



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

Solicitation

NUMBER
COR61681

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
TARA LYLE
304-558-2544

RFQ COPY

423132115

TYPE NAME/ADDRESS HERE

V
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Pomeroy
500 Westmoreland Office Park
Dunbar, WV 25064

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DIVISION OF CORRECTIONS

1409 GREENBRIER ST

CHARLESTON, WV

25311

304-558-8045

DATE PRINTED

03/13/2014

BID OPENING DATE:

04/03/2014

BID OPENING TIME

1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
THE WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, WV DIVISION OF CORRECTIONS, IS SOLICITING BIDS TO PROVIDE NETWORK SWITCHES AND INTERFACE CONVERTERS, PER THE ATTACHED SPECIFICATIONS.						
ATTACHMENTS INCLUDE:						
1. INSTRUCTIONS TO VENDORS SUBMITTING BIDS						
2. GENERAL TERMS AND CONDITIONS						
3. COR61681 SPECIFICATIONS						
4. CERTIFICATION AND SIGNATURE PAGE						
5. PURCHASING AFFIDAVIT						
6. RESIDENT VENDOR PREFERENCE (RVP) FORM						
04/16/14 03:05:02PM West Virginia Purchasing Division						
0001	45	EA	205-16		2,134.42	96,048.90
	NETWORK SWITCHES					
0002	65	EA	205-16		857.07	55,709.55
	NETWORK SWITCHES					
0003	220	EA	205-16		117.11	25,764.20
	INTERFACE CONVERTERS					

SIGNATURE

[Signature]

TELEPHONE

304-746-4134

DATE

4-16-2014

TITLE

Sales Executive

FAX

61-1352158

ADDRESS CHANGES TO BE NOTED ABOVE

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



State of West Virginia
Department of Administration
Purchasing Division
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BID OPENING DATE: 04/03/2014

BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0004	110 WARRANTY 24X4X7	EA		939-22		41,000.20
***** THIS IS THE END OF RFQ COR61681 ***** TOTAL:						218,522.85

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

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

INSTRUCTIONS TO VENDORS SUBMITTING BIDS

1. **REVIEW DOCUMENTS THOROUGHLY:** The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.
2. **MANDATORY TERMS:** The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.
3. **PREBID MEETING:** The item identified below shall apply to this Solicitation.
 - ☒ A pre-bid meeting will not be held prior to bid opening.
 - ☐ A **NON-MANDATORY PRE-BID** meeting will be held at the following place and time:

 - ☐ A **MANDATORY PRE-BID** meeting will be held at the following place and time:

All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one person attending the pre-bid meeting may represent more than one Vendor.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. The State will not accept any other form of proof or documentation to verify attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing. Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in, but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

4. **VENDOR QUESTION DEADLINE:** Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below in order to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are non-binding.

Question Submission Deadline: March 26, 2014 by 5:00 pm

Submit Questions to: Tara Lyle, File 32

2019 Washington Street, East

Charleston, WV 25305

Fax: 304-558-4115

Email: Tara.L.Lyle@wv.gov

5. **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 Solicitation by an official written addendum by the Purchasing Division is binding.
6. **BID SUBMISSION:** All bids must be signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via e-mail. Acceptable delivery methods include hand delivery, delivery by courier, or facsimile. The bid delivery address is:

Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

The bid should contain the information listed below on the face of the envelope or the bid may not be considered:

SEALED BID

BUYER: _____

SOLICITATION NO.: _____

BID OPENING DATE: _____

BID OPENING TIME: _____

FAX NUMBER: _____

In the event that Vendor is responding to a request for proposal, the Vendor shall submit one original technical and one original cost proposal plus n/a convenience copies of each to the Purchasing Division at the address shown above. Additionally, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

BID TYPE: ☐ Technical
☐ Cost

7. **BID OPENING:** Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when time stamped by the official Purchasing Division time clock.

Bid Opening Date and Time: April 3, 2014 at 1:30 pm

Bid Opening Location: Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

8. **ADDENDUM ACKNOWLEDGEMENT:** Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.
9. **BID FORMATTING:** Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

GENERAL TERMS AND CONDITIONS:

1. **CONTRACTUAL AGREEMENT:** Issuance of a Purchase Order signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.
2. **DEFINITIONS:** As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.
 - 2.1 **"Agency" or "Agencies"** means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.
 - 2.2 **"Contract"** means the binding agreement that is entered into between the State and the Vendor to provide the goods and services requested in the Solicitation.
 - 2.3 **"Director"** means the Director of the West Virginia Department of Administration, Purchasing Division.
 - 2.4 **"Purchasing Division"** means the West Virginia Department of Administration, Purchasing Division.
 - 2.5 **"Purchase Order"** means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the successful bidder and Contract holder.
 - 2.6 **"Solicitation"** means the official solicitation published by the Purchasing Division and identified by number on the first page thereof.
 - 2.7 **"State"** means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.
 - 2.8 **"Vendor" or "Vendors"** means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

3. **CONTRACT TERM; RENEWAL; EXTENSION:** The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

☐ **Term Contract**

Initial Contract Term: This Contract becomes effective on

and extends for a period of _____ year(s).

Renewal Term: This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal must be submitted to the Purchasing Division Director thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Renewal of this Contract is limited to _____ successive one (1) year periods. Automatic renewal of this Contract is prohibited. Notwithstanding the foregoing, Purchasing Division approval is not required on agency delegated or exempt purchases. Attorney General approval may be required for vendor terms and conditions.

Reasonable Time Extension: At the sole discretion of the Purchasing Division Director, and with approval from the Attorney General's office (Attorney General approval is as to form only), this Contract may be extended for a reasonable time after the initial Contract term or after any renewal term as may be necessary to obtain a new contract or renew this Contract. Any reasonable time extension shall not exceed twelve (12) months. Vendor may avoid a reasonable time extension by providing the Purchasing Division Director with written notice of Vendor's desire to terminate this Contract 30 days prior to the expiration of the then current term. During any reasonable time extension period, the Vendor may terminate this Contract for any reason upon giving the Purchasing Division Director 30 days written notice. Automatic extension of this Contract is prohibited. Notwithstanding the foregoing, Purchasing Division approval is not required on agency delegated or exempt purchases, but Attorney General approval may be required.

Release Order Limitations: In the event that this contract permits release orders, a release order may only be issued during the time this Contract is in effect. Any release order issued within one year of the expiration of this Contract shall be effective for one year from the date the release order is issued. No release order may be extended beyond one year after this Contract has expired.

☐ **Fixed Period Contract:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within _____ days.

☒ **One Time Purchase:** The term of this Contract shall run from the issuance of the Purchase Order until all of the goods contracted for have been delivered, but in no event shall this Contract extend for more than one fiscal year.

☐ **Other:** See attached.

4. **NOTICE TO PROCEED:** Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Purchase Order will be considered notice to proceed.

5. **QUANTITIES:** The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

☐ **Open End Contract:** Quantities listed in this Solicitation are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

☐ **Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.

☐ **Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

☒ **One Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

6. **PRICING:** The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification.

7. **EMERGENCY PURCHASES:** The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute a breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One Time Purchase contract.

8. **REQUIRED DOCUMENTS:** All of the items checked below must be provided to the Purchasing Division by the Vendor as specified below.

- ☐ **BID BOND:** All Vendors shall furnish a bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.
- ☐ **PERFORMANCE BOND:** The apparent successful Vendor shall provide a performance bond in the amount of . The performance bond must be issued and received by the Purchasing Division prior to Contract award. On construction contracts, the performance bond must be 100% of the Contract value.
- ☐ **LABOR/MATERIAL PAYMENT BOND:** The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be issued and delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under \$100,000. Personal or business checks are not acceptable.

- ☐ **MAINTENANCE BOND:** The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.
- ☐ **WORKERS' COMPENSATION INSURANCE:** The apparent successful Vendor shall have appropriate workers' compensation insurance and shall provide proof thereof upon request.
- ☐ **INSURANCE:** The apparent successful Vendor shall furnish proof of the following insurance prior to Contract award and shall list the state as a certificate holder:

☐ **Commercial General Liability Insurance:**

or more.

☐ **Builders Risk Insurance:** builders risk – all risk insurance in an amount equal to 100% of the amount of the Contract.

☐
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The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether or not that insurance requirement is listed above.

- ☐ **LICENSE(S) / CERTIFICATIONS / PERMITS:** In addition to anything required under the Section entitled Licensing, of the General Terms and Conditions, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits prior to Contract award, in a form acceptable to the Purchasing Division.

☐
☐
☐
☐

The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications prior to Contract award regardless of whether or not that requirement is listed above.

9. **LITIGATION BOND:** The Director reserves the right to require any Vendor that files a protest of an award to submit a litigation bond in the amount equal to one percent of the lowest bid submitted or \$5,000, whichever is greater. The entire amount of the bond shall be forfeited if the hearing officer determines that the protest was filed for frivolous or improper purpose, including but not limited to, the purpose of harassing, causing unnecessary delay, or needless expense for the Agency. All litigation bonds shall be made payable to the Purchasing Division. In lieu of a bond, the protester may submit a cashier's check or certified check payable to the Purchasing Division. Cashier's or certified checks will be deposited with and held by the State Treasurer's office. If it is determined that the protest has not been filed for frivolous or improper purpose, the bond or deposit shall be returned in its entirety.
10. **ALTERNATES:** Any model, brand, or specification listed herein establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.
11. **EXCEPTIONS AND CLARIFICATIONS:** The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or

other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

12. LIQUIDATED DAMAGES: Vendor shall pay liquidated damages in the amount
for

This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy.

13. ACCEPTANCE/REJECTION: The State may accept or reject any bid in whole, or in part. Vendor's signature on its bid signifies acceptance of the terms and conditions contained in the Solicitation and Vendor agrees to be bound by the terms of the Contract, as reflected in the Purchase Order, upon receipt.

14. REGISTRATION: Prior to Contract award, the apparent successful Vendor must be properly registered with the West Virginia Purchasing Division and must have paid the \$125 fee if applicable.

15. COMMUNICATION LIMITATIONS: In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

16. FUNDING: This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available.

17. PAYMENT: Payment in advance is prohibited under this Contract. Payment may only be made after the delivery and acceptance of goods or services. The Vendor shall submit invoices, in arrears, to the Agency at the address on the face of the purchase order labeled "Invoice To."

18. UNIT PRICE: Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.

19. DELIVERY: All quotations are considered freight on board destination ("F.O.B. destination") unless alternate shipping terms are clearly identified in the bid. Vendor's listing of shipping terms that contradict the shipping terms expressly required by this Solicitation may result in bid disqualification.

20. INTEREST: Interest attributable to late payment will only be permitted if authorized by the West Virginia Code. Presently, there is no provision in the law for interest on late payments.

21. PREFERENCE: Vendor Preference may only be granted upon written request and only in accordance with the West Virginia Code § 5A-3-37 and the West Virginia Code of State Rules. A Resident Vendor Certification form has been attached hereto to allow Vendor to apply for the preference. Vendor's

failure to submit the Resident Vendor Certification form with its bid will result in denial of Vendor Preference. Vendor Preference does not apply to construction projects.

22. **SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES:** For any solicitations publicly advertised for bid on or after July 1, 2012, in accordance with West Virginia Code §5A-3-37(a)(7) and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the same preference made available to any resident vendor. Any non-resident small, women-owned, or minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to submission of its bid to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority-owned business shall be applied in accordance with W. Va. CSR § 148-22-9.
23. **TAXES:** The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
24. **CANCELLATION:** The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-7.16.2.
25. **WAIVER OF MINOR IRREGULARITIES:** The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.
26. **TIME:** Time is of the essence with regard to all matters of time and performance in this Contract.
27. **APPLICABLE LAW:** This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code or West Virginia Code of State Rules is void and of no effect.
28. **COMPLIANCE:** Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendors acknowledge that they have reviewed, understand, and will comply with all applicable law.
29. **PREVAILING WAGE:** On any contract for the construction of a public improvement, Vendor and any subcontractors utilized by Vendor shall pay a rate or rates of wages which shall not be less than the fair minimum rate or rates of wages (prevailing wage), as established by the West Virginia Division of Labor under West Virginia Code §§ 21-5A-1 et seq. and available at <http://www.sos.wv.gov/administrative-law/wagerates/Pages/default.aspx>. Vendor shall be responsible for ensuring compliance with prevailing wage requirements and determining when prevailing wage

requirements are applicable. The required contract provisions contained in West Virginia Code of State Rules § 42-7-3 are specifically incorporated herein by reference.

- 30. ARBITRATION:** Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.
- 31. MODIFICATIONS:** This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary, no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). **No Change shall be implemented by the Vendor until such time as the Vendor receives an approved written change order from the Purchasing Division.**
- 32. WAIVER:** The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.
- 33. SUBSEQUENT FORMS:** The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.
- 34. ASSIGNMENT:** Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments. Notwithstanding the foregoing, Purchasing Division approval may or may not be required on certain agency delegated or exempt purchases.
- 35. WARRANTY:** The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.
- 36. STATE EMPLOYEES:** State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.
- 37. BANKRUPTCY:** In the event the Vendor files for bankruptcy protection, the State of West Virginia may deem this Contract null and void, and terminate this Contract without notice.

38. [RESERVED]

39. CONFIDENTIALITY: The Vendor agrees that it 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/default.html>.

40. DISCLOSURE: Vendor's response to the Solicitation and the resulting Contract are considered public documents and will be disclosed to the public in accordance with the laws, rules, and policies governing the West Virginia Purchasing Division. Those laws include, but are not limited to, the Freedom of Information Act found in West Virginia Code § 29B-1-1 et seq.

If a Vendor considers any part of its bid to be exempt from public disclosure, Vendor must so indicate by specifically identifying the exempt information, identifying the exemption that applies, providing a detailed justification for the exemption, segregating the exempt information from the general bid information, and submitting the exempt information as part of its bid but in a segregated and clearly identifiable format. Failure to comply with the foregoing requirements will result in public disclosure of the Vendor's bid without further notice. A Vendor's act of marking all or nearly all of its bid as exempt is not sufficient to avoid disclosure and WILL NOT BE HONORED. Vendor's act of marking a bid or any part thereof as "confidential" or "proprietary" is not sufficient to avoid disclosure and WILL NOT BE HONORED. In addition, a legend or other statement indicating that all or substantially all of the bid is exempt from disclosure is not sufficient to avoid disclosure and WILL NOT BE HONORED. Vendor will be required to defend any claimed exemption for nondisclosure in the event of an administrative or judicial challenge to the State's nondisclosure. Vendor must indemnify the State for any costs incurred related to any exemptions claimed by Vendor. Any questions regarding the applicability of the various public records laws should be addressed to your own legal counsel prior to bid submission.

41. LICENSING: In accordance with West Virginia Code of State Rules §148-1-6.1.7, Vendor 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, West Virginia Insurance Commission, or any other state agency or political subdivision. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

42. ANTITRUST: In submitting a bid to, signing a contract with, or accepting a Purchase Order from any agency of the State of West Virginia, the Vendor agrees to 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 Vendor.

- 43. VENDOR CERTIFICATIONS:** By signing its bid or entering into this Contract, Vendor certifies (1) that its bid was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid for the same material, supplies, equipment or services; (2) that its bid is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this RFQ in its entirety, understands the requirements, terms and conditions, and other information contained herein. Vendor's signature on its bid also 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.

The individual signing this bid on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

- 44. PURCHASING CARD ACCEPTANCE:** The State of West Virginia currently utilizes a Purchasing Card program, administered under contract by a banking institution, to process payment for goods and services. The Vendor must accept the State of West Virginia's Purchasing Card for payment of all orders under this Contract unless the box below is checked.

