights reserved.

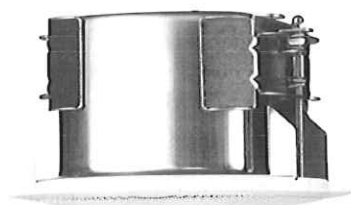
All information included here is valid as of November 2010.

PT-DZ570U1 Printed in Japan.

CM42-EZs-II

In-Ceiling Speaker

Preliminary Technical Information



Preliminary Specifications: CM42-EZs-II

Tile bridge included

System Type	4-inch, coaxial, in-ceiling, sealed (20-watt transformer for 25/70.7/100-volt or transformer bypass)
Impedance (nominal)	16 ohm
Sensitivity dB @ 2.83 V/1 m	84.5 dB
Sensitivity dB @ 1 W/1 m ¹	87.5 dB
Frequency Response (-3 dB) ²	160 Hz - 20 kHz
Frequency Response (-10 dB) ²	125 Hz - 22 kHz
Max. Program Power ³	40 W
Max. Continuous Power RMS ⁴	20 W
Max. Power SPL @ 1 m ⁵	100.5 dB
Coverage Angle (-6 dB @ 2 kHz)	170°
Coverage Angle (-6 dB @ 10 kHz)	95°
Coverage Angle (Avg. 2 - 10 kHz)	100°
Directivity Factor (Q)	4.3 (averaged 100 Hz - 10 kHz); 4.2 (2 kHz)
Directivity Index (DI) dB	5.7 dB (averaged 100 Hz - 10 kHz); 6.2 dB (2 kHz)
Tap Selector	Six-position rotary switch with transformer bypass position
Transducer - Low-Frequency Driver	102 mm (4 in.) Treated fiber cone, cloth surround
Transducer - High-Frequency Driver	19 mm (0.75 in.) Silk dome tweeter
Low-Frequency Voice Coil	12.70 mm (0.50 in.)
Crossover Frequency	5.0 kHz
Network Type: Low-Pass	12dB per octave, 2nd order
Network Type: High-Pass	6 dB per octave, 1st order
Enclosure Alignment	Sealed
Enclosure Material	Drawn steel backcan with ABS baffle
Grille	Painted Steel
Inputs	4 position ceramic terminal strip
Colors	Black or white
Backcan Diameter	146.8 mm (5.78 in.)
Backcan Height	95.3 mm (3.75 in.)
Visible Diameter	190.5 mm (7.50 in.)
Visible Height	8.4 mm (0.33 in.)
Mounting Hole Diameter	165.1 mm (6.50 in.)
Min. / Max. Ceiling Thickness	0.0 mm (0.0 in.) - 24.6 mm (0.97 in.)
Weight	1.8 kg (4.0 lb.)
Shipping Weight	2.3 kg (5.0 lb.)
Included Accessories	Tile bridge, UL-listed flex conduit clamp, paint shield, hole template, wire nuts
Optional Accessories	Pre-construction bracket (AC-CM4-PCB); junction box (AC-CMEZ-JBOX)
Packaging	One per box
Regulatory - UL	1480 (UEAY) and 2043 approved
Regulatory - CE	Approved
RoHS	Approved

¹ 1 W 1 m sensitivity determined using nominal impedance

² Frequency response measured in half or full space as dictated by speaker mounting configuration

³ Max program power is 3 dB above max continuous power

⁴ Continuous power rating, EIA-426-B test

⁵ Max output based on max continuous power

⁶ Max useable SPL based on testing by NWA Labs

Transformer Taps

70.7 V	Output	100 V	Output	25 V	Output
20 W	100.5 dB	20 W	100.5 dB	2.5 W	91.5 dB
10 W	97.5 dB	10 W	97.5 dB	1 W	88.5 dB
5 W	94.5 dB	5 W	94.5 dB	0.63 W	85.5 dB
2.5 W	91.5 dB	2.5 W	91.5 dB	0.31 W	82.5 dB
1.25 W	88.5 dB				

Key Features

- Engineered for applications with limited plenum space incorporating a SoundTube-specific shallow backcan with an installed depth of only 3.5 inches.
- One 4 inch (102 mm) treated fiber woofer with cloth surround and one 0.75 inch (19 mm) silk dome tweeter.
- Easy-access six-position tap switch for 25/70.7/100-volt and 16 ohm transformer bypass position allows for easy ordering, stocking and installation.
- Reduced amplification costs with maximum efficiency including 87.5 dB sensitivity and 16 ohm impedance.
- Superior voice intelligibility with an average coverage angle of 100° (2-10 kHz, independently verified).
- Cost-effective 16 ohm settings allows for the use of multiples of two, four, or six speakers in a system using a standard amplifier without a transformer.
- Incorporates a painted steel grille for lasting durability.
- Clamping allowance from 0.00 in. (0.0 mm) to 1.50 in. (38.1 mm).
- UL 1480 (UEAY) and 2043, CE (EMC Directive 89/366/EEC, EN55020, EN55013) approved.
- High-quality black or white painted finish. Custom colors available.
- Included accessories: Tile bridge, UL-listed 0.5-inch flex conduit clamp, paint shield and two wire nuts.
- Optional accessories: Color-coded (orange) pre-construction bracket (AC-CM4-PCB), junction box (AC-CM-EZ-JBOX).

Description

The CM42-EZs-II is a 4-inch, coaxial, two-way, blind-mount, in-ceiling speaker which delivers true high efficiency and performance across the operating bandwidth. By incorporating a 4-inch treated-fiber driver with cloth surround in a sealed drawn steel backcan, this speaker delivers maximum frequency response (125 Hz - 22 kHz, - 10 dB) in a compact design.

Mounting hardware is included and features a constant-tension winged mounting system with a 21-gauge "full-metal" steel tile bridge ensuring rapid and secure installation in any sheet-rock or drop-tile application. For easy ordering, stocking and installation, this



series includes a color-coded (orange) tile bridge, optional pre-construction bracket, and a six-position tap switch for 25-, 70.7- and 100-volt applications with transformer bypass position.

Applications

Developed specifically for the paging and background music applications where cost, quality and fit are paramount, the CM42-EZs-II is ideal for hotels, retail stores, restaurants, airports, churches (under eave), medical facilities or boardrooms. Indeed, the entire CM-EZ-II series is engineered for installations where high-efficiency and rapid installation are critical attributes. For applications requiring additional bass response, SoundTube's CM1001d-T subwoofer provides true low-end response down to 50 Hz.

Patented SoundTube Technologies

SoundTube Entertainment and the MSE Audio Group constantly develop new technologies that enhance audio product performance. SoundTube Entertainment innovations are protected by multiple U.S. and international patents, which explicitly cover SoundTube dome, enclosure and dispersion technologies. The MSE Audio Group actively defends its patents in order to protect SoundTube resellers and end-users.

Technical Data and Specification Tools

Technical Data

SoundTube Entertainment strives to provide complete and effective technical information and data to dealers, engineers and designers. All data are available from SoundTube Entertainment or at www.soundtube.com.

Technical data and downloads include:

EASE™ data – 3-D polar plots.

EASE™ Address – 2-D modeling for distributed systems

Autodesk® Revit® software

Tech Sheets – Technical information and architectural specs for system engineers

SoundTubeSPEC™ – Proprietary speaker placement software

Independent Data Acquisition and Verification

All data for SoundTube speakers are independently collected from and verified by NWA Labs (www.nwaalabs.com) using their proprietary MACH testing system. All data are collected and analyzed according to ASTM, ISO and AES standards using EASERA, TEF and MLSSA. Full balloon data including both phase and magnitude is compiled into a variety of formats including EASE 4.x, GLL and CLF.

Architectural Specifications

The loudspeaker shall consist of one 102 mm (4 in.) low-frequency transducer and one 19 mm (0.75 in.) high-frequency transducer with a frequency dividing network installed in a sealed enclosure. The low-frequency voice coil diameter shall be 13 mm (0.50 in.). The low-frequency transducer shall have a treated fiber cone material with cloth surround. The high-frequency transducer shall be constructed of silk material using a balanced-dome configuration.

Performance specifications of a typical production unit shall be as follows: Usable frequency range shall extend from 125 Hz - 22 kHz, -10 dB. The loudspeaker shall include a selectable 25/70.7/100-volt and 16 ohm transformer bypass position. The frequency-dividing network shall have a crossover frequency of 5.0 kHz. Rated power capacity of the components and network shall be at least 20 watts RMS and conform to EIA-426-B testing. Maximum continuous output at 1 meter shall be at least 100.5 dB SPL.

The backcan shall be constructed of galvanized steel with an ABS plastic baffle. The grille shall be constructed of painted steel. Shipped complete with UL-listed flex conduit clamp, color-coded tile bridge (to match color-coded backcan), grille, wire nuts, cut-out template and paint shield, the integrated in-ceiling speaker is engineered for high performance and rapid installation in plenum spaces. The unit incorporates three additional attachment points for added security, or code satisfaction where required.

Installation for the speaker shall be by two-screw, blind-mount, constant-tension winged assembly with a clamping allowance from 0.00 mm (0.0 in.) to

38.1 mm (1.5 in.). The external wiring shall be via 4 position ceramic terminal strip accepting up to 12-gauge wire.

The maximum backcan dimension shall be no more than 146.8 mm (5.78 in.) in height by 95.3 mm (3.75 in.) in diameter. The maximum visible dimensions shall be no more than 8.4 mm (0.33 in.) in height by 190.5 mm (7.5 in.) in diameter. The unit is factory preset to the 20-watt setting in the 70.7-volt mode with a tap switch located on the front baffle.

The system shall be the SoundTube CM42-EZs-II for both low- high-impedance applications.