☐

Vendor is not required to accept the State of West Virginia's Purchasing Card as payment for all goods and services.

- 45. VENDOR RELATIONSHIP:** The relationship of the Vendor to 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 Solicitation 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, *etc.* 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.

- 46. 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 and hour laws.

- 47. PURCHASING AFFIDAVIT:** In accordance with West Virginia Code § 5A-3-10a, all Vendors are required to sign, notarize, and submit the Purchasing Affidavit stating that neither the Vendor nor a related party owe a debt to the State in excess of \$1,000. The affidavit must be submitted prior to award, but should be submitted with the Vendor's bid. A copy of the Purchasing Affidavit is included herewith.
- 48. ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE:** This Contract may be utilized by and extends to other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts ("Other Government Entities"). This Contract shall be extended to the aforementioned Other Government Entities on the same prices, terms, and conditions as those offered and agreed to in this Contract. If the Vendor does not wish to extend the prices, terms, and conditions of its bid and subsequent contract to the Other Government Entities, the Vendor must clearly indicate such refusal in its bid. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.
- 49. CONFLICT OF INTEREST:** Vendor, its officers or members or employees, shall not presently have or acquire any interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.
- 50. REPORTS:** Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:
- ☒ Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.
 - ☐ Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at purchasing.requisitions@wv.gov.
- 51. BACKGROUND CHECK:** In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information

to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision.

The State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check.

Service providers should contact the West Virginia Division of Protective Services by phone at (304)558-9911 for more information.

52. PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS: Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

- a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
- b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process.

The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:

- a. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars (\$2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or
- b. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

53. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL: In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars (\$50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a "substantial labor surplus area", as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products.

This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

SPECIFICATIONS

- 1. PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of WV Division of Corrections to establish a contract for the one time purchase of Cisco Catalyst 2960 Series Network Switches, or equal and Cisco Gigabit Interface Converters (GBIC), or equal .

Project Background: The State of West Virginia's Division of Corrections is in the process of upgrading its network infrastructure across the state to maintain compatibility with both current and anticipated technologies and services as provided by the Office of Technology. In order to accomplish that goal, a dynamic, standardized environment needs to be established to provide for efficient upgrade, repair, and expansion of the infrastructure as our facilities grow and change. To that end, the Division of Corrections is looking to replace all of the aging network switches across the state with new hardware, creating a platform for future growth, and maintaining the safety and security of our officers, staff and inmates, while minimizing cost to the State and to the Division.

- 2. DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions.
- 2.1. "Contract Item"** means Cisco Catalyst 2960 Series Network Switches, or equal, and Cisco Gigabit Interface Converter (GBIC), or equal.
 - 2.2. "Pricing Page"** means the pages upon which Vendor should list its proposed price for the Contract Items in the manner requested. The Pricing Page is either included on the last page of this RFQ or attached hereto as Exhibit A.
 - 2.3. "RFQ"** means the official request for quotation published by the Purchasing Division and identified as COR61681.
 - 2.4. "24x7x4"** means support available over the period of a full twenty-four hour day, seven day week, with a four hour time on repair or replacement.
 - 2.5. "1RU"** means one rack unit in height.
 - 2.6. "EIGRP"** stands for Enhanced Interior Gateway Routing Protocol.
 - 2.7. "VTP"** stands for Virtual LAN Trunking Protocol.
 - 2.8. "Power over Ethernet"** means that the switch provides power across data cables in accordance with IEEE 802.3a-2012

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- 2.9. "SFP" stands for small form factor pluggable, a compact "hot-pluggable" transceiver that can be removed and replaced while the switch is in operation

3. GENERAL REQUIREMENTS:

- 3.1. Mandatory Contract Item Requirements:** Contract Item must meet or exceed the mandatory requirements listed below.

- 3.1.1. Cisco Catalyst 2960-SF 48 FE PoE 740W 4 x SFP LAN Base, or equal, WS-C2960S-F48FPS-L, 48 Ethernet 10/100 ports with Power-Over-Ethernet (PoE) and 4 SFP-based Gigabit Ethernet ports: 1RU.
- 3.1.2. Cisco Catalyst 2960-SF 24 FE PoE 370W 2 x SFP LAN Base, or equal, WS-C2960S-F24PS-L, 24 Ethernet 10/100 ports with Power-Over-Ethernet (PoE) and 2 SFP-based Gigabit Ethernet ports: 1RU.
- 3.1.3. Cisco GLC-SX-MM SFP transceiver, or equal, at two per switch ordered.
- 3.1.4. Switches must support either by default, or with a firmware upgrade, Enhanced Interior Gateway Routing Protocol (EIGRP), and Virtual Local Area Network Trunking Protocol (VTP) as is or may be deployed by the WV Office of Technology. Switches must be able to support all existing Cisco Call Manager Voice over IP (VoIP) protocols as utilized by the WV Office of Technology.
- 3.1.5. The switches must be fully compatible and interoperable with the existing State of West Virginia hardware and system architecture currently in place. These switches will be a direct replacement for existing hardware that has reached manufacturer end-of-life.
- 3.1.6. Must provide Power-Over-Ethernet plus (PoE+) technology, providing 740 Watts for 48 ports or 370 Watts for 24 ports, at up to 30 Watts per port.
- 3.1.7. All items shall be new, so that they have the full manufacturer's warranty available to them. Used or refurbished products will not be accepted.
- 3.1.8. Vendor must provide a warranty Cisco Smart Net 24x7x4 (24 hours per day, seven days per week, 4-hour response time), or equal, on hardware and software for a minimum period of one year.
 - 3.1.8.1. Coverage must include all hardware and software parts. No parts shall be excluded.

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- 3.1.8.2. Support must provide for Smart Call Home or equal, where the switch will self-diagnose and alert administrators of issues that require attention and/or remediation.
- 3.1.8.3. Service SLA for the Warranty will be on a 365 days per year, 24-hours per day, x7 days per week x 4 hour response window requirement, with automatic escalation if the initial remediation window is not met.
- 3.1.8.4. Warranty service shall include unlimited access to updates for the life of the product, limited only by the feature set of the hardware and software.
- 3.1.8.5. Warranty service shall include unlimited 24 hour per day x 7 days per week access to a Technical Assistance Center support service, to include issue triage assistance if requested.
- 3.1.8.6. Communication methods with the Technical Assistance Center will include email, phone, web-based collaboration and face-to-face via conferencing software.
- 3.1.8.7. Warranty service shall include unlimited online access to documents and software, as well as any support community, wiki, or other social media that pertains to the operation, programming, or maintenance of the hardware and software contained in the product.
- 3.1.8.8. Warranty service shall include unlimited online access to any web portal, automated tools, or service request management tools.

4. CONTRACT AWARD:

- 4.1. **Contract Award:** The Contract is intended to provide Agencies with a purchase price for the Contract Items. The Contract shall be awarded to the Vendor that provides the Contract Items meeting the required specifications for the lowest overall total cost as shown on the Pricing Pages.
- 4.2. **Pricing Page:** Vendor should complete the Pricing Page by multiplying unit prices by the requested quantities to equal an extended price per item. Vendor should complete the Pricing Page in full as failure to complete the Pricing Page in its entirety may result in Vendor's bid being disqualified.

Notwithstanding the foregoing, the Purchasing Division may correct errors as it deems appropriate. Vendor should type or electronically enter the information into the Pricing Page to prevent errors in the evaluation.

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5. PAYMENT:

5.1. Payment: Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia.

6. DELIVERY AND RETURN:

6.1. Shipment and Delivery: Vendor shall ship the Contract Items immediately after being awarded this Contract and receiving a purchase order or notice to proceed. Vendor shall deliver the Contract Items within 30 working days after receiving a purchase order or notice to proceed. Contract Items must be delivered to Agency at 1409 Greenbrier Street, Charleston, WV 25311.

6.2. Late Delivery: The Agency placing the order under this Contract must be notified in writing if the shipment of the Contract Items will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the Contract, and/or obtaining the Contract Items from a third party.

Any Agency seeking to obtain the Contract Items from a third party under this provision must first obtain approval of the Purchasing Division.

6.3. Delivery Payment/Risk of Loss: Vendor shall deliver the Contract Items F.O.B. destination to the Agency's location.

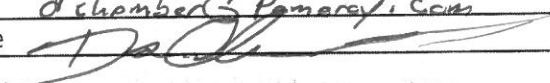
6.4. Return of Unacceptable Items: If the Agency deems the Contract Items to be unacceptable, the Contract Items shall be returned to Vendor at Vendor's expense and with no restocking charge. Vendor shall either make arrangements for the return within five (5) days of being notified that items are unacceptable, or permit the Agency to arrange for the return and reimburse Agency for delivery expenses. If the original packaging cannot be utilized for the return, Vendor will supply the Agency with appropriate return packaging upon request. All returns of unacceptable items shall be F.O.B. the Agency's location. The returned product shall either be replaced, or the Agency shall receive a full credit or refund for the purchase price, at the Agency's discretion.

6.5. Return Due to Agency Error: Items ordered in error by the Agency will be returned for credit within 30 days of receipt, F.O.B. Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.

COR61681 - Network Switches/Interface Converter

Item #	Brand, Model Number and/or Product Code	Description	Unit of Measure	Quantity	Unit Price	Extended Amount
3.1.1		Cisco Catalyst 2960-SF 48 FE PoE 740W 4 x SFP LAN Base, or equal, WS-C2960S-F48FPS-L	Each	45	2134.42	96,048.90
3.1.2		Cisco Catalyst 2960-SF 24 FE PoE 370W 2 x SFP LAN Base, or equal, WS-C2960S-F24PS-L	Each	65	857.01	55,709.55
3.1.3		Cisco SFP Gigabit Ethernet Interface Converter (GBIC), or equal, GLC-SX-MM	Each	220	117.11	25,764.20
3.1.8		Cisco Smartnet 24x4x7, or equal, Warranty, one year term	Each	110		41,000.20
OVERALL TOTAL COST:						218,523.85

Bidder/Vendor Information:

Name:	Pomeroy
Address:	500 Westmoreland Office Park
	Dunbar, WV 25064
Phone No.:	301-746-4434 X5756
Fax No.:	301-746-4439
Email Address:	dchamber@pomeroy.com
Authorized Signature	


Failure to use this form may result in disqualification

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CERTIFICATION AND SIGNATURE PAGE

By signing below, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid or proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

Pomroy
(Company)


(Authorized Signature)

David Chambers Sples Executive
(Representative Name, Title)

304-746-4434 304-746-4439
(Phone Number) (Fax Number)

4-16-2014
(Date)

RFQ No. _____

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

MANDATE: Under W. Va. Code §5A-3-10a, 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: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. 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.

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.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"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.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Pomeroy

Authorized Signature: [Signature] Date: 4-15-2014

State of West Virginia

County of Kanawha, to-wit:

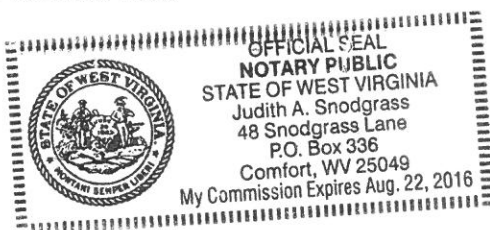
Taken, subscribed, and sworn to before me this 15th day of April, 2014.

My Commission expires Aug 22, 2016.

AFFIX SEAL HERE

NOTARY PUBLIC

Judith A. Snodgrass
Purchasing Affidavit (Revised 07/01/2012)



State of West Virginia

VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with **West Virginia Code**, §5A-3-37. (Does not apply to construction contracts). **West Virginia Code**, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the **West Virginia Code**. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

1. Application is made for 2.5% resident vendor preference for the reason checked:

- ____ Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or**,
 ____ Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or**,
 ____ Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or**,

2. Application is made for 2.5% resident vendor preference for the reason checked:

- ____ Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or**,

3. Application is made for 2.5% resident vendor preference for the reason checked:

- ☒ Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or**,

4. Application is made for 5% resident vendor preference for the reason checked:

- ____ Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or**,

5. Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:

- ____ Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or**,

6. Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:

- ____ Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

7. Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with West Virginia Code §5A-3-59 and West Virginia Code of State Rules.

- ____ Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: Pomeroj

Signed: [Signature]

Date: 4-15-2014

Title: Sales Executive

POMEROY
infrastructure. optimized.™

POMEROY
500 Westmoreland Office
Park
Dunbar, WV 25064
Phone: (800) 227-8798 x5756

**COR61681 Enterasys
Bid**

Number: 9095819

Date: 04/15/2014

Bill To:

Tara Lyle
WV PURCHASING DIVISION
2019 WASHINGTON STREET EAST
CHARLESTON, WV 25305

Phone: (304)558-2544

Email: TARA.L.LYLE@WV.GOV

Ship To:

Tara Lyle
WV PURCHASING DIVISION
2019 WASHINGTON STREET EAST
CHARLESTON, WV 25305

Srl	Mfr. Part	Description	Price	Qty.	Extended
*1	C5G124-48P2	C5 (48) 10/100/1000 AT-PoE RJ45 ports (4) combo SFP ports (2) high speed dedicated stacking ports and external RPS connector Mfr: ENTERASYS NETWORKS	\$ 2,134.42	45	\$ 96,048.90
*2	B5G124-24P2	B5 (24) 10/100/1000 AT-POE RJ45 ports (4) combo SFP ports (2) dedicated stacking ports and external RPS connector Mfr: ENTERASYS NETWORKS	\$ 857.07	65	\$ 55,709.55
*3	MGBIC-LC01	1 Gb 1000Base-SX IEEE 802.3 MM 850 nm Short Wave Length 220/550 M LC SFP Mfr: ENTERASYS NETWORKS	\$ 117.11	220	\$ 25,764.20
*4	ES-SN-OSP4-S03	ENTERASYS NETWORKS : SupportNet Onsite Premium 4-hour response Includes web support 24X7 phone firmware updates upgrades 4-hour advance replacement of parts and 4-hour onsite response	\$ 547.65	45	\$ 24,644.25
*5	ES-SN-OSP4-S01	ENTERASYS NETWORKS : SupportNet Onsite Premium 4-hour response Includes web support 24X7 phone firmware updates upgrades 4-hour advance replacement of parts and 4-hour onsite response	\$ 251.63	65	\$ 16,355.95
*6	ES-SN-OSP4-SNC	ENTERASYS NETWORKS : SUPPORT TERM Remarks: No additional Charge	\$ 0.00	220	\$ 0.00
6 item(s)				Sub-Total	\$ 218,522.85
				Freight:	\$ 0.00
				Tax @ 6.5%	\$ 0.00
				Total	\$ 218,522.85
(*) Tax exempted Part(s)					

Terms and Conditions

This quotation has been prepared by Pomeroy based upon current product pricing and product availability as of the date of this quotation. The quotation provided hereon is subject to change if, after the issuance of this quotation, product pricing and/or product availability is affected as the direct result of a force majeure event or circumstance that is beyond Pomeroy's reasonable control.

Payment Details

Credit Card

Additional References

Shipping Details and Delivery

Shipping Via Delivery

☐ Prepared by: David Chambers ☐ dchamber@pomeroy.com ☐ (800) 227-8798 x5756

POMEROY
infrastructure. optimized.™

POMEROY
500 Westmoreland Office
Park
Dunbar, WV 25064
Phone: (800) 227-8798 x5756

**COR61681 Enterasys
Bid**

Number: 9095819

Date: 04/15/2014

Customer Name
Sales Consultant

Prepared by: David Chambers dchamber@pomeroy.com (800) 227-8798 x5756



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

Solicitation

NUMBER

COR61681

PAGE

1

ADDRESS CORRESPONDENCE TO ATTENTION OF:

TARA LYLE

304-558-2544

RFQ COPY

TYPE NAME/ADDRESS HERE

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DIVISION OF CORRECTIONS

1409 GREENBRIER ST

CHARLESTON, WV

25311

304-558-8045

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DATE PRINTED

04/01/2014

BID OPENING DATE:

04/17/2014

BID OPENING TIME

1:30PM

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
ADDENDUM NO. 1						
SEE ATTACHED PAGES.						
END OF ADDENDUM NO. 1						
0001	45	EA		205-16		
	NETWORK SWITCHES					
0002	65	EA		205-16		
	NETWORK SWITCHES					
0003	220	EA		205-16		
	INTERFACE CONVERTERS					
0004	110	EA		939-22		
	WARRANTY 24X4X7					

SIGNATURE

TELEPHONE

DATE

TITLE

FEIN

ADDRESS CHANGES TO BE NOTED ABOVE

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

0000002

SOLICITATION NUMBER: COR61681
Addendum Number: 1

The purpose of this addendum is to modify the solicitation identified as COR61681 ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

- ☒ [X] Modify bid opening date and time
- ☐ [] Modify specifications of product or service being sought
- ☐ [] Attachment of vendor questions and responses
- ☐ [] Attachment of pre-bid sign-in sheet
- ☐ [] Correction of error
- ☒ [X] Other

Description of Modification to Solicitation:

1. The bid opening date has moved from 04/03/2014 to 04/17/2014. The bid opening time remains at 1:30 pm.
2. Responses to vendor questions will be issued under separate addendum.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: COR61681

000000

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:

(Check the box next to each addendum received)

<input checked="" type="checkbox"/> Addendum No. 1	<input type="checkbox"/> Addendum No. 6
<input checked="" type="checkbox"/> Addendum No. 2	<input type="checkbox"/> Addendum No. 7
<input type="checkbox"/> Addendum No. 3	<input type="checkbox"/> Addendum No. 8
<input type="checkbox"/> Addendum No. 4	<input type="checkbox"/> Addendum No. 9
<input type="checkbox"/> Addendum No. 5	<input type="checkbox"/> Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that 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.

Pomeroy
Company


Authorized Signature

8-16-2014
Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.



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

Solicitation

NUMBER

COR61681

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1409 GREENBRIER ST

CHARLESTON, WV
25311

304-558-8045

DATE PRINTED

04/04/2014

BID OPENING DATE: 04/17/2014

BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
ADDENDUM NO. 2						
SEE ATTACHED PAGES.						
END OF ADDENDUM NO. 2						
0001	45	EA		205-16		
	NETWORK SWITCHES					
0002	65	EA		205-16		
	NETWORK SWITCHES					
0003	220	EA		205-16		
	INTERFACE CONVERTERS					
0004	110	EA		939-22		
	WARRANTY 24X4X7					
SIGNATURE					TELEPHONE	
TITLE					DATE	
FEIN					ADDRESS CHANGES TO BE NOTED ABOVE	

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

SOLICITATION NUMBER: COR61681
Addendum Number: 2

The purpose of this addendum is to modify the solicitation identified as COR61681 ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

- ☐ Modify bid opening date and time
- ☐ Modify specifications of product or service being sought
- ☒ Attachment of vendor questions and responses
- ☐ Attachment of pre-bid sign-in sheet
- ☐ Correction of error
- ☐ Other

Description of Modification to Solicitation:

1. The bid opening date remains 04/17/2014 at 1:30 pm.
2. Responses to vendor questions attached.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

ATTACHMENT A**Questions:**

Q1: The Cisco L2 switches or equal specified in the bid don't support Cisco's proprietary routing protocol EIGRP because these are Layer 2 switches. Is this an oversight or is there a different requirement such as Layer 3 switches?

A1: This was an oversight. The Agency hereby deletes the requirement for Enhanced Interior Gateway Routing Protocol (EIGRP).

Delete Section 3.1.4 in its entirety and replace with the following:

3.1.4. Switches must support either by default, or with a firmware upgrade, Virtual Local Area Network Trunking Protocol (VTP), or equal, as is or may be deployed by the WV Office of Technology. Switches must be able to support all existing Cisco Call Manager Voice over IP (VoIP) protocols as utilized by the WV Office of Technology.

Q2: Virtual Local Area Network Trunking Protocol (VTP) is also a proprietary Cisco ONLY protocol. Cisco can also support the Industry Standard Generic VLAN registration Protocol (GVRP). If the goal is to automatically propagate VLANs across a trunk port is the Standard Protocol acceptable since they both do the same thing? This way bids would not lock out every other manufacturer except Cisco and will drive competitive pricing and innovation.

A2: VTP and GVRP do indeed do many of the same things, however, the long term plan for the infrastructure requires that we have a structure that will quickly propagate changes across the entire framework. GVRP will only dynamically add VLANs to aid in trunking, and does not synchronize between switches.

The Agency requires an infrastructure that will automatically synchronize and replicate VLAN changes from switch to switch across the LAN, reducing programming and implementation time. It is for this reason that Virtual Local Area Network Trunking Protocol (VTP), or equal, is a mandatory requirement of this RFQ.

Q3: Section 3.1.8: SmartNet 24X7X4 is very expensive and will add approximately \$600 to every switch. Many manufacturers provide advanced replacement, firmware and bug fixes, and GTAC phone support included in the cost of the switch. Is this an oversight or actually required?

A3: Warranty requirements remain as stated. Warranty must meet all requirements stated in Section 3.1.8.1 through 3.1.8.8 of the RFQ.

Q4: It appears that the switches specified are WS-C2960S-F48FPS-L are a 10/100 mbps switch. Question: Does the State really want 10/100/1000 mbps current switch technology since most networking devices come equipped with 1000 mbps interfaces?

A4: The 10/100 mbps switch technology meets our current and anticipated requirements.

Q5a: I would just like to confirm that the quantity of 110 for item 3.1.8 on page 000023 is for extended service agreements for items 3.1.1 and 3.1.2.

A5a: The quantity of 110 items for item 3.1.8 is for the items listed in 3.1.1. and 3.1.2.

Q5b: It appears that there is a different part number for the extended service agreement for each of these, so I wanted to confirm the item numbers which I show as the following:

- Item 3.1.1 - Quantity 45 - Mfg. Part: WS-C2960S-F48FPS-L
- Item 3.1.2 - Quantity 65 - Mfg. Part: WS-C2960S-F24PS-L
- Item 3.1.8 - Quantity 45 - Mfg. Part: CON-SNTP-WSC2960F
- Item 3.1.8 - Quantity 65 - Mfg. Part: CON-SNTP-WSC29PS

A5b: The Mfg. Part Numbers you listed are correct.

Q6: The bid below specifies EIGRP although other parts show openness to equivalent technologies. Can you confirm if we can bid? Our Partners do not want to do the bid package unless we are sure to be considered.

<http://www.state.wv.us/admin/purchase/rfq/fy2014/COR61681.pdf>

A6: See A1, the Agency hereby deletes the requirement for Enhanced Interior Gateway Routing Protocol (EIGRP).

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: COR61681

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

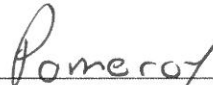
Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

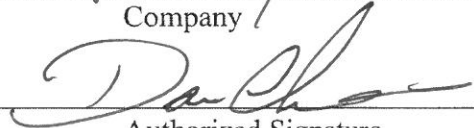
Addendum Numbers Received:

(Check the box next to each addendum received)

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I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that 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.



Company


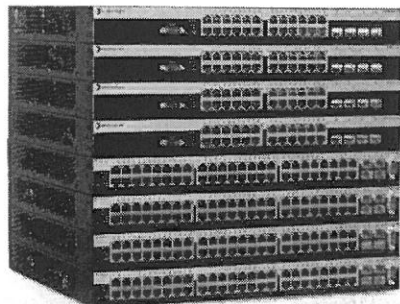
Authorized Signature
4-16-2014

Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.

B-Series B5

Gigabit Ethernet Stackable Edge Switch



Future-proofed with 802.3at
high-power PoE support

Automatic discovery and deployment
of VoIP services

High-availability stacking assures
reliable network operations

Automated management features
reduce operational costs

Investment protection via
comprehensive lifetime warranty

1.47 Tbps capacity and 809.5 Mpps

Product Overview

The Enterasys B5 is a scalable, high-performance Gigabit Ethernet switch that provides support for the bandwidth-intensive and latency-sensitive requirements of today's demanding business applications. The B5 is an excellent choice for environments that require complete multi-layer switching capabilities and support for high density 10/100/1000 Ethernet ports, cost effective 10GE uplinks, dual IPv4/IPv6 management, basic routing and policy-based automation capabilities for advanced edge deployments.

The B5 incorporates the new 802.3at high-power PoE on all ports, translating into increased power provisioning for power-hungry devices such as Pan/Tilt/Zoom (PTZ) IP surveillance cameras, IP videophones, third party 802.11n access points and virtual desktops. Built-in high-power PoE support is a cost effective alternative for customers in place of purchasing separate PoE midspans, which can take away valuable rack space, add cost and contribute more cabling to the wiring closet.

The B5 provides high port density in a 1U footprint and is environmentally friendly by design. The B5's overall energy efficiency is further enhanced by a low current draw and an extreme tolerance for high environmental temperatures. A highly-scalable architecture and a comprehensive lifetime warranty ensure that a B5 network investment will sustain a secure, feature-rich and cost-effective network well into the future.

The B5's highly customizable Layer 2/3/4 packet classification capabilities work together with the 8 hardware-based priority queues associated with each Ethernet port to support a suite of differentiated services with as many as 8 distinct priority levels to provide guaranteed Quality of Service (QoS) for critical voice and video network traffic. In conjunction with its non-blocking L2 switching and L3 routing architecture, the B5's intelligent queuing mechanisms ensure that mission-critical applications receive prioritized access to network resources.

Benefits

Business Alignment

- Aligns network resource utilization with business goals and priorities
- Reliable network operation for mission-critical applications

Operational Efficiency

- Management automation capabilities reduce network operational expenses
- Automatic discovery and deployment of VoIP services

Security

- Ability to audit network for adherence to compliance regulations, such as PCI or HIPAA
- Network resources securely allocated according to user roles
- Network security maintained concurrently with user mobility

Support and Service

- Industry-leading customer satisfaction and first call resolution rates
- Personalized services, including site surveys, network design, installation, and training
- Comprehensive lifetime warranty, including feature upgrades and more

**There is nothing more important
than our customers.**

Reliability and Availability

The B5 design incorporates redundancy and failure protection mechanisms complete with automatic failover and recovery capabilities to provide a reliable network. An integral power supply is the primary source of power for the B5 and complete power redundancy is provided by an optional external power supply. A virtual switch can be created by interconnecting as many as eight B5s in a single stack, which can be managed via a single IP address with redundant management connections. The B5's closed-loop stacking capability utilizes bi-directional switch interconnects to maintain connectivity within the virtual switch despite any physical failures, which includes switches, cables and connections. Up to eight Ethernet ports can be grouped together to create a multi-link aggregation group (LAG). A LAG's Ethernet ports can be co-located on a single B5 or they can be distributed across multiple B5s within a stack to prevent a switch-level failure from disrupting data communications. The B5 also includes Host CPU Protection support to help prevent Denial of Service (DoS) and BPDU attacks.

Advanced Quality of Service

Robust Quality of Service (QoS) features enable strong support for integrated multimedia networks, as well as all types of data-intensive applications. The B5 is a standards-based solution optimized for multimedia applications, including VoIP, videoconferencing and real-time collaboration. The B5 uses multiple standards-based discovery methods with Enterasys policy capabilities to automatically identify and provision VoIP services for IP phones from all major vendors. B5 switches provide dynamic mobility for VoIP clients to reduce operating costs; when an IP phone moves and plugs in elsewhere in the enterprise network, its VoIP service provisioning, security and traffic priority settings move with it, with no manual administration required.

Security

The B5 enables strong network security by utilizing its authentication and security features, which can be applied at the port level or at the user level. Making use of the Enterasys Network Management Suite's Policy Manager or a standard CLI, the Enterasys role-based architecture enables a network administrator to define distinct roles or profiles that represent operational groups within a business (e.g., employee, executive, guest, etc). Multiple users/devices per port can be authenticated via IEEE 802.1X, MAC address, or web authentication, and then assigned a pre-

defined operational role.

Administrators can easily transition from RFC 3580 and complex access control list (ACL) deployments to the Enterasys role-based policy framework in a seamless fashion, without the need to make changes to their RADIUS infrastructure (e.g., adding filter-ID). In addition, the B5 also supports ACLs for supplementary network security. Network operations can be easily tailored to meet business-oriented requirements by providing each role with individualized access to network services and applications (e.g., a guest should have different network access privileges than an employee). Utilizing Enterasys role-based policy, administrators are able to manipulate DSCP and 802.1p rewrite for classification and prioritization of network traffic.

The B5 allows administrators even more network visibility, with the ability to audit their network for adherence to compliance regulations, such as PCI or HIPAA. The B5 is able to segment roles down to group levels, such as supporting a guest access role, helping to protect corporate applications and information.

Investment Protection

The B5 is a cost-effective, feature-rich, stackable switch that provides a broad set of features today and will continue to deliver benefits well into the future. All B-Series products include a lifetime warranty that includes warranty and support services for which many competitors charge additional fees – adding up to 10% of initial deployment costs on an annual basis. Included benefits, such as advanced hardware return, firmware feature upgrades (which most vendors cover at most for 90 days) and telephone support (which most don't include or severely limit) combine to significantly decrease operational costs for customers over the life of their network. For more information regarding warranty terms and conditions please go to <http://www.enterasys.com/support/warranty.aspx>.

Performance & Scalability

The B5, with support for 32,000 MAC addresses, provides scalable, wire-rate performance in support of the bandwidth-intensive and delay-sensitive requirements of today's demanding applications. Along with a switch capacity of 184 Gbps, the B5 provides up to 48 10/100/1000 Ethernet ports as well as two 10 GE ports. Leveraging the B5's stacking capability, as many as 8 B5s (both 24-port and 48-port combinations) can be interconnected in a single stack to create a virtual switch that provides 1.47 Tbps of capacity and up to 384 10/100/1000 Ethernet ports as well as 16 10GE uplink ports.