SoundTube Entertainment

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Park City, Utah 84098

Phone 435.647.9555

Fax 435.647.9666

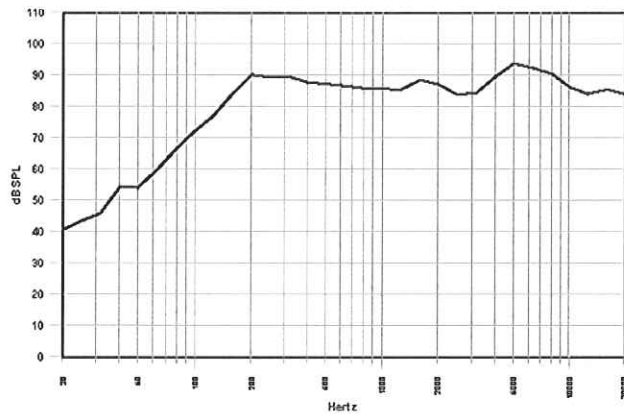
Toll Free 800.647.TUBE

www.soundtube.com

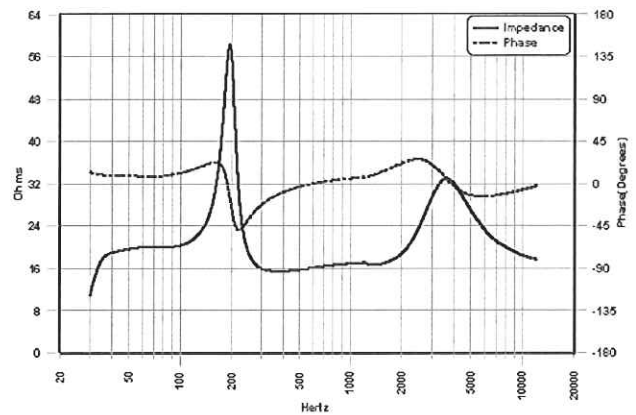
All SoundTube products come with a 5-year limited warranty.



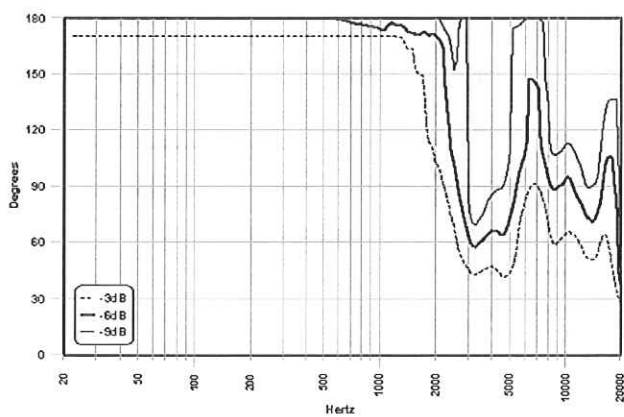
Frequency Response



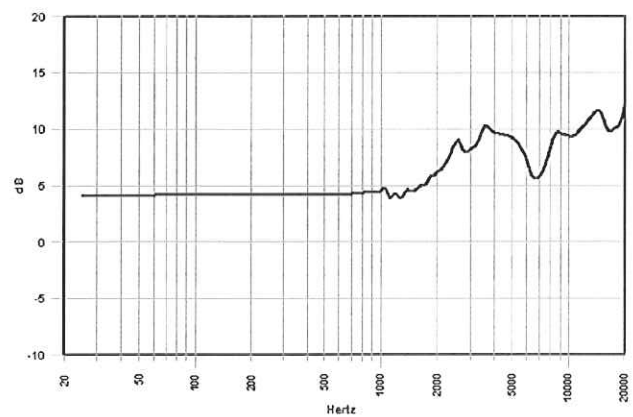
Phase/Impedance Response



Beamwidth



Directivity Index (DI)



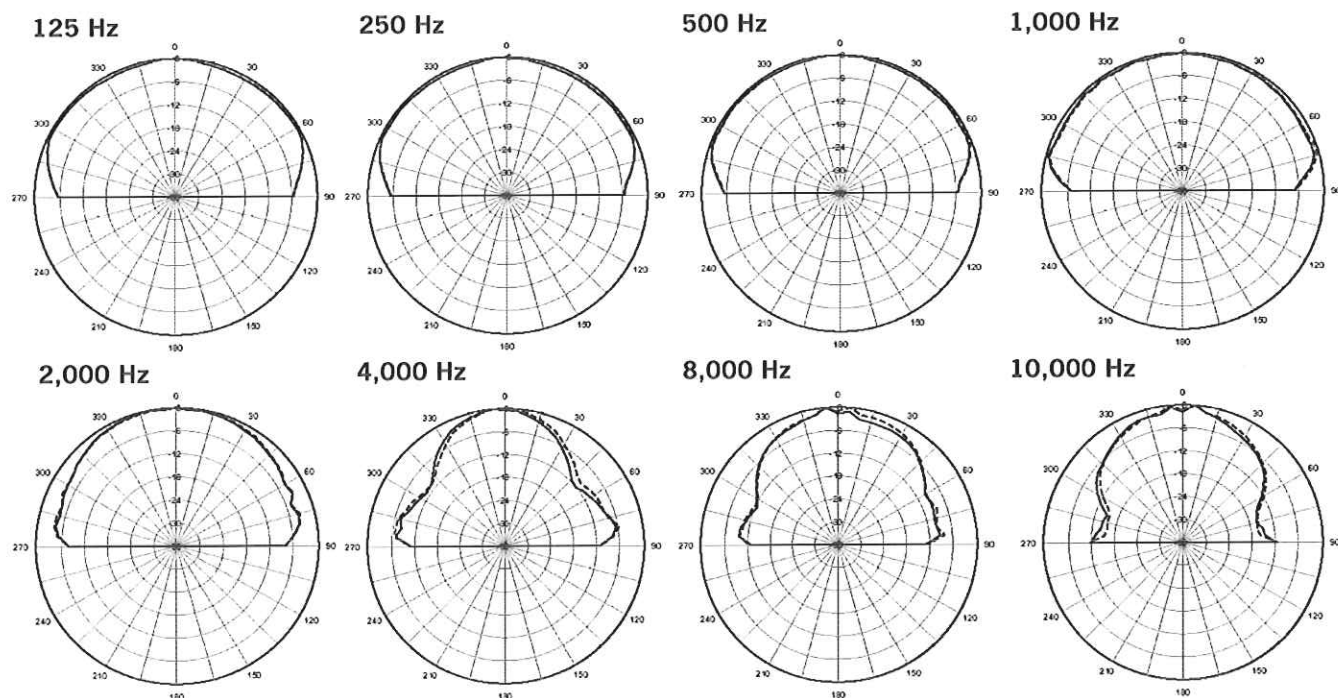
CM42-EZs-II

In-Ceiling Speaker
Preliminary Technical Information



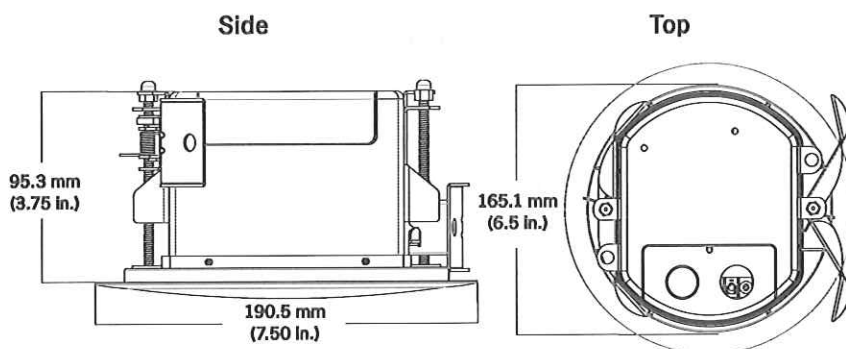
SOUNDTUBE
ENTERTAINMENT

Polar Plots

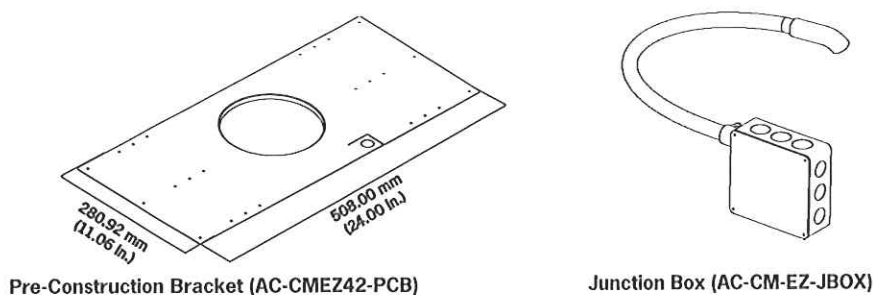


Technical data, EASE™ plots, SoundTube SPEC™ software and product downloads available at www.soundtube.com

Mechanical Drawings



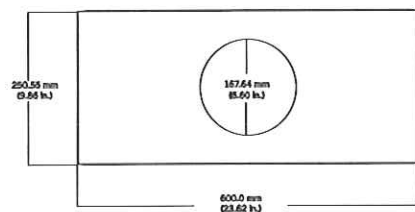
Optional Accessories



Pre-Construction Bracket (AC-CMEZ42-PCB)

Junction Box (AC-CM-EZ-JBOX)