Features / Standards and Protocols

MAC Address Table Size

32,000

VLANs

4,094 VLAN IDs

1,024 VLAN Entries per Stack

Switching Services

IEEE 802.1AB – LLDP

ANSI/TIA-1057 – LLDP-MED

IEEE 802.1D – MAC Bridges

IEEE 802.1s – Multiple Spanning Trees

IEEE 802.1t – 802.1D Maintenance

IEEE 802.1w – Rapid Spanning Tree

Reconvergence

IEEE 802.3 – Ethernet

IEEE 802.3ab – GE over Twisted Pair

IEEE 802.3ad – Link Aggregation

IEEE 802.3ae – 10 Gigabit Ethernet (fiber)

IEEE 802.3af – PoE

IEEE 802.3at – High Power PoE

(up to 30W per port)

IEEE 802.3i – 10Base-T

IEEE 802.3u – 100Base-T, 100Base-FX

IEEE 802.3z – GE over Fiber

Full/half duplex auto-sense support on all ports

IGMP Snooping v1/v2/v3

Jumbo Frame support (9,216 bytes)

Loop Protection

One-to-One and Many-to-One Port Mirroring

Port Description

Protected Ports

Host CPU Protection – Broadcast/ Multicast/

Unknown Unicast Suppression

Spanning Tree Backup Root

STP Pass-Thru

VLAN Support

Generic Attribute Registration Protocol (GARP)

Generic VLAN Registration Protocol (GVRP)

IEEE 802.1p – Traffic classification

IEEE 802.1q – VLAN Tagging

Protocol-based VLANs with Enterasys Policy

IEEE 802.3ac – VLAN Tagging Extensions

Port-based VLAN (private port/private VLAN)

Tagged-based VLAN

VLAN Marking of Mirror Traffic

Quality of Service

8 Priority Queues per Port

802.3x Flow Control

Class of Service (CoS)

Ingress Rate Limiting

IP ToS/DSCP Marking/Remarking

IP Precedence

IP Protocol

Layer 2/3/4 Classification

Multi-layer Packet Processing

Queuing Control – Strict and

Weighted Round Robin

Source/Destination IP Address

Source/Destination MAC Address

RFC 2474 Definition of Differentiated Services

Field

Security

ARP Spoof Protection

DHCP Spoof Protection

Dynamic and Static MAC Locking

EAP Pass Thru

Hybrid Mode

IEEE 802.1X Port Authentication

MAC-based Port Authentication

RADIUS Accounting for network access

RADIUS Client

RFC 3580 – IEEE 802.1X RADIUS Usage

Guidelines

Multi-user Authentication

Password Encryption

Secure Networks Policy

Secured Shell (SSHv2)

Secured Socket Layer (SSL)

User and IP Phone Authentication

Web-based Port Authentication

IPv4 Routing

Standard Access Control List (ACLs)

Extended ACLs

VLAN-based ACLs

ARP & ARP Redirect

IP Helper Address

RFC 826 – Ethernet ARP

RFC 1058 – RIP v1

RFC 1256 – ICMP Router Discovery Messages

RFC 1519 Classless Inter-Domain Routing

RFC 1724 – RIPv2 MIB Extension

RFC 2236 – IGMPv2

RFC 2453 – RIP v2

RFC 3046 – DHCP/BootP Relay

RFC 3376 – IGMPv3

Static Routes

MIB Support

Enterasys Entity MIB

Enterasys Policy MIB

Enterasys VLAN Authorization MIB

ANSI/TIA-1057 – LLDP-MED MIB

IEEE 802.1AB – LLDP MIB

IEEE 802.1X MIB – Port Access

IEEE 802.3ad MIB – LAG MIB

RFC 826 – ARP and ARP Redirect

RFC 951, RFC 1542 – DHCP/BOOTP Relay

RFC 1213 – MIB/MIB II

RFC 1493 – BRIDGE-MIB

RFC 1643 – Ethernet-like MIB

RFC 2096 – IP Forwarding Table MIB

RFC 2131, RFC 3046 – DHCP Client/Relay

RFC 2571 – SNMP Framework MIB

RFC 2466 – ICMPv6 MIB

RFC 2613 – SMON MIB

RFC 2618 – RADIUS Authentication

Client MIB

RFC 2620 – RADIUS Accounting Client MIB

RFC 2668 – Managed Object Definitions for

802.3 MAUs

RFC 2674 – P-BRIDGE-MIB

RFC 2674 – QBRIDGE-MIB VLAN

Bridge MIB

RFC 2737 – Entity MIB (physical branch only)

RFC 2819 – RMON-MIB

RFC 2863 – IfMIB

RFC 2933 – IGMP MIB

RFC 3413 – SNMP v3 Applications MIB

RFC 3414 – SNMP v3 User-based Security

Module (USM) MIB

RFC 3415 – View-based Access Control

Model for SNMP

RFC 3584 – SNMP Community MIB

RFC 3621 – Power over Ethernet MIB

Management

Alias Port Naming Command Line
Interface (CLI)

Configuration Upload/Download

Dual IPv4/IPv6 Management Support

Editable Text-based Configuration File

TFTP Client

Multi-configuration File Support

NMS Automated Security Manager

NMS Console

NMS Inventory Manager

NMS Policy Manager

Node/Alias Table

RFC 768 – UDP

RFC 783 – TFTP

RFC 791 – IP

RFC 792 – ICMP

RFC 793 – TCP

RFC 826 – ARP

RFC 854 – Telnet

RFC 951 – BootP

RFC 1157 – SNMP

RFC 1901 – Community-based SNMPv2

RFC 1981 – Path MTU for IPv6

RFC 2030 – Simple Network Time Protocol
(SNTP)

RFC 2465 – IPv6 MIB

RFC 2933 – IGMP MIB

RFC 3176 – sFlow

RFC 3413 – SNMP Applications MIB

RFC 3414 – SNMP User-based Security

Module (USM) MIB

RFC 3415 – View-based Access Control

Model for SNMP

RFC 3826 – Advanced Encryption Standard

(AES) for SNMP

RMON (Stats, History, Alarms, Events,

Filters, Packet Capture)

Secure Copy (SCP)

Secure FTP (SFTP)

Simple Network Management Protocol

(SNMP) v1/v2c/v3

SSHv2

RFC 3164 – The BSD Syslog Protocol

TACACS+ for Management Authentication,

Authorization and Auditing

Web-based Management

Webview via SSL Interface

Switch Model Specifications

	B5G124-24	B5G124-24P2	B5G124-48	B5G124-48P2
Performance				
Throughput Capacity wire-speed Mpps (switch / stack)	35.7 Mpps / 285.7 Mpps	35.7 Mpps / 285.7 Mpps	71.4 Mpps / 571.4 Mpps	71.4 Mpps / 571.4 Mpps
Switching Capacity (switch / stack)	48 Gbps (35.7 Mpps)/ 384 Gbps (285.7 Mpps)	48 Gbps (35.7 Mpps)/ 384 Gbps (285.7 Mpps)	96 Gbps (71.4 Mpps)/ 768 Gbps (571.4 Mpps)	96 Gbps (71.4 Mpps)/ 768 Gbps (571.4 Mpps)
Stacking Capacity (switch / stack)	48 Gbps (35.7 Mpps)/ 384 Gbps (285.7 Mpps)	48 Gbps (35.7 Mpps)/ 384 Gbps (285.7 Mpps)	48 Gbps (35.7 Mpps)/ 384 Gbps (285.7 Mpps)	48 Gbps (35.7 Mpps)/ 384 Gbps (285.7 Mpps)
Aggregate Throughput Capacity (switch / stack)	96 Gbps (71.4 Mpps)/ 768 Gbps (571.4 Mpps)	96 Gbps (71.4 Mpps)/ 768 Gbps (571.4 Mpps)	144 Gbps (107.1 Mpps)/ 1,152 Gbps (857.1 Mpps)	144 Gbps (107.1 Mpps)/ 1,152 Gbps (857.1 Mpps)
PoE Specifications				
802.3af Interoperable	N/A	Yes	N/A	Yes
802.3at Interoperable	N/A	Yes	N/A	Yes
System Power	N/A	375 watts per switch with up to 30 watts per port Per-port switch power monitor: • Enable/disable • Priority safety • Overload & short circuit protection	N/A	375 watts per switch with up to 30 watts per port Per-port switch power monitor: • Enable/disable • Priority safety • Overload & short circuit protection
Physical Specifications				
Dimensions (H x W x D)	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")
Net Weight	4.92 kg (10.85 lb)	6.10 kg (13.45 lb)	5.31 kg (11.70 lb)	6.49 kg (14.30 lb)
MTBF	394,679 hours	345,093 hours	308,359 hours	260,806 hours
Physical Ports	<ul style="list-style-type: none"> • (24) 10/100/1000 auto-sensing, auto-negotiating MDI/MDI-X RJ45 ports • (4) Combo SFP ports • (2) dedicated stacking ports • (1) DB9 console port • (1) RPS connector 	<ul style="list-style-type: none"> • (24) 10/100/1000 PoE (.af + .at) auto-sensing, auto-negotiating MDI/MDI-X RJ45 ports • (4) Combo SFP ports • (2) dedicated stacking ports • (1) DB9 console port • (1) RPS connector 	<ul style="list-style-type: none"> • (48) 10/100/1000 auto-sensing, auto-negotiating MDI/MDI-X RJ45 ports • (4) Combo SFP ports • (2) dedicated stacking ports • (1) DB9 console port • (1) RPS connector 	<ul style="list-style-type: none"> • (48) 10/100/1000 PoE (.af + .at) auto-sensing, auto-negotiating MDI/MDI-X RJ45 ports • (4) Combo SFP ports • (2) dedicated stacking ports • (1) DB9 console port • (1) RPS connector
Power Requirements				
Normal Input Voltage	100 - 240 VAC	100 - 240 VAC	100 - 240 VAC	100 - 240 VAC
Input Frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Input Current	2 A Max	7.5 A Max	2 A Max	7.5 A Max
Power Consumption	48 watts	93 watts	76 watts	125 watts
Temperature				
IEC 6-2-1 Standard Operating Temperature	0° to 50° C (32° to 122° F)	0° to 50° C (32° to 122° F)	0° to 50° C (32° to 122° F)	0° to 50° C (32° to 122° F)
IEC 6-2-14 Non-Operating Temperature	-40° to 70° C (-40° to 158° F)	-40° to 70° C (-40° to 158° F)	-40° to 70° C (-40° to 158° F)	-40° to 70° C (-40° to 158° F)
Heat Dissipation	164 BTUs/Hr	318 BTUs/Hr	258 BTUs/Hr	427 BTUs/Hr
Humidity				
Operating Humidity	5% - 95% non-condensing	5% - 95% non-condensing	5% - 95% non-condensing	5% - 95% non-condensing
Vibration				
	IEC 68-2-6, IEC68-2-36	IEC 68-2-6, IEC68-2-36	IEC 68-2-6, IEC68-2-36	IEC 68-2-6, IEC68-2-36
Shock				
	IEC 68-2-29	IEC 68-2-29	IEC 68-2-29	IEC 68-2-29
Drop				
	IEC 68-2-32	IEC 68-2-32	IEC 68-2-32	IEC 68-2-32
Altitude				
Operating	10,000 ft (3,048 m)	10,000 ft (3,048 m)	10,000 ft (3,048 m)	10,000 ft (3,048 m)
Non-operating	15,000 ft (4,572 m)	15,000 ft (4,572 m)	15,000 ft (4,572 m)	15,000 ft (4,572 m)

Acoustics				
Front of switch (normal operation)	44.5 dB	45 dB	45.5 dB	44.5 dB
Agency and Regulatory Standard Specifications				
Safety	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1
EMC	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3
Environmental	2002/95/EC (RoHS Directive), 2002/96/EC (WEEE Directive), Ministry of Information Order #39 (China RoHS)	2002/95/EC (RoHS Directive), 2002/96/EC (WEEE Directive), Ministry of Information Order #39 (China RoHS)	2002/95/EC (RoHS Directive), 2002/96/EC (WEEE Directive), Ministry of Information Order #39 (China RoHS)	2002/95/EC (RoHS Directive), 2002/96/EC (WEEE Directive), Ministry of Information Order #39 (China RoHS)

B5K125-24		B5K125-24P2		B5K125-48		B5K125-48P2		
Performance								
Throughput Capacity wire-speed Mpps (switch / stack)	65.5 Mpps / 523.8 Mpps		65.5 Mpps / 523.8 Mpps		101.2 Mpps / 809.5 Mpps		101.2 Mpps / 809.5 Mpps	
Switching Capacity (switch / stack)	88 Gbps (65.5 Mpps)/ 704 Gbps (523.8 Mpps)		88 Gbps (65.5 Mpps)/ 704 Gbps (523.8 Mpps)		136 Gbps (101.2 Mpps)/ 1,088 Gbps (809.5 Mpps)		136 Gbps (101.2 Mpps)/ 1,088 Gbps (809.5 Mpps)	
Stacking Capacity (switch / stack)	48 Gbps (35.7 Mpps)/ 384 Gbps (285.7 Mpps)		48 Gbps (35.7 Mpps)/ 384 Gbps (285.7 Mpps)		48 Gbps (35.7 Mpps)/ 384 Gbps (285.7 Mpps)		48 Gbps (35.7 Mpps)/ 384 Gbps (285.7 Mpps)	
Aggregate Throughput Capacity (switch / stack)	136 Gbps (101.2 Mpps)/ 1,088 Gbps (809.5 Mpps)		136 Gbps (101.2 Mpps)/ 1,088 Gbps (809.5 Mpps)		184 Gbps (136.9 Mpps)/ 1,472 Gbps (1,095.2 Mpps)		184 Gbps (136.9 Mpps)/ 1,472 Gbps (1,095.2 Mpps)	
PoE Specifications								
802.3af Interoperable	N/A		Yes		N/A		Yes	
802.3at Interoperable	N/A		Yes		N/A		Yes	
System Power	N/A		375 watts per switch with up to 30 watts per port Per-port switch power monitor: <ul style="list-style-type: none">• Enable/disable• Priority safety• Overload & short circuit protection		N/A		375 watts per switch with up to 30 watts per port Per-port switch power monitor: <ul style="list-style-type: none">• Enable/disable• Priority safety• Overload & short circuit protection	
Physical Specifications								
Dimensions (H x W x D)	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")		H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")		H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")		H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")	
Net Weight	4.92 kg (10.85 lb)		6.10 kg (13.45 lb)		5.31 kg (11.70 lb)		6.49 kg (14.30 lb)	
MTBF	374,029 hours		328,905 hours		297,808 hours		252,940 hours	
Physical Ports	<ul style="list-style-type: none">• (24) 10/100/1000 auto-sensing, auto-negotiating MDI/MDI-X RJ45 ports• (2) Combo SFP ports• (2) 10GE ports• (2) dedicated stacking ports• (1) DB9 console port• (1) RPS connector		<ul style="list-style-type: none">• (24)10/100/1000 PoE (.af + .at) auto-sensing, auto-negotiating MDI/MDI-X RJ45 ports• (2) Combo SFP ports• (2) 10GE ports• (2) dedicated stacking ports• (1) DB9 console port• (1) RPS connector		<ul style="list-style-type: none">• (48) 10/100/1000 auto-sensing, auto-negotiating MDI/MDI-X RJ45 ports• (2) Combo SFP ports• (2) 10GE ports• (2) dedicated stacking ports• (1) DB9 console port• (1) RPS connector		<ul style="list-style-type: none">• (48)10/100/1000 PoE (.af + .at) auto-sensing, auto-negotiating MDI/MDI-X RJ45 ports• (2) Combo SFP ports• (2) 10GE ports• (2) dedicated stacking ports• (1) DB9 console port• (1) RPS connector	
Power Requirements								
Normal Input Voltage	100 - 240 VAC		100 - 240 VAC		100 - 240 VAC		100 - 240 VAC	
Input Frequency	50 – 60 Hz		50 – 60 Hz		50 – 60 Hz		50 – 60 Hz	
Input Current	2 A Max		7.5 A Max		2 A Max		7.5 A Max	
Power Consumption	59 watts		98 watts		94 watts		125 watts	
Temperature								
IEC 6-2-1 Standard Operating Temperature	0° to 50° C (32° to 122° F)		0° to 50° C (32° to 122° F)		0° to 50° C (32° to 122° F)		0° to 50° C (32° to 122° F)	
IEC 6-2-14 Non-Operating Temperature	-40° to 70° C (-40° to 158° F)		-40° to 70° C (-40° to 158° F)		-40° to 70° C (-40° to 158° F)		-40° to 70° C (-40° to 158° F)	