Included Accessories



Tile Bridge

Hole Template

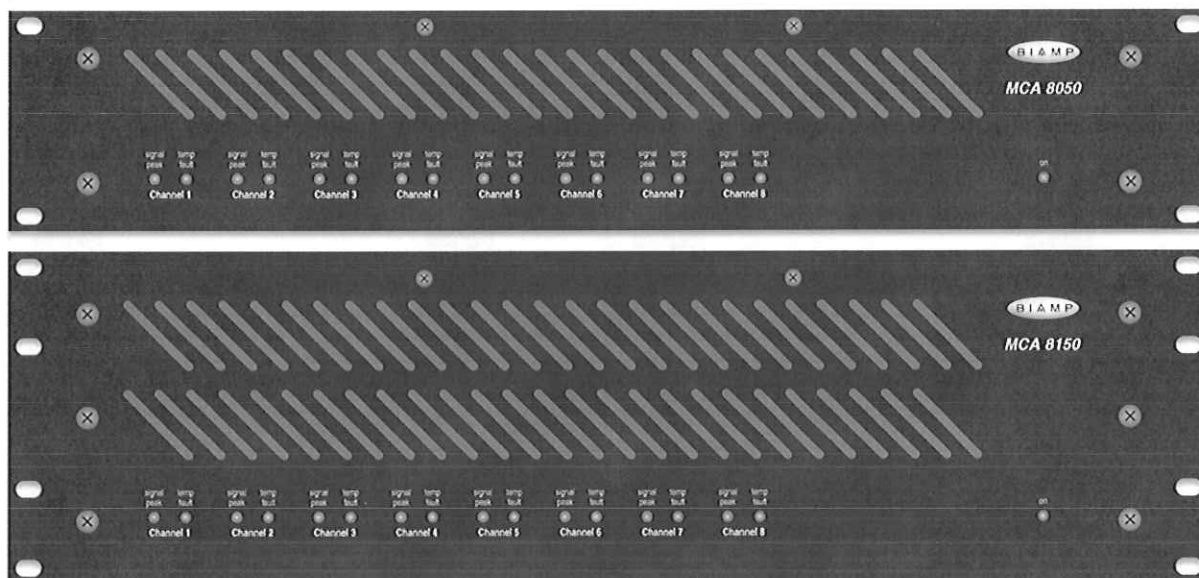
SoundTube Entertainment manufactures a complete line of speakers for:
Open-Ceiling • In-Ceiling • Surface-Mount • Outdoor • Sound-Focusing

All SoundTube products are designed and engineered in the USA.

BIAMP



MCA Series Multi-Channel Amplifiers



MCA Series Multi-Channel Amplifiers provide eight channels of power amplification. Model MCA 8050 delivers 50 watts/channel into 4 ohms. Model MCA 8150 delivers 150 watts/channel into 4 ohms. Channels may be bridged in pairs for higher combined wattage. Connections are provided for remote control of channel levels & muting. MCA Series amplifiers are covered by a five-year warranty.

FEATURES

- 8 channels of 50W (MCA 8050) or 150W (MCA 8150)
- channels may be bridged in pairs for combined power
- terminals for remote control of channel levels/muting
- balanced line-level inputs on plug-in barrier strips
- rear panel level controls & high-pass filter switches
- amplifier outputs on screw-terminal connectors
- dual-color signal/peak indicators on front & rear panels
- front panel indicators for amplifier temp/load faults
- fan cooled with complete output/speaker protection
- optional transformers for 25/70/100 Volt systems
- **RoHS** compliance and **AES** grounding practices
- **CE** marked & **UL / C-UL** listed
- **CCC** certified
- covered by Biamp Systems' five-year warranty

ARCHITECTS & ENGINEERS SPECIFICATION

The multi-channel amplifier shall provide eight individual channels of power amplification, in two different models. One model shall deliver 50 watts/channel into 4 ohms, with channels bridgeable in pairs to provide 100 watts into 8 ohms. The other model shall deliver 150 watts/channel into 4 ohms, with channels bridgeable in pairs to provide 300 watts into 8 ohms. Connections shall be provided for remote control of individual channel levels & muting, via external potentiometers & switches. Channel inputs shall be line-level, with connections provided on plug-in barrier strips. Channel amplifier outputs shall be provided on standard screw terminals.

Each channel shall include LED indication of signal presence, output clipping, over-temperature condition, and output fault condition. Each channel shall include complete self re-setting protection against short-circuit, improper load, and over-temperature conditions. Input level controls & high-pass filter switches shall be provided on each channel. Internally mounted transformers for distributed speaker systems shall be available as a user-installed option, for both individual channel & bridged-pair outputs.

Frequency Response shall be +0/-1dB, THD+N shall be less than 0.2%, and S/N Ratio shall be greater than 85dB (20Hz~20kHz @ rated power). Power Consumption shall be less than 900 Watts (50 watt/channel model) or 1800 Watts (150 watt/channel model). The amplifier shall be CE marked, UL / C-UL listed, and shall incorporate AES48-2005 Grounding & EMC practices. The mixer shall be compliant with EU Directive 2002/95/EC, the RoHS directive. The amplifier shall carry a five-year warranty.

The 50 Watt / channel model shall be a BIAMP MCA 8050.

The 150 Watt / channel model shall be a BIAMP MCA 8150.

BIAMP

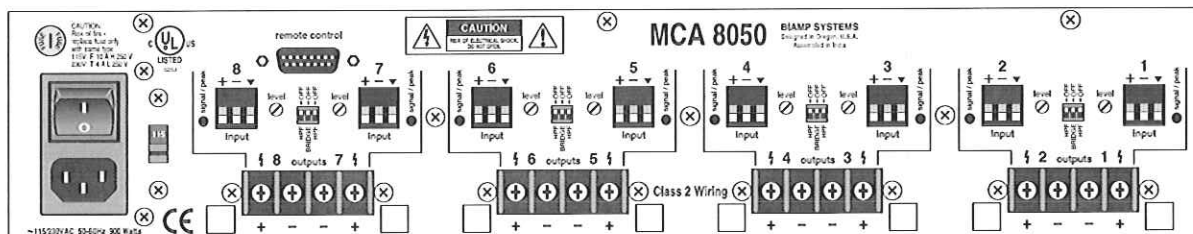
MCA 8050 SPECIFICATIONS

Maximum Power Output (@ 2kHz):	
individual channel into 4 ohm load	50 watts/channel
individual channel into 8 ohm load	30 watts/channel
bridged channels into 8 ohm load	100 watts
Signal-to-Noise Ratio (20Hz~20kHz @ rated power):	> 85dB
THD + Noise (20Hz~20kHz @ rated power):	< 0.2%
Intermodulation Distortion (SMPTE):	< 0.35%
Frequency Response (20Hz~20kHz):	+0/-1dB
Input Impedance:	
balanced	20k ohms
unbalanced	10k ohms
Input Sensitivity:	0.775 Vrms (0dBu)
Channel High-Pass Filters:	12dB/octave @ 120Hz
Power Requirements:	115/230VAC 50/60Hz
Power Consumption:	900 watts max.
Dimensions:	
height (2 rack spaces)	3.5 inches (89mm)
width	19 inches (483mm)
depth	15.5 inches (394mm)
Weight:	30 lbs. (13.6kg)
Compliance:	
AES48-2005 Grounding & EMC practices	
EU Directive 2002/95/EC, RoHS directive	
CE marked	
UL / C-UL listed	
CCC Certified	

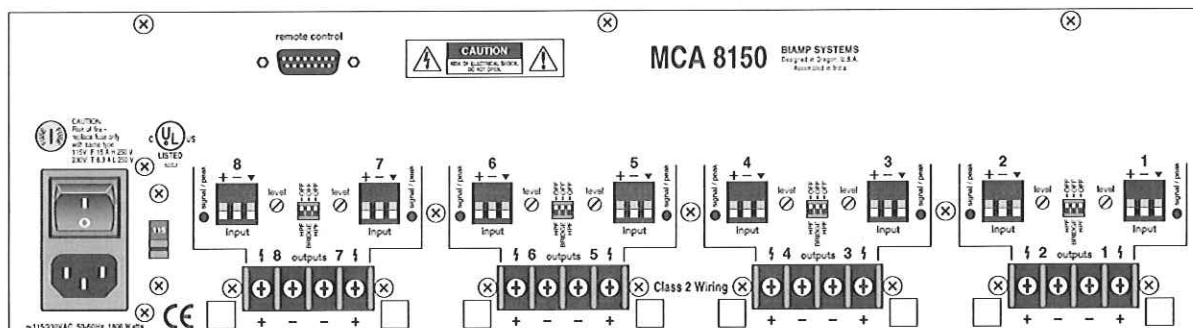
MCA 8150 SPECIFICATIONS

Maximum Power Output (@ 2kHz):	
individual channel into 4 ohm load	150 watts/channel
individual channel into 8 ohm load	90 watts/channel
bridged channels into 8 ohm load	300 watts
Signal-to-Noise Ratio (20Hz~20kHz @ rated power):	> 85dB
THD + Noise (20Hz~20kHz @ rated power):	< 0.2%
Intermodulation Distortion (SMPTE):	< 0.35%
Frequency Response (20Hz~20kHz):	+0/-1dB
Input Impedance:	
balanced	20k ohms
unbalanced	10k ohms
Input Sensitivity:	0.775 Vrms (0dBu)
Channel High-Pass Filters:	12dB/octave @ 120Hz
Power Requirements:	115/230VAC 50/60Hz
Power Consumption:	1800 watts max.
Dimensions:	
height (3 rack spaces)	5.25 inches (133mm)
width	19 inches (483mm)
depth	15.5 inches (394mm)
Weight:	35 lbs. (15.9kg)
Compliance:	
AES48-2005 Grounding & EMC practices	
EU Directive 2002/95/EC, RoHS directive	
CE marked	
UL / C-UL listed	
CCC Certified	

MCA 8050 REAR PANEL DIAGRAM



MCA 8150 REAR PANEL DIAGRAM





**State of West Virginia
DRUG FREE WORKPLACE CONFORMANCE AFFIDAVIT
West Virginia Code §21-1D-5**

STATE OF West Virginia

COUNTY OF Rutland, TO-WIT:

I, Thomas L. Sizemore, after being first duly sworn, depose and state as follows:

1. I am an employee of Grandview Systems, Inc.; and,
(Company Name)
2. I do hereby attest that Grandview Systems, Inc.
(Company Name)

maintains a valid written drug free workplace policy and that such policy is in compliance with **West Virginia Code §21-1D-5**.