	B5K125-24	B5K125-24P2	B5K125-48	B5K125-48P2
Heat Dissipation	200 BTUs/Hr	335 BTUs/Hr	321 BTUs/Hr	427 BTUs/Hr
Humidity				
Operating Humidity	5% - 95% non-condensing	5% - 95% non-condensing	5% - 95% non-condensing	5% - 95% non-condensing
Vibration				
	IEC 68-2-6, IEC68-2-36	IEC 68-2-6, IEC68-2-36	IEC 68-2-6, IEC68-2-36	IEC 68-2-6, IEC68-2-36
Shock				
	IEC 68-2-29	IEC 68-2-29	IEC 68-2-29	IEC 68-2-29
Drop				
	IEC 68-2-32	IEC 68-2-32	IEC 68-2-32	IEC 68-2-32
Acoustics				
Front of switch (normal operation)	45.5 dB	45 dB	46 dB	45.5 dB
Altitude				
Operating	10,000 ft (3,048 m)	10,000 ft (3,048 m)	10,000 ft (3,048 m)	10,000 ft (3,048 m)
Non-operating	15,000 ft (4,572 m)	15,000 ft (4,572 m)	15,000 ft (4,572 m)	15,000 ft (4,572 m)
Agency and Regulatory Standard Specifications				
Safety	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1
EMC	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3
Environmental	2002/95/EC (RoHS Directive), 2002/96/EC (WEEE Directive), Ministry of Information Order #39 (China RoHS)	2002/95/EC (RoHS Directive), 2002/96/EC (WEEE Directive), Ministry of Information Order #39 (China RoHS)	2002/95/EC (RoHS Directive), 2002/96/EC (WEEE Directive), Ministry of Information Order #39 (China RoHS)	2002/95/EC (RoHS Directive), 2002/96/EC (WEEE Directive), Ministry of Information Order #39 (China RoHS)

Redundant Power Supply Equipment Specifications

STK-RPS-150CH2 Power Shelf

Power Supply Slots

2

Dimensions (H x W x D)*

5.5 cm (2.2") x 44.0 cm (17.3") x 18.0 cm (7.0")

Weight

0.95 kg (2.09 lbs)

**Note: dimensions include integrated rack mount ears*

STK-RPS-150CH8 Power Shelf

Power Supply Slots

8

Dimensions (H x W x D)*

22.26 cm (8.77") x 44.0 cm (17.3") x 26.4 cm (10.4")

Weight

5.27 kg (11.6 lbs)

STK-RPS-150PS Power Supply

Dimensions (H x W x D)

19.6 cm (7.7") x 5.2 cm (2.04") x 25.7 cm (10.1")

Net Weight (Unit Only)

1.75 kg (3.85 lbs)

Gross Weight (Packaged Unit)

3.20 kg (7.04 lbs)

MTBF

300,000 hours

Operating Temperature

0° C to 50° C (32° F to 122° F)

Storage Temperature

-30° C to 73° C (-22° F to 164° F)

Operating Relative Humidity

5% to 95%

AC Input Frequency Range

50 – 60 Hz

AC Input Voltage Range

100 – 240 VAC

Maximum Output Power

156 W continuous

STK-RPS-500PS Power Supply

Dimensions (H x W x D)*

4.45 cm (1.75") x 44.5 cm (17.5") x 16.5 cm (6.5")

Net Weight (Unit Only)

3.47 kg (7.63 lbs)

Gross Weight (Packaged Unit)

4.95 kg (10.89 lbs)

MTBF

589,644 hours at 25° C (77° F)

Operating Temperature

0° C to 50° C (32° F to 122° F)

Storage Temperature

-30° C to 73° C (-22° F to 164° F)

Operating Relative Humidity

5% to 95%

AC Input Frequency Range

50 – 60 Hz

AC Input Voltage Range

100 – 240 VAC

Maximum Output Power

500 W continuous

Ordering Information

Part Number	Description
B5 Switches	
B5G124-24	(24) 10/100/1000 RJ45 ports, (4) combo SFP ports, (2) dedicated high-speed stacking ports and external RPS connector. Total active ports per switch: (24) Gigabit ports
B5G124-24P2	(24) 10/100/1000 PoE (.at + .af) RJ45 ports, (4) combo SFP ports, (2) dedicated high-speed stacking ports and external RPS connector. Total active ports per switch: (24) Gigabit ports
B5G124-48	(48) 10/100/1000 RJ45 ports, (4) combo SFP ports, (2) dedicated high-speed stacking ports and external RPS connector. Total active ports per switch: (48) Gigabit ports
B5G124-48P2	(48) 10/100/1000 PoE (.at + .af) RJ45 ports, (4) combo SFP ports, (2) dedicated high-speed stacking ports and external RPS connector. Total active ports per switch: (48) Gigabit ports
B5K125-24	(24) 10/100/1000 RJ45 ports, (2) combo SFP ports, (2) 10GE ports, (2) dedicated high-speed stacking ports and external RPS connector. Total active ports per switch: (24) Gigabit ports + (2) 10GE ports
B5K125-24P2	(24) 10/100/1000 PoE (.at + .af) RJ45 ports, (2) combo SFP ports, (2) 10GE ports, (2) dedicated high-speed stacking ports and external RPS connector. Total active ports per switch: (24) Gigabit ports + (2) 10GE ports
B5K125-48	(48) 10/100/1000 RJ45 ports, (2) combo SFP ports, (2) 10GE ports, (2) dedicated high-speed stacking ports and external RPS connector. Total active ports per switch: (48) Gigabit ports + (2) 10GE ports
B5K125-48P2	(48) 10/100/1000 PoE (.at + .af) RJ45 ports, (2) combo SFP ports, (2) 10GE ports, (2) dedicated high-speed stacking ports and external RPS connector. Total active ports per switch: (48) Gigabit ports + (2) 10GE ports
Cables	
STK-CAB-SHORT	Stacking cable for connecting adjacent B5/C5 switches (30cm)
STK-CAB-LONG	Stacking cable for connecting top switch to bottom switch in a B5 or C5 stack (1m)
STK-CAB-2M	Stacking cable for B5/C5 models (2m)
STK-CAB-5M	Stacking cable for B5/C5 models (5m)
SSCON-CAB	Spare DB9 Console Cable
Redundant Power Supplies	
STK-RPS-150CH2	2-slot modular power supply shelf (power supply STK-RPS-150PS sold separately)
STK-RPS-150CH8	8-slot modular power supply shelf (power supply STK-RPS-150PS sold separately)
STK-RPS-150PS	150W Non-PoE redundant power supply
STK-RPS-500PS	500W 802.3at PoE redundant power supply

Transceivers

Enterasys transceivers provide connectivity options for Ethernet over twisted pair copper and fiber optic cables with transmission speeds from 100 Megabits per second to 10 Gigabits per second. The Enterasys B5 10GE ports support SFP+ transceivers that operate at 10GE, but do not support 1GE transceivers. All Enterasys transceivers meet the highest quality for extended life cycle and the best possible return on investment. For detailed specifications, compatibility and ordering information please go to <http://www.enterasys.com/products/transceivers-ds.pdf>.

Warranty

As a customer-centric company, Enterasys is committed to providing quality products and solutions. In the event that one of our products fails due to a defect, we have developed a comprehensive warranty that protects you and provides a simple way to get your products repaired or media replaced as soon as possible.

B-Series switches come with the Enterasys lifetime warranty against manufacturing defects. For full warranty terms and conditions please go to: www.enterasys.com/support/warranty.aspx.

Service and Support

Enterasys Networks provides comprehensive service offerings that range from Professional Services to design, deploy and optimize customer networks, customized technical training, to service and support tailored to individual customer needs. Please contact your Enterasys account executive for more information about Enterasys Service and Support.

Contact Us

For more information, call Enterasys Networks toll free at 1-877-801-7082, or +1-978-684-1000 and visit us on the Web at enterasys.com

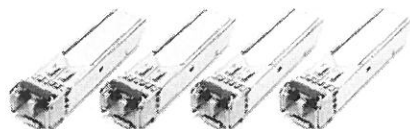


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Pluggable Transceivers

Industry Standard Pluggable Transceivers for Fast Ethernet, Gigabit, and 10 Gigabit Ethernet



Compatible and interoperable with
Enterasys product platforms

High quality transceiver technology for
extended life cycle that improves ROI
and lowers TCO

Support for a large variety of cable
types and transmission distances

Compliant with industry standard
multi-source agreements for vendor-
to-vendor compatibility

Overview

Enterasys pluggable transceivers deliver speed and media flexibility for Enterasys product platforms that support pluggable transceiver technology. All Enterasys transceivers are of the highest quality and conform to industry standards and manufacturer multi-source agreements for interoperability. Enterasys fully tests our transceivers with all product platforms to ensure compatibility and compliance.

Transceiver Summary

Multiple media types, port speeds and transmission distances to fit any environment

Enterasys transceivers provide connectivity options for Ethernet over twisted pair copper and fiber optic cables with transition speeds from 100 Megabits per second to 10 Gigabits per second. Twisted pair copper transceivers support transmission distances of up to 100 meters and fiber optic transceivers support multi-mode and single-mode fiber optic cable types with transmission distances up to 110 kilometers. Direct connect copper and fiber cable solutions with integrated transceivers provide low cost options for 10 Gigabit Ethernet connectivity at distances from 1 meter to 20 meters.

Fast Ethernet

Product Portfolio			100 Mbps Modular Interfaces		
Category	Model	Sub-model	SFP Modules		
			MGBIC-LC04	MGBIC-LC05	MGBIC-N-LC04
Stackable Switches	C3	C3K Models Only	✓	✓	✓
	B5		✓	✓	✓
	C5		✓	✓	✓
Modular Chassis Products	N-Series	7G-6MGBIC-B	✓	✓	✓
		7K-2XFP-6MGBIC	✓	✓	✓
	S-Series		✓	✓	✓
G-Series	G3		✓	✓	✓
D-Series	D2		✓	✓	✓

Benefits

Business Alignment

- Industry standard technology and form-factor
- Flexible interface selection to accommodate and take advantage of existing cabling infrastructure

Operational Efficiency

- Highest quality for extended life cycle and for the best possible return on investment
- Fully tested with all applicable Enterasys products

Interoperability and Quality

- Designed and manufactured to stringent IEEE standards and manufacturer multi-source agreements to ensure interoperability
- The highest quality transceiver technology to ensure long life cycle and reliability

Support and Services

- Industry-leading customer satisfaction and first call resolution rates
- Personalized services, including site surveys, network design, installation, and training

There is nothing more important
than our customers.

Transceiver Compatibility

Gigabit Ethernet

Product Portfolio			1 Gbps Ethernet Modular Interfaces											
			SFP Modules											
Category	Model	Sub-model	MGBIC-02	MGBIC-08	MGBIC-LC01	MGBIC-LC03	MGBIC-LC07	MGBIC-LC09	MGBIC-BX10-D MGBIC-BX10-U	MGBIC-MT01	I-MGBIC-GLX	I-MGBIC-GSX	I-MGBIC-GZX	I-MGBIC-GTX
Stackable Switches	A2		✓	✓	✓	✓	✓	✓	✓	✓				
	A4		✓	✓	✓	✓	✓	✓	✓	✓				
	B2		✓	✓	✓	✓	✓	✓	✓	✓				
	B3		✓	✓	✓	✓	✓	✓	✓	✓				
	C2		✓	✓	✓	✓	✓	✓	✓	✓				
	C3		✓	✓	✓	✓	✓	✓	✓	✓				
	B5		✓	✓	✓	✓	✓	✓	✓	✓				
	C5		✓	✓	✓	✓	✓	✓	✓	✓				
Modular Chassis Products	N-Series		✓	✓	✓	✓	✓	✓	✓	✓				
	S-Series		✓	✓	✓	✓	✓	✓	✓	✓				
	X-Series		✓	✓	✓	✓	✓	✓	✓	✓				
	E1		✓	✓	✓	✓		✓	✓	✓				
XSR	XSR			✓			✓		✓					
G-Series	G3		✓	✓	✓	✓	✓	✓	✓					
D-Series	D2		✓	✓	✓	✓	✓	✓	✓					
I-Series	I-Series										✓	✓	✓	✓
Security	NAC	2S4082-25-SYS 7S4280-19-SYS	✓	✓	✓	✓	✓	✓	✓	✓				

10 Gigabit Ethernet

Product Portfolio			10 Gbps Ethernet Modular Interfaces																		
			XFP Modules					XENPAK Modules				SFP+ Modules				SFP+ Interconnect Cable Assemblies			Laserwire Cables		
Category	Model	Sub-model	10GBASE-CX4-XFP	10GBASE-SR-XFP	10GBASE-LRM-XFP	10GBASE-LR-XFP	10GBASE-ER-XFP	10GBASE-ZR-XFP	10GBASE-LX4	10GBASE-SR	10GBASE-LR	10GBASE-ER	10GB-SR-SFPP	10GB-LR-SFPP	10GB-LRM-SFPP	10GB-ER-SFPP	10GB-C01-SFPP	10GB-C03-SFPP	10GB-C10-SFPP	10GB-LW-SFPP	10GB-LW-XFP
Stackable Switches	C2	C2K122-24	✓	✓	✓	✓	✓	✓													✓
	C3	C3K-2XFP	✓	✓	✓	✓	✓	✓													✓
	B5												✓	✓	✓	✓	✓	✓	✓	✓	
	C5												✓	✓	✓	✓	✓	✓	✓	✓	
Modular Chassis Products	N-Series	7KR4290-02							✓	✓	✓	✓									
		7KR4297-xx	✓	✓	✓	✓	✓	✓													
		7K-2XFP-6MGBIC	✓	✓	✓	✓	✓	✓													✓
	S-Series												✓	✓	✓	✓	✓	✓	✓	✓	
	X-Series	X-M2 & -M8 IOMs	✓	✓	✓	✓	✓	✓													✓
G-Series	G3	G3K- IOMs	✓	✓	✓	✓	✓	✓													✓

Transceiver Specifications

	Type	Connector Type	Cable Type	Core Size (microns)	Modal B/W MHz-Km	Max Distance*	Wavelength nm	Tx Power Min/Max dBm	Rx Min/Max dBm	Link Power Budget dB	Notes
10 Gigabit Ethernet											
10GBASE-ZR-XFP	XFP	LC	SMF	9	-	80 km	1550	0 / 4.0	-25 / -7.0	25	Requires minimum 11 dB attenuation
10GBASE-ER**	XENPAK	SC	SMF	9	-	40 km	1550	-1 / 2	-16 / -1.0	15	Requires minimum 3 dB attenuation. Links longer than 30 km require attenuation to be less than the minimum for B1.1 or B1.3 single mode fiber.
10GBASE-ER-XFP	XFP	LC									
10GB-ER-SFP+	SFP+	LC									
10GBASE-LR**	XENPAK	SC	SMF	9	-	10 km	1310	-8.2 / 0.5	-14.4 / 0.5	6.2	
10GBASE-LR-XFP	XFP	LC									
10GB-LR-SFP+	SFP+	LC									
10GBASE-SR**	XENPAK	SC	MMF	62.5 (OM1) 50 (OM2) 50 (OM3) 50 (OM4)	200 500 2000 4700	33 m 82 m 300 m 550 m	850	-7.3 / -1.0	-9.9 / -1.0	2.6	
10GBASE-SR-XFP	XFP	LC									
10GB-SR-SFP+	SFP+	LC									
10GBASE-LRM-XFP	XFP	LC	MMF	62.5 (OM1) 50 (OM2) 50 (OM3)	500 500 500	220 m 220 m 220 m	1310	-4.5 / 1.5	-6.5 / 1.5	2	XFP - OM1 and OM2 requires MCP
10GB-LRM-SFP+	SFP+										SFP+ - No Mode Conditioning Patch cord (MCP) required
10GBASE-LX4**	XENPAK	SC	MMF	62.5 / 50	500	300 m	1275, 1300, 1325, 1350	-7.3 / -1.0	-9.9 / -1.0	2.6	OM1 and OM2 MMF require mode conditioning patch cords.
10GBASE-CX4-XFP	XFP	CX4	Copper CX4	-	-	15 m	-	-	-	-	Compatible with CX4 compliant cable up to 15 m in length
10GB-C01-SFP+	SFP+	Integrated SFP+	Copper	-	-	1 m	-	-	-	-	Pre-terminated copper cable with integrated SFP+ connector modules
10GB-C03-SFP+						3 m					
10GB-C10-SFP+						10 m					
10GB-LW-SFP+	SFP+	-	-	-	-	-	-	-	-	-	Laserwire (LW) SFP+ Adapter
10GB-LW-XFP	XFP										Laserwire (LW) XFP adapter
10GB-LW-03	LW Adapter	Integrated LW	MMF	-	-	3 m	850	-	-	-	Pre-terminated Laserwire cable with integrated transceivers. Requires the use of SFP+ or XFP adapters.
10GB-LW-05						5 m					
10GB-LW-10						10 m					
10GB-LW-20						20 m					

* Transmission distances are provided as a nominal guide only. Refer to the optical specifications and the specific characteristics of your fiber installation to determine achievable distances.