The above statements are sworn to under the penalty of perjury.

Grandview Systems, Inc.
(Company Name)

By: [Signature]

Title: Bres Owner

Date: 6/1/12

Taken, subscribed and sworn to before me this 1st day of June, 2012

By Commission expires October 17, 2021

(Seal)

Carrie Lynn Dotson
(Notary Public)

THIS AFFIDAVIT MUST BE SUBMITTED WITH THE BID IN ORDER TO COMPLY WITH WV CODE PROVISIONS. FAILURE TO INCLUDE THE AFFIDAVIT WITH THE BID SHALL RESULT IN DISQUALIFICATION OF THE BID.

Rev March 2009



N/A

Agency _____ 54
REQ.P.O# _____

BID BOND

KNOW ALL MEN BY THESE PRESENTS, That we, the undersigned, _____
_____ of _____, _____, as Principal, and _____
_____ of _____, _____, a corporation organized and existing under the laws of the State of _____
_____ with its principal office in the City of _____, as Surety, are held and firmly bound unto the State
of West Virginia, as Obligor, in the penal sum of _____ (\$ _____) for the payment of which,
well and truly to be made, we jointly and severally bind ourselves, our heirs, administrators, executors, successors and assigns.

The Condition of the above obligation is such that whereas the Principal has submitted to the Purchasing Section of the
Department of Administration a certain bid or proposal, attached hereto and made a part hereof, to enter into a contract in writing for

NOW THEREFORE,

(a) If said bid shall be rejected, or
(b) If said bid shall be accepted and the Principal shall enter into a contract in accordance with the bid or proposal attached
hereto and shall furnish any other bonds and insurance required by the bid or proposal, and shall in all other respects perform the
agreement created by the acceptance of said bid, then this obligation shall be null and void, otherwise this obligation shall remain in full
force and effect. It is expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event,
exceed the penal amount of this obligation as herein stated.

The Surety, for the value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no
way impaired or affected by any extension of the time within which the Obligor may accept such bid, and said Surety does hereby
waive notice of any such extension.

IN WITNESS WHEREOF, Principal and Surety have hereunto set their hands and seals, and such of them as are corporations
have caused their corporate seals to be affixed hereunto and these presents to be signed by their proper officers, this

_____ day of _____, 20____.

Principal Corporate Seal

(Name of Principal)

By _____
(Must be President or
Vice President)

(Title)

Surety Corporate Seal

(Name of Surety)

Attorney-in-Fact

**IMPORTANT – Surety executing bonds must be licensed in West Virginia to transact surety insurance. Raised corporate seals
must be affixed, a power of attorney must be attached.**



STATE OF WEST VIRGINIA
Purchasing Division**PURCHASING AFFIDAVIT**

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (West Virginia Code §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATUREVendor's Name: Grandview Systems Inc.Authorized Signature: [Signature] Date: 6-1-2012State of West VirginiaCounty of Putnam, to-wit:Taken, subscribed, and sworn to before me this 1st day of June, 2012.My Commission expires October 17, 2021.**AFFIX SEAL HERE****NOTARY PUBLIC**Carrie Lynn Dotson



State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER

LOT493

PAGE

1

ADDRESS CORRESPONDENCE TO ATTENTION OF:

SHELLY MURRAY
304-558-8801

*921113050 304-545-8819

GRANDVIEW SYSTEMS INC
4200 1ST AVE #114

NITRO WV 25143

WEST VIRGINIA LOTTERY

900 PENNSYLVANIA AVE
CHARLESTON, WV

25302

304-558-0500

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
05/25/2012				

BID OPENING DATE:

06/06/2012

BID OPENING TIME

01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
ADDENDUM NO. 1						
1. ISSUED TO PROVIDE CLARIFICATION OF INSTALLATION OF PROJECTOR LIFTS PER THE ATTACHED.						
2. PROVIDE PRE-BID SIGN IN SHEETS.						
3. ADDENDUM ACKNOWLEDGEMENT IS ATTACHED. THIS DOCUMENT SHOULD BE SIGNED AND RETURNED WITH YOUR BID. FAILURE TO SIGN AND RETURN MAY RESULT IN DISQUALIFICATION OF YOUR BID.						
EXHIBIT 10						
REQUISITION NO. LOT493						
ADDENDUM ACKNOWLEDGEMENT						
I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.						
ADDENDUM NO. S:						
NO. 1. <i>Received - TUS</i>						
NO. 2.....						
NO. 3.....						
NO. 4.....						
NO. 5.....						
I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

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2. The State may accept or reject in part, or in whole, any bid.
3. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
4. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods this Purchase Order/Contract becomes void and of no effect after June 30.
5. Payment may only be made after the delivery and acceptance of goods or services.
6. Interest may be paid for late payment in accordance with the *West Virginia Code*.
7. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
10. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern the purchasing process.
11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
12. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
13. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at www.state.wv.us/admin/purchase/vrc/hipaa.html and is hereby made part of the agreement provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
14. **CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.
15. **LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, and the West Virginia Insurance Commission. The vendor must provide all necessary releases to obtain information to enable the director or spending unit to verify that the vendor is licensed and in good standing with the above entities.
16. **ANTITRUST:** In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the State of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or Fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.
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5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).