** Discontinued product. Specifications for reference only.

Transceiver Specifications (cont.)

	Type	Connector Type	Cable Type	Core Size (microns)	Modal B/W MHz-Km	Max Distance*	Wavelength nm	Tx Power Min/Max dBm	Rx Min/Max dBm	Link Power Budget dB	Notes
Gigabit Ethernet											
MGBIC-LC07	SFP	LC	SMF	9	-	110 km	1550	0 / +5.0	-30 / -9	30	Requires minimum 14 dB attenuation
MGBIC-08	SFP	LC	SMF	9	-	80 km	1550	0 / +5.0	-24.0 / -3	24	Requires minimum 8 dB attenuation I-MGBIC for I-Series only -40° to +60° C
I-MGBIC-GZX	SFP		SMF	9	-	10 km	1310	-9.5 / -3	-20 / -3	10.5	I-MGBIC for I-Series only -40° to +60° C
MGBIC-LC09	SFP	Simplex LC	SMF	9	-	10 km	Tx 1490 Rx 1310	-9 / -3	-22 / -3	13	Single fiber application SFP's must be used in -D and -U pairs
I-MGBIC-GLX	SFP		SMF	9	-	10 km	Tx 1310 Rx 1490	-9 / -3	-22 / -3	13	Single fiber application SFP's must be used in -D and -U pairs
MGBIC-BX10-D	SFP	LC	MMF	62.5 50	160 400	2 Km 1 Km	1310	-9 / -1	-19 / -1	10	No mode conditioning patch cords required
MGBIC-BX10-U	SFP		MMF	62.5 50	160 400	220 m 275 m	850	-9.5 / -3	-17 / 0	7.5	I-MGBIC for I-Series only -40° to +60° C
MGBIC-LC03	SFP	LC	MMF	62.5 50	160 400	2 Km 1 Km	1310	-9 / -1	-19 / -1	10	No mode conditioning patch cords required
MGBIC-LC01	SFP	LC	MMF	62.5 50	160 200 400	220 m 275 m 500 m	850	-9.5 / -3	-17 / 0	7.5	I-MGBIC for I-Series only -40° to +60° C
I-MGBIC-GSX	SFP	LC		62.5 50	200 400	275 m 500 m					
MGBIC-MT01	SFP	MTRJ		50	500	550 m					
MGBIC-02	SFP	RJ45	Cat5, Twisted Pair	-	-	100 m	-	-	-	-	I-Series only -40° to +60° C
I-MGBIC-GTX	SFP										
100 Megabit Ethernet											
MGBIC-LC05	SFP	LC	SMF	9	-	10 km	1310	-15 / -8	-28 / -8	13	
MGBIC-LC04	SFP	LC	MMF	62.5 50	160 400	2 km	1310	-20 / -15	-30 / -14	10	Same as MGBIC-N-LC04

* Transmission distances are provided as a nominal guide only. Refer to the optical specifications and the specific characteristics of your fiber installation to determine achievable distances.

Ordering Information

Part Number	Description
10 Gigabit Ethernet	
10GB-ER-SFP	10 Gb, 10GBASE-ER, IEEE 802.3 SM, 1550 nm Long Wave Length, 40 km, LC SFP+
10GB-LR-SFP	10 Gb, 10GBASE-LR, IEEE 802.3 SM, 1310 nm Long Wave Length, 10 km, LC SFP+
10GB-LRM-SFP	10 Gb, 10GBASE-LRM, IEEE 802.3 MM, 1310 nm Short Wave Length, 220 m, LC SFP+
10GB-SR-SFP	10 Gb, 10GBASE-SR, IEEE 802.3 MM, 850 nm Short Wave Length, 33/82 m, LC SFP+
10GBASE-ZR-XFP	10 Gb, 10GBASE-ZR, SM, 1550 nm Long Wave Length, 80 km, LC XFP
10GBASE-ER-XFP	10 Gb, 10GBASE-ER, IEEE 802.3 SM, 1550 nm Long Wave Length, 40 km, LC XFP
10GBASE-LR-XFP	10 Gb, 10GBASE-LR, IEEE 802.3 SM, 1310 nm Long Wave Length, 10 km, LC XFP
10GBASE-LRM-XFP	10 Gb, 10GBASE-LRM, IEEE 802.3 MM, 1310 nm Long Wave Length, 220 m, LC XFP
10GBASE-SR-XFP	10 Gb, 10GBASE-SR, IEEE 802.3 MM, 850 nm Short Wave Length, 33/82 m, LC XFP
10GBASE-CX4-XFP	10 Gb, 10GBASE-CX4, IEEE 802.3 TwinAxial, Copper SFF-8470, 15 m, LC XFP
10 Gigabit Ethernet Cables and Interconnects	
10GB-C10-SFPP	10 Gb, pluggable copper cable assembly with integrated SFP+ transceivers, 10 meters
10GB-C03-SFPP	10 Gb, pluggable copper cable assembly with integrated SFP+ transceivers, 3 meters
10GB-C01-SFPP	10 Gb, pluggable copper cable assembly with integrated SFP+ transceivers, 1 meter
CX4-CBL-15	CX4 cable, 15 meters
CX4-CBL-05	CX4 cable, 5 meters
CX4-CBL-02	CX4 cable, 2 meters
10GB-LW-SFPP	10Gb, Laserwire® SFP+ adapter for use with Laserwire cable assembly*
10GB-LW-XFP	10Gb, Laserwire® XFP adapter for use with Laserwire cable assembly*
10GB-LW-20	10Gb, Laserwire® cable assembly, (requires Laserwire SFP+ or XFP adapters), 20 meters*
10GB-LW-10	10Gb, Laserwire® cable assembly, (requires Laserwire SFP+ or XFP adapters), 10 meters*
10GB-LW-05	10Gb, Laserwire® cable assembly, (requires Laserwire SFP+ or XFP adapters), 5 meters*
10GB-LW-03	10Gb, Laserwire® cable assembly, (requires Laserwire SFP+ or XFP adapters), 3 meters*
Gigabit Ethernet	
MGBIC-LC07	1 Gb, 802.3 SM, 1550 nm, 110 km, LC SFP
MGBIC-08	1 Gb, 1000BASE-LX/LH, IEEE 802.3 SM, 1550 nm Long Wave Length, 80 km, LC SFP
MGBIC-LC09	1 Gb, 1000BASE-LX, IEEE 802.3 SM, 1310 nm Long Wave Length, 10 km, LC SFP
MGBIC-LC03	1 Gb, 1000BASE-LX, MM, 1310 nm Long Wave Length, 2 km, LC SFP
MGBIC-BX10-D	1 Gb, 1000Base-BX10-D Single Fiber SM, Bidirectional, 1490nm Tx / 1310nm Rx, 10 km, Simplex LC SFP (must be paired with MGBIC-BX10-U)
MGBIC-BX10-U	1 Gb, 1000Base-BX10-U Single Fiber SM, Bidirectional 1310nm Tx / 1490nm Rx, 10 km, Simplex LC SFP (must be paired with MGBIC-BX10-D)
MGBIC-LC01	1 Gb, 1000BASE-SX, IEEE 802.3 MM, 850 nm Short Wave Length, 220/550 m, LC SFP
MGBIC-MT01	1 Gb, 1000BASE-SX, IEEE 802.3 MM, 850 nm Short Wave Length, 220/550 m, MTRJ SFP
MGBIC-02	1 Gb, 1000BASE-T, IEEE 802.3 Cat5, Copper Twisted Pair, 100 m, RJ 45 SFP
I-MGBIC-GZX	I-Series Only, -40°C to +60°C, 1 Gb, 1000BASE-LX/LH, IEEE 802.3 SM, 1550 nm Long Wave Length, 80 km, LC SFP
I-MGBIC-GLX	I-Series Only, -40°C to +60°C, 1 Gb, 1000BASE-LX, MM - 550 m, SM - 10 km, 1310 nm Long Wave Length, LC SFP
I-MGBIC-GSX	I-Series Only, -40°C to +60°C, 1 Gb, 1000BASE-SX, IEEE 802.3 MM, 850 nm Short Wave Length, 220/550 m, LC SFP
I-MGBIC-GTX	I-Series Only, -40°C to +60°C, 1 Gb, 1000BASE-T, IEEE 802.3 Cat5, Copper Twisted Pair, 100 m, RJ 45 SFP
100 Megabit Ethernet	
MGBIC-LC05	100 Mb, 100BASE-LX10, IEEE 802.3 SM, 1310 nm Long Wave Length, 10 km, LC SFP
MGBIC-LC04	100 Mb, 100BASE-FX, IEEE 802.3 MM, 1310 nm Long Wave Length, 2 km, LC SFP

* The Laserwire® mark is a registered trademark and is the property of Finisar Corporation.

Laser Safety

Class I Laser Eye Safety Compliance:

IEC 60825

FDA/CFR Title 21

OSHA TED 01-00-015

Additional eye safety notice:

Fiber optic transceivers operate in the infrared spectrum, outside of the visible spectrum.

Users should always avoid looking directly into any laser transmission path.

Enterasys Third Party Transceiver Policy

Enterasys provides a wide range of fully tested and interoperable transceivers for use in our product platforms. Enterasys makes no claim or guarantee that any third party transceiver will operate correctly or at all when used in an Enterasys product. Enterasys strongly advises our customers to always use Enterasys transceivers in our product platforms to ensure compatibility with the product platform and interoperability with other industry standard transceiver devices.

Enterasys is not liable for and will not support Enterasys products that are found to be defective if the cause of the product failure is due to the use of a third party transceiver. Enterasys does not express or imply any warranty or support obligations for any third party transceivers.

Warranty

Enterasys Transceivers come with a one year hardware warranty. For full warranty terms and conditions please go to <http://www.enterasys.com/support/warranty.aspx>.

Service and Support

Enterasys Networks provides comprehensive service offerings that range from Professional Services to design, deploy and optimize customer networks, customized technical training, to service and support tailored to individual customer needs. Please contact your Enterasys account executive for more information about Enterasys Service and Support.

Contact Us

For more information, call Enterasys Networks toll free at 1-877-801-7082, or +1-978-684-1000 and visit us on the Web at enterasys.com



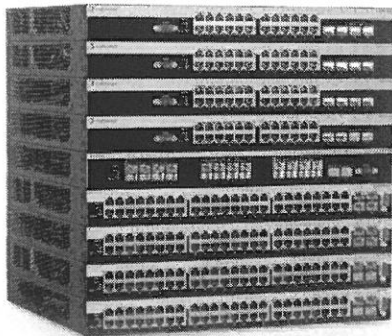
Thought Leadership
Patented Innovation

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C-Series C5

Gigabit Ethernet Stackable L2/L3/L4 Switch



Future-proofed with 802.3at high-power PoE and IPv6 routing support

Automatic discovery and deployment of VoIP services

High-availability stacking assures reliable network operations

Automated management features reduce operational costs

Investment protection via comprehensive lifetime warranty
2.11Tbps capacity and 809.5Mpps

Product Overview

The Enterasys C5 is a scalable, high-performance Gigabit Ethernet switch that provides support for the bandwidth-intensive and latency-sensitive requirements of today's demanding business applications. The C5 is an excellent choice for environments that require complete multi-layer switching capabilities and support for high density 10/100/1000 Ethernet ports and 10GE uplinks. The C5 also includes dynamic IPv4 and IPv6 routing and switching built into the hardware and policy-based automation capabilities for advanced edge deployments.

The C5 incorporates the new 802.3at high-power PoE on all ports, which translates into increased power provisioning for power-hungry devices such as Pan/Tilt/Zoom (PTZ) IP surveillance cameras, IP videophones, third party 802.11n access points and virtual desktops. Built-in high-power PoE support is a cost effective alternative for customers in place of purchasing separate PoE midspans, which can take away valuable rack space, add cost and contribute more cabling to the wiring closet.

The C5 provides high port density in a 1U footprint and is environmentally friendly by design. The C5's overall energy efficiency is further enhanced by a low current draw and an extreme tolerance for high environmental temperatures. A highly-scalable architecture and a comprehensive lifetime warranty ensure that a C5 network investment will sustain a secure, feature-rich and cost-effective network well into the future.

The C5's highly customizable Layer 2/3/4 packet classification capabilities work together with the 8 hardware-based priority queues associated with each Ethernet port to support a suite of differentiated services with as many as 8 distinct priority levels to provide guaranteed Quality of Service (QoS) for critical voice and video network traffic. In conjunction with its non-blocking L2 switching and L3 routing architecture, the C5's intelligent queuing mechanisms ensure that mission-critical applications receive prioritized access to network resources.

Benefits

Business Alignment

- Aligns network resource utilization with business goals and priorities
- Reliable network operation for mission-critical applications

Operational Efficiency

- Management automation capabilities reduce network operational expenses
- Automatic discovery and deployment of VoIP services

Security

- Ability to audit network for adherence to compliance regulations, such as PCI or HIPAA
- Network resources securely allocated according to user roles
- Network security maintained concurrently with user mobility

Support and Service

- Industry-leading customer satisfaction and first call resolution rates
- Personalized services, including site surveys, network design, installation, and training
- Comprehensive lifetime warranty, including feature upgrades and more

There is nothing more important
than our customers.

Reliability and Availability

The C5 design incorporates redundancy and failure protection mechanisms complete with automatic failover and recovery capabilities to provide a reliable network. An integral power supply is the primary source of power for the C5 and complete power redundancy is provided by an optional external power supply. The C5 redundant power supply provides load sharing, backup, or additive PoE power to a C5 stackable switch. With the power supply connected, the power requirement for the switch is equally shared by the two power supplies thereby stressing the power supplies less and increasing the lifetime and reliability of the power supplies.

A virtual switch can be created by interconnecting as many as eight C5s in a single stack, which can be managed via a single IP address with redundant management connections. The C5's closed-loop stacking capability utilizes bi-directional switch interconnects to maintain connectivity within the virtual switch despite any physical failures, which includes switches, cables and connections. Up to eight Ethernet ports can be grouped together to create a multi-link aggregation group (LAG). A LAG's Ethernet ports can be co-located on a single C5 or they can be distributed across multiple C5s within a stack to prevent a switch-level failure from disrupting data communications. The C5 also supports equal cost multipath protocol (ECMP) and virtual router redundancy protocol (VRRP) to strengthen its ability to quickly recover from a network failure. The C5 also includes Host CPU Protection support to help prevent Denial of Service (DoS) and BPDU attacks.

Advanced Quality of Service

Robust Quality of Service features enable strong support for integrated multimedia networks, as well as all types of data-intensive applications. The C5 is a standards-based solution optimized for multimedia applications, including VoIP, videoconferencing and real-time collaboration. The C5 uses multiple standards-based discovery methods with Enterasys policy capabilities to automatically identify and provision VoIP services for IP phones from all major vendors. C5 switches provide dynamic mobility for VoIP clients and reduce operating costs; when an IP phone moves and plugs in elsewhere in the enterprise network, its VoIP service provisioning, security and traffic priority settings move with it, with no manual administration required.

Advanced packet buffering on the C5 means less jitter on the network and a greater level of QoS for time-sensitive applications, such as VoIP and IP video, resulting in better network performance.

Security

The C5 enables strong network security by utilizing its authentication and security features, which can be applied at the port level or at the user level. Making use of the Enterasys Network Management Suite's Policy Manager or a standard CLI, the Enterasys role-based architecture enables

a network administrator to define distinct roles or profiles that represent operational groups within a business (e.g., employee, executive, guest, etc). Multiple users/devices per port can be authenticated via IEEE 802.1X, MAC address, or web authentication, and then assigned a pre-defined operational role.

Administrators can easily transition from RFC 3580 and complex access control list (ACL) deployments to the Enterasys role-based policy framework in a seamless fashion, without the need to make changes to their RADIUS infrastructure (e.g., adding filter-ID). In addition, the C5 also supports ACLs for supplementary network security. Network operations can be easily tailored to meet business-oriented requirements by providing each role with individualized access to network services and applications (e.g., a guest should have different network access privileges than an employee). Utilizing Enterasys role-based policy, administrators are able to manipulate DSCP and 802.1p rewrite for classification and prioritization of network traffic.

The C5 allows administrators even more network visibility, with the ability to audit their network for adherence to compliance regulations, such as PCI or HIPAA. The C5 is able to segment roles down to specific business functions, such as marketing, finance, HR or corporate, tailoring employee access to sensitive information.

Investment Protection

The C5 is a cost-effective, feature-rich, stackable switch that provides a broad set of features today and will continue to deliver benefits well into the future. All C-Series products include a lifetime warranty that includes warranty and support services for which many competitors charge additional fees – adding up to 10% of initial deployment costs on an annual basis. Included benefits, such as advanced hardware return, firmware feature upgrades (which most vendors cover at most for 90 days) and telephone support (which most don't include or severely limit) combine to significantly decrease operational costs for customers over the life of their network. For more information regarding warranty terms and conditions please go to <http://www.enterasys.com/support/warranty.aspx>.

Performance & Scalability

The C5, with support for 32,000 MAC addresses, provides scalable, wire-rate performance in support of the bandwidth-intensive and delay-sensitive requirements of today's demanding applications. Along with a switch capacity of 264 Gbps, the C5 provides up to 48 10/100/1000 Ethernet ports as well as 2 SFP+ ports, with the ability to support both 1GE and 10GE uplinks on the same port. Leveraging the C5's stacking capability, as many as 8 C5s (both 24-port and 48-port combinations) can be interconnected in a single stack to create a virtual switch that provides 2.11 Tbps of capacity and up to 384 10/100/1000 Ethernet ports as well as 16 10GE uplink ports.

Features / Standards and Protocols

MAC Address Table Size

32,000

VLANs

4,094 VLAN IDs

1,024 VLAN Entries per Stack

Switching Services Protocols

IEEE 802.1AB – LLDP

ANSI/TIA-1057 – LLDP-MED

IEEE 802.1D – MAC Bridges

IEEE 802.1s – Multiple Spanning Trees

IEEE 802.1t – 802.1D Maintenance

IEEE 802.1w – Rapid Spanning Tree

Reconvergence

IEEE 802.3 – Ethernet

IEEE 802.3ab – GE over Twisted Pair

IEEE 802.3ad – Link Aggregation

IEEE 802.3ae – 10 Gigabit Ethernet (fiber)

IEEE 802.3af – PoE

IEEE 802.3at – High Power PoE

(up to 30W per port)

IEEE 802.3i – 10Base-T

IEEE 802.3u – 100Base-T, 100Base-FX

IEEE 802.3z – GE over Fiber

Full/half duplex auto-sense support on all ports

IGMP Snooping v1/v2/v3

Jumbo Frame support (9,216 bytes)

Loop Protection

One-to-One and Many-to-One Port Mirroring

Port Description

Protected Ports

Selectable LAG Configuration Ready (6 x 8, 12 x 4, 24 x 2)

Host CPU Protection – Broadcast/ Multicast/

Unknown Unicast Suppression

Spanning Tree Backup Root

STP Pass Thru

VLAN Support

Generic Attribute Registration Protocol (GARP)

Generic VLAN Registration Protocol (GVRP)

IEEE 802.1p – Traffic classification

IEEE 802.1Q – VLAN Tagging

Protocol-based VLANs with Enterasys Policy

IEEE 802.3ac – VLAN Tagging Extensions

Port-based VLAN (private port/private VLAN)

Tagged-based VLAN

VLAN Marking of Mirror Traffic

Security

ARP Spoof Protection

DHCP Spoof Protection

IEEE 802.1X Port Authentication

MAC-based Port Authentication

RADIUS Accounting for network access

RADIUS Client

RFC 3580 – IEEE 802.1X RADIUS Usage Guidelines

Multi-user Authentication

Password Protection (encryption)

Secure Networks Policy

Secured Shell (SSHv2)

Secured Socket Layer (SSL)

User and IP Phone Authentication

Web-based Port Authentication

IPv4 Routing

Standard Access Control List (ACLs)

Extended ACLs

VLAN-based ACLs

ARP & ARP Redirect

DVMRP

IP Helper Address

RFC 826 – Ethernet ARP

RFC 1058 – RIP v1

RFC 1256 – ICMP Router Discovery Messages

RFC 1519 Classless Inter-Domain Routing

RFC 1724 – RIPv2 MIB Extension

RFC 2236 – IGMPv2

RFC 2328 – OSPF version 2

RFC 2338 – IP Redundancy VRRP

RFC 2362 – PIM-SM

RFC 2453 – RIP v2

RFC 3046 – DHCP/BootP Relay

RFC 3376 – IGMPv3

RFC 3768 – VRRP – Virtual Router

Redundancy Protocol Static Routes

IPv6 Routing

RFC 1981 – Path MTU for IPv6

RFC 2373 – IPv6 Addressing

RFC 2460 – IPv6 Protocol Specification

RFC 2461 – Neighbor Discovery

RFC 2462 – Stateless Autoconfiguration

RFC 2463 – ICMPv6

RFC 2464 – IPv6 over Ethernet

RFC 2473 – Generic Packet Tunneling in IPv6

RFC 2271 – SNMP Framework MIB

RFC 2711 – IPv6 Router Alert

RFC 2740 – OSPFv3

RFC 2893 – Transition Mechanisms for IPv6 Hosts and Routers (6 over 4 configured)

RFC 3315 – DHCPv6 (stateless + relay)

RFC 3484 – Default Address Selection for IPv6

RFC 3493 – Basic Socket Interface for IPv6

RFC 3513 – Addressing Architecture for IPv6

RFC 3542 – Advanced Sockets API for

RFC 3587 – IPv6 Global Unicast Address Format

RFC 3736 – Stateless DHCPv6

Dual IPv4/IPv6 TCP/IP Stack

MIB Support

Enterasys Entity MIB

Enterasys Policy MIB

Enterasys VLAN Authorization MIB

ANSI/TIA-1057 – LLDP-MED MIB

IEEE 802.1AB – LLDP MIB

IEEE 802.1X MIB – Port Access

IEEE 802.3ad MIB – LAG MIB

RFC 826 – ARP and ARP Redirect

RFC 951, RFC 1542 – DHCP/

BOOTP Relay

RFC 1213 – MIB/MIB II

RFC 1493 – BRIDGE-MIB

RFC 1643 – Ethernet-like MIB

RFC 1724 – RIPv2 MIB Extension

RFC 1850 – OSPF MIB

RFC 2096 – IP Forwarding Table MIB

RFC 2131, RFC 3046 – DHCPClient/Relay

RFC 2233 – IF-MIB

RFC 2465 – IPv6 MIB

RFC 2466 – ICMPv6 MIB

RFC 2571 – SNMP Framework MIB

RFC 2618 – RADIUS Authentication Client MIB

RFC 2620 – RADIUS Accounting Client MIB

RFC 2668 – Managed Object Definitions

for 802.3 MAUs

RFC 2674 – P-BRIDGE-MIB

RFC 2674 – QBRIDGE-MIB VLAN Bridge MIB

RFC 2737 – Entity MIB (physical branch only)

RFC 2787 – VRRP-MIB

RFC 2819 – RMON-MIB

RFC 2933 – IGMP MIB

RFC 2934 – PIM MIB for IPv4

RFC 3413 – SNMP v3 Applications MIB

RFC 3414 – SNMP v3 User-based

Security Module (USM) MIB

RFC 3584 – SNMP Community MIB

RFC 3621 – Power over Ethernet MIB

Quality of Service

8 Priority Queues per Port

802.3x Flow Control

Class of Service (CoS)

Ingress Rate Limiting

IP ToS/DSCP Marking/Remarking

IP Precedence

IP Protocol

Layer 2/3/4 Classification

Multi-layer Packet Processing

Queueing Control – Strict and Weighted

Round Robin

Source/Destination IP Address

Source/Destination MAC Address

Dynamic and Static MAC Locking

EAP Pass-Thru

RFC 2474 Definition of Differentiated Services

Field

Features / Standards and Protocols (cont.)

Management

Alias Port Naming
 Command Line Interface (CLI)
 Configuration Upload/Download
 Dual IPv4/IPv6 Management Support
 Editable Text-based Configuration File
 TFTP Client
 Multi-configuration File Support
 NMS Automated Security Manager
 NMS Console
 NMS Inventory Manager
 NMS Policy Manager
 Node/Alias Table
 RFC 768 – UDP
 RFC 783 – TFTP
 RFC 791 – IP

RFC 792 – ICMP
 RFC 793 – TCP
 RFC 826 – ARP
 RFC 854 – Telnet
 RFC 951 – BootP
 RFC 1157 – SNMP
 RFC 1321 – The MD5 Message-Digest Algorithm
 RFC 1901 – Community-based SNMPv2
 RFC 2030 Simple Network Time Protocol (SNTP)
 RFC 2933 – IGMP MIB
 RFC 3176 – sFlow
 RFC 3413 – SNMPV3 Applications
 RFC 3414 – User-based Security Module (USM) for SNMPv3

RFC 3415 – View-based Access Control Model for SNMP
 RFC 3826 – Advanced Encryption Standard (AES) for SNMP
 RMON (Stats, History, Alarms, Events, Filters, Packet Capture)
 Secure Copy (SCP)
 Secure FTP (SFTP)
 Simple Network Management Protocol (SNMP) v1/v2c/v3
 SSHv2
 RFC 3164 – The BSD Syslog Protocol
 TACACS+ support
 Authentication, Authorization and Auditing
 Web-based Management
 Webview via SSL Interface

Switch Model Specifications

	C5G124-24	C5G124-24P2	C5G124-48	C5G124-48P2
Performance				
Throughput Capacity wire-speed Mpps (switch / stack)	35.7 Mpps / 285.7 Mpps	35.7 Mpps / 285.7 Mpps	71.4 Mpps / 571.4 Mpps	71.4 Mpps / 571.4 Mpps
Switching Capacity (switch / stack)	48 Gbps (35.7 Mpps) / 384 Gbps (285.7 Mpps)	48 Gbps (35.7 Mpps) / 384 Gbps (285.7 Mpps)	96 Gbps (71.4 Mpps) / 768 Gbps (571.4 Mpps)	96 Gbps (71.4 Mpps) / 768 Gbps (571.4 Mpps)
Stacking Capacity (switch / stack)	128 Gbps (95.2 Mpps) / 1,024 Gbps (761.8 Mpps)	128 Gbps (95.2 Mpps) / 1,024 Gbps (761.8 Mpps)	128 Gbps (95.2 Mpps) / 1,024 Gbps (761.8 Mpps)	128 Gbps (95.2 Mpps) / 1,024 Gbps (761.8 Mpps)
Aggregate Throughput Capacity (switch / stack)	176 Gbps (130.9 Mpps) / 1,408 Gbps (1,047.5 Mpps)	176 Gbps (130.9 Mpps) / 1,408 Gbps (1,047.5 Mpps)	224 Gbps (166.6 Mpps) / 1,792 Gbps (1,333.2 Mpps)	224 Gbps (166.6 Mpps) / 1,792 Gbps (1,333.2 Mpps)
PoE Specifications				
802.3af Interoperable	N/A	Yes	N/A	Yes
802.3at Interoperable	N/A	Yes	N/A	Yes
System Power	N/A	850 watts per switch with up to 30 watts per port Per-port switch power monitor: • Enable/disable • Priority safety • Overload & short circuit protection	N/A	850 watts per switch with up to 30 watts per port Per-port switch power monitor: • Enable/disable • Priority safety • Overload & short circuit protection
Physical Specifications				
Dimensions (H x W x D)	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")
Net Weight	5.03 kg (11.10 lb)	6.21 kg (13.70 lb)	5.42 kg (11.95 lb)	6.60 kg (14.55 lb)
MTBF	395,557 hours	289,425 hours	311,897 hours	229,532 hours
Physical Ports	<ul style="list-style-type: none"> • (24) 10/100/1000 auto-sensing, auto-negotiating MDI/MDI-X RJ45 ports • (4) Combo SFP ports • (2) dedicated stacking ports • (1) DB9 console port • (1) RPS port 	<ul style="list-style-type: none"> • (24) 10/100/1000 PoE (.af+..at) auto-sensing, auto-negotiating MDI/MDI-X RJ45 ports • (4) Combo SFP ports • (2) dedicated stacking ports • (1) DB9 console port • (1) RPS port 	<ul style="list-style-type: none"> • (48) 10/100/1000 auto-sensing, auto-negotiating MDI/MDI-X RJ45 ports • (4) Combo SFP ports • (2) dedicated stacking ports • (1) DB9 console port • (1) RPS port 	<ul style="list-style-type: none"> • (48) 10/100/1000 PoE (.af+..at) auto-sensing, auto-negotiating MDI/MDI-X RJ45 ports • (4) Combo SFP ports • (2) dedicated stacking ports • (1) DB9 console port • (1) RPS port
Power Requirements				
Normal Input Voltage	100 - 240 VAC	100 - 240 VAC	100 - 240 VAC	100 - 240 VAC
Input Frequency	50 – 60 Hz	50 – 60 Hz	50 – 60 Hz	50 – 60 Hz
Input Current	2 A Max	12 A Max	2 A Max	12 A Max
Power Consumption	65 watts	125 watts	101 watts	150 watts

Switch Model Specifications (cont.)