State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER

LOT493

PAGE

2

ADDRESS CORRESPONDENCE TO ATTENTION OF:

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304-558-8801

*921113050 304-545-8819

GRANDVIEW SYSTEMS INC
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NITRO WV 25143

WEST VIRGINIA LOTTERY

900 PENNSYLVANIA AVE
CHARLESTON, WV

25302

304-558-0500

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
05/25/2012				

BID OPENING DATE:

06/06/2012

BID OPENING TIME

01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSIONS HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.</p> <p>..... SIGNATURE Grandview Systems Inc. COMPANY 6-1-2012 DATE</p> <p>NOTE: THIS ADDENDUM ACKNOWLEDGEMENT SHOULD BE SUBMITTED WITH THE BID.</p> <p>REV. 09/21/2009</p> <p>END OF ADDENDUM NO. 1</p>						
0001	1	LS		840-99		
AUDIO/VISUAL EQUIPMENT						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

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State of West Virginia
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Request for Quotation

RFQ NUMBER

LOT493

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25302

304-558-0500

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
05/25/2012				

BID OPENING DATE:

06/06/2012

BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
***** THIS IS THE END OF RFQ LOT493 ***** TOTAL: _____						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE

TELEPHONE

DATE _____

TITLE	DATE	TIME	LOCATION	STATUS
1. [Illegible]	10/10/2023	14:30	Room 101	Completed
2. [Illegible]	10/11/2023	10:00	Room 102	In Progress
3. [Illegible]	10/12/2023	09:00	Room 103	Not Started
4. [Illegible]	10/13/2023	15:00	Room 104	Completed
5. [Illegible]	10/14/2023	11:00	Room 105	In Progress
6. [Illegible]	10/15/2023	13:00	Room 106	Not Started
7. [Illegible]	10/16/2023	10:30	Room 107	Completed
8. [Illegible]	10/17/2023	12:00	Room 108	In Progress
9. [Illegible]	10/18/2023	14:00	Room 109	Not Started
10. [Illegible]	10/19/2023	16:00	Room 110	Completed

FEIN

ADDRESS CHANGES TO BE NOTED ABOVE

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WEST VIRGINIA LOTTERY
REQUEST FOR QUOTATION
LOT493

PRE-BID CONFERENCE

MAY 16, 2012

<u>NAME</u>	<u>COMPANY</u>	<u>TELEPHONE</u>	<u>EMAIL</u>
Tom Sizemore	Grandview Systems Inc.	304-204-1392 Ext 1	tsizemore@gsi.wv.com
Kipp McGhee	Lee Hartman & Sons	304 397-4100	cmcghee@leehartman.com
Larry Cox	Lee Hartman & Sons	304 397-4100	lcox@leehartman.com

West Virginia LOT493
Addendum #1

Addendum #1 issued to provide clarification to installation of projector and provide pre-bid sign in sheets.

The Lottery's original document had specifications that the Lottery would furnish and install the projector lifts in room 1000 (Commission Room). In clarification, the contractor will be required to install the lifts. The Lottery will furnish the lifts and power has been provided at a receptacle above the ceiling.

REMITTER

GRANDVIEW SYSTEMS

PAY TO THE
ORDER OF STATE OF WV

PocaValleyBank

Where you can still bank on friendly service
TELEBANK: (304) 577-6730 or 1-877-707-2265
www.pocavalleybank.com

DATE 06/02/12

046931


69-314/515
9991111

\$3,966.75

THE POCA VALLEY BANK
WINFIELD

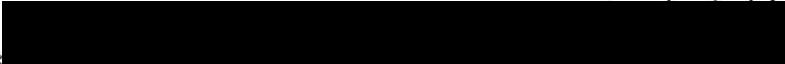
3,966.75

THIS DOCUMENT HAS A MICRO-PRINT SIGNATURE LINE, WATERMARK AND A THERMOCHROMIC ICON; ABSENCE OF THESE FEATURES WILL INDICATE A COPY

DOLLARS  Security features included on bank

CASHIER'S CHECK

Lancy Huffman MP



ENDORSE HERE

X

DO NOT WRITE, STAMP OR SIGN BELOW THIS LINE
RESERVED FOR FINANCIAL INSTITUTION ONLY *

This padlock icon is printed with ink that responds to warmth. Place your thumb on it and it should change appearance. If it does not, this may be a copy.

* FEDERAL RESERVE BOARD OF GOVERNORS REG. CC

Security features on this document include a Micro-Print Signature Line, Watermark and Security Screen. Absence of these features may indicate alteration.
© Padlock design is a certification mark of Check Payment Systems Association.