C5G124-24		C5G124-24P2		C5G124-48		C5G124-48P2	
Temperature							
IEC 6-2-1 Standard Operating Temperature		0° to 50° C (32° to 122° F)		0° to 50° C (32° to 122° F)		0° to 50° C (32° to 122° F)	
IEC 6-2-14 Non-Operating Temperature		-40° to 70° C (-40° to 158° F)		-40° to 70° C (-40° to 158° F)		-40° to 70° C (-40° to 158° F)	
Heat Dissipation		222 BTUs/Hr		428 BTUs/Hr		345 BTUs/Hr	
513 BTUs/Hr							
Humidity							
Operating Humidity		5% - 95% non-condensing		5% - 95% non-condensing		5% - 95% non-condensing	
Vibration							
		IEC 68-2-6, IEC68-2-36		IEC 68-2-6, IEC68-2-36		IEC 68-2-6, IEC68-2-36	
Shock							
		IEC 68-2-29		IEC 68-2-29		IEC 68-2-29	
Drop							
		IEC 68-2-32		IEC 68-2-32		IEC 68-2-32	
Acoustics							
Front of switch (normal operation)		44 dB		45.5 dB		46 dB	
45.5 dB							
Altitude							
Operating		10,000 ft (3,048 m)		10,000 ft (3,048 m)		10,000 ft (3,048 m)	
Non-operating		15,000 ft (4,572 m)		15,000 ft (4,572 m)		15,000 ft (4,572 m)	
Agency and Regulatory Standard Specifications							
Safety		UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1		UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1		UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1	
EMC		FCC Part 15 (Class A), ICES- 003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3		FCC Part 15 (Class A), ICES- 003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3		FCC Part 15 (Class A), ICES- 003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3	
Environmental		2002/95/EC (RoHS Directive), 2002/96/EC (WEEE Directive), Ministry of Information Order #39 (China RoHS)		2002/95/EC (RoHS Directive), 2002/96/EC (WEEE Directive), Ministry of Information Order #39 (China RoHS)		2002/95/EC (RoHS Directive), 2002/96/EC (WEEE Directive), Ministry of Information Order #39 (China RoHS)	

C5K125-24		C5K125-24P2		C5K125-48		C5K125-48P2		C5K175-24	
Performance									
Throughput Capacity wire-speed Mpps (switch / stack)		65.5 Mpps / 523.8 Mpps		65.5 Mpps / 523.8 Mpps		101.2 Mpps / 809.5 Mpps		101.2 Mpps / 809.5 Mpps	
65.5 Mpps / 523.8 Mpps									
Switching Capacity (switch / stack)		88 Gbps (65.5 Mpps) / 704 Gbps (523.8 Mpps)		88 Gbps (65.5 Mpps) / 704 Gbps (523.8 Mpps)		136 Gbps (101.2 Mpps) / 1,088 Gbps (809.5 Mpps)		136 Gbps (101.2 Mpps) / 1,088 Gbps (809.5 Mpps)	
88 Gbps (65.5 Mpps) / 704 Gbps (523.8 Mpps)									
Stacking Capacity (switch / stack)		128 Gbps (95.2 Mpps) / 1,024 Gbps (761.8 Mpps)		128 Gbps (95.2 Mpps) / 1,024 Gbps (761.8 Mpps)		128 Gbps (95.2 Mpps) / 1,024 Gbps (761.8 Mpps)		128 Gbps (95.2 Mpps) / 1,024 Gbps (761.8 Mpps)	
128 Gbps (95.2 Mpps) / 1,024 Gbps (761.8 Mpps)									
Aggregate Throughput Capacity (switch / stack)		216 Gbps (160.7 Mpps) / 1,728 Gbps (1,285.6 Mpps)		216 Gbps (160.7 Mpps) / 1,728 Gbps (1,285.6 Mpps)		264 Gbps (196.4 Mpps) / 2,112 Gbps (1,571.3 Mpps)		264 Gbps (196.4 Mpps) / 2,112 Gbps (1,571.3 Mpps)	
216 Gbps (160.7 Mpps) / 1,728 Gbps (1,285.6 Mpps)									
PoE Specifications									
802.3af Interoperable		N/A		Yes		N/A		Yes	
N/A									
802.3at Interoperable		N/A		Yes		N/A		Yes	
N/A									

Switch Model Specifications (cont.)

	C5K125-24	C5K125-24P2	C5K125-48	C5K125-48P2	C5K175-24
System Power	N/A	850 watts per switch with up to 30 watts per port Per-port switch power monitor: • Enable/disable • Priority safety • Overload & short circuit protection	N/A	850 watts per switch with up to 30 watts per port Per-port switch power monitor: • Enable/disable • Priority safety • Overload & short circuit protection	N/A
Physical Specifications					
Dimensions (H x W x D)	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")
Net Weight	4.92 kg (10.85 lb)	6.10 kg (13.45 lb)	5.31 kg (11.70 lb)	6.49 kg (14.30 lb)	4.97 kg (10.95 lb)
MTBF	365,615 hours	273,083 hours	284,345 hours	213,965 hours	395,839 hours
Physical Ports	<ul style="list-style-type: none"> • (24) 10/100/1000 auto-sensing, auto-negotiating MDI/MDI-X RJ45 ports • (2) Combo SFP ports • (2) SFP+ ports • (2) dedicated stacking ports • DB9 console port • (1) RPS port 	<ul style="list-style-type: none"> • (24) 10/100/1000 PoE (.af + .at) auto-sensing, auto-negotiating MDI/MDI-X RJ45 ports • (2) Combo SFP ports • (2) SFP+ ports • (2) dedicated stacking ports • DB9 console port • (1) RPS port 	<ul style="list-style-type: none"> • (48) 10/100/1000 auto-sensing, auto-negotiating MDI/MDI-X RJ45 ports • (2) Combo SFP ports • (2) SFP+ ports • (2) dedicated stacking ports • (1) DB9 console port • (1) RPS port 	<ul style="list-style-type: none"> • (48) 10/100/1000 PoE (.af + .at) auto-sensing, auto-negotiating MDI/MDI-X RJ45 ports • (2) Combo SFP ports • (2) SFP+ ports • (2) dedicated stacking ports • (1) DB9 console port • (1) RPS port 	<ul style="list-style-type: none"> • (24) SFP • (2) SFP+ ports • (2) dedicated stacking ports • (1) DB9 console port • (1) RPS port
Power Requirements					
Normal Input Voltage	100 - 240 VAC	100 - 240 VAC	100 - 240 VAC	100 - 240 VAC	100 - 240 VAC
Input Frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Input Current	2 A Max	12 A Max	2 A Max	12 A Max	2 A Max
Power Consumption	74 watts	130 watts	120 watts	165 watts	69 watts
Temperature					
IEC 6-2-1 Standard Operating Temperature	0° to 50° C (32° to 122° F)	0° to 50° C (32° to 122° F)	0° to 50° C (32° to 122° F)	0° to 50° C (32° to 122° F)	0° to 50° C (32° to 122° F)
IEC 6-2-14 Non-Operating Temperature	-40° to 70° C (-40° to 158° F)	-40° to 70° C (-40° to 158° F)	-40° to 70° C (-40° to 158° F)	-40° to 70° C (-40° to 158° F)	-40° to 70° C (-40° to 158° F)
Heat Dissipation	253 BTUs/Hr	445 BTUs/Hr	408 BTUs/Hr	565 BTUs/Hr	234 BTUs/Hr
Humidity					
Operating Humidity	5% - 95% non-condensing	5% - 95% non-condensing	5% - 95% non-condensing	5% - 95% non-condensing	5% - 95% non-condensing
Vibration					
	IEC 68-2-6, IEC68-2-36	IEC 68-2-6, IEC68-2-36	IEC 68-2-6, IEC68-2-36	IEC 68-2-6, IEC68-2-36	IEC 68-2-6, IEC68-2-36
Shock					
	IEC 68-2-29	IEC 68-2-29	IEC 68-2-29	IEC 68-2-29	IEC 68-2-29
Drop					
	IEC 68-2-32	IEC 68-2-32	IEC 68-2-32	IEC 68-2-32	IEC 68-2-32
Acoustics					
Front of switch (normal operation)	45 dB	45.5 dB	47 dB	46 dB	46 dB
Altitude					
Operating	10,000 ft (3,048 m)	10,000 ft (3,048 m)	10,000 ft (3,048 m)	10,000 ft (3,048 m)	10,000 ft (3,048 m)
Non-operating	15,000 ft (4,572 m)	15,000 ft (4,572 m)	15,000 ft (4,572 m)	15,000 ft (4,572 m)	15,000 ft (4,572 m)

Agency and Regulatory Standard Specifications					
Safety	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1
EMC	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3
Environmental	2002/95/EC (RoHS Directive), 2002/96/EC (WEEE Directive), Ministry of Information Order #39 (China RoHS)	2002/95/EC (RoHS Directive), 2002/96/EC (WEEE Directive), Ministry of Information Order #39 (China RoHS)	2002/95/EC (RoHS Directive), 2002/96/EC (WEEE Directive), Ministry of Information Order #39 (China RoHS)	2002/95/EC (RoHS Directive), 2002/96/EC (WEEE Directive), Ministry of Information Order #39 (China RoHS)	2002/95/EC (RoHS Directive), 2002/96/EC (WEEE Directive), Ministry of Information Order #39 (China RoHS)

Redundant Power Supply Equipment Specifications

STK-RPS-1005CH3 Power Shelf

Power Supply Slots

3

Dimensions (H x W x D)*

5.5 cm (2.2") x 44.0 cm (17.3") x 35.1 cm (13.8")

Weight

0.95 kg (2.09 lbs)

STK-RPS-150CH2 Power Shelf

Power Supply Slots

2

Dimensions (H x W x D)*

5.5 cm (2.2") x 44.0 cm (17.3") x 18.0 cm (7.0")

Weight

5.27 kg (11.6 lbs)

STK-RPS-150CH8 Power Shelf

Power Supply Slots

8

Dimensions (H x W x D)*

22.26 cm (8.77") x 44.0 cm (17.3") x 26.4 cm (10.4")

Weight

5.27 kg (11.6 lbs)

**Note: dimensions include integrated rack mount ears*

STK-RPS-150PS Power Supply

Dimensions (H x W x D)

19.6 cm (7.7") x 5.2 cm (2.04") x 25.7 cm (10.1")

Net Weight (Unit Only)

1.75 kg (3.85 lbs)

Gross Weight (Packaged Unit)

3.20 kg (7.04 lbs)

MTBF

300,000 hours

Operating Temperature

0° C to 50° C (32° F to 122° F)

Storage Temperature

-30° C to 73° C (-22° F to 164° F)

Operating Relative Humidity

5% to 95%

AC Input Frequency Range

50 – 60 Hz

AC Input Voltage Range

100 – 240 VAC

Maximum Output Power

156 W continuous

STK-RPS-1005PS Power Supply

Dimensions (H x W x D)*

4.3 cm (1.7") x 15.4 cm (6.06") x 34.0 cm (13.39")

Net Weight (Unit Only)

2.1 kg (4.63 lb)

Gross Weight (Packaged Unit)

3.53 kg (7.77 lb)

MTBF

800,000 hours

Operating Temperature

0° C to 50° C (32° F to 122° F)

Storage Temperature

-40° C to 70° C (-40° F to 158° F)

Operating Relative Humidity

5% to 95%

AC Input Frequency Range

50-60 Hz

AC Input Voltage Range

100 - 240 VAC

Maximum Output Power

1005 W continuous

Ordering Information

Part Number	Description
C5 Switches	
C5G124-24	(24) 10/100/1000 RJ45 ports, (4) combo SFP ports, (2) dedicated high-speed stacking ports and external RPS connector. Total active ports per switch: (24) Gigabit ports
C5G124-24P2	(24) 10/100/1000 PoE (.at + .af) RJ45 ports, (4) combo SFP ports, (2) dedicated high-speed stacking ports and external RPS connector. Total active ports per switch: (24) Gigabit ports
C5G124-48	(48) 10/100/1000 RJ45 ports, (4) combo SFP ports, (2) dedicated high-speed stacking ports and external RPS connector. Total active ports per switch: (48) Gigabit ports
C5G124-48P2	(48) 10/100/1000 PoE (.at + .af) RJ45 ports, (4) combo SFP ports, (2) dedicated high-speed dedicated stacking ports and external RPS connector. Total active ports per switch: (48) Gigabit ports
C5K125-24	(24) 10/100/1000 RJ45 ports, (2) combo SFP ports, (2) SFP+, (2) dedicated high-speed stacking ports and external RPS connector. Total active ports per switch: (24) Gigabit ports + (2) 1GE or 10GE SFP+ ports
C5K125-24P2	(24) 10/100/1000 PoE (.at + .af) RJ45 ports, (2) combo SFP ports, (2) SFP+, (2) dedicated high-speed stacking ports and external RPS connector. Total active ports per switch: (24) Gigabit ports + (2) 1GE or 10GE SFP+ ports
C5K125-48	(48) 10/100/1000 RJ45 ports, (2) combo SFP ports, (2) SFP+, (2) dedicated high-speed stacking ports and external RPS connector. Total active ports per switch: (48) Gigabit ports + (2) 1GE or 10GE SFP+ ports
C5K125-48P2	(48) 10/100/1000 PoE (.at + .af) RJ45 ports, (2) combo SFP ports, (2) SFP+, (2) dedicated high-speed stacking ports and external RPS connector. Total active ports per switch: (48) Gigabit ports + (2) 1GE or 10GE SFP+ ports
C5K175-24	(24) SFP, (2) SFP+ ports, (2) dedicated high-speed stacking ports and external RPS connector. Total active ports per switch: (24) SFP, (2) 1GE or 10GE SFP+ ports
Optional Software Licenses	
C5L3-LIC	C5 advanced IPv4 (OSPF, PIM-SM, DVMRP and VRRP) and IPv6 routing licensing (OSPF) (per switch)
Cables	
STK-CAB-SHORT	Stacking cable for connecting adjacent B5/C5 switches (30cm)
STK-CAB-LONG	Stacking cable for connecting top switch to bottom switch in a B5 or C5 stack (1m)
STK-CAB-2M	Stacking cable for B5/C5 models (2m)
STK-CAB-5M	Stacking cable for B5/C5 models (5m)
SSCON-CAB	Spare DB9 Console Cable
Redundant Power Supplies	
STK-RPS-1005CH3	3-slot modular power supply chassis (power supply STK-RPS-1005PS sold separately)
STK-RPS-1005PS	1005W 802.3at PoE redundant power supply with load-balancing support
STK-RPS-150CH2	2-slot modular power supply shelf (power supply STK-RPS-150PS sold separately)
STK-RPS-150CH8	8-slot modular power supply shelf (power supply STK-RPS-150PS sold separately)
STK-RPS-150PS	150W non-PoE redundant power supply

Transceivers

Enterasys transceivers provide connectivity options for Ethernet over twisted pair copper and fiber optic cables with transmission speeds from 100 Megabits per second to 10 Gigabits per second. The Enterasys C5 includes SFP+ transceivers that can support both 10GE and 1GE transceivers. All Enterasys transceivers meet the highest quality for extended life cycle and the best possible return on investment. For detailed specifications, compatibility and ordering information please go to <http://www.enterasys.com/products/transceivers-ds.pdf>.

Warranty

As a customer-centric company, Enterasys is committed to providing quality products and solutions. In the event that one of our products fails due to a defect, we have developed a comprehensive warranty that protects you and provides a simple way to get your products repaired or media replaced as soon as possible.

C-Series switches come with the Enterasys lifetime warranty against manufacturing defects. For full warranty terms and conditions please go to: www.enterasys.com/support/warranty.aspx.

Service and Support

Enterasys Networks provides comprehensive service offerings that range from Professional Services to design, deploy and optimize customer networks, customized technical training, to service and support tailored to individual customer needs. Please contact your Enterasys account executive for more information about Enterasys Service and Support.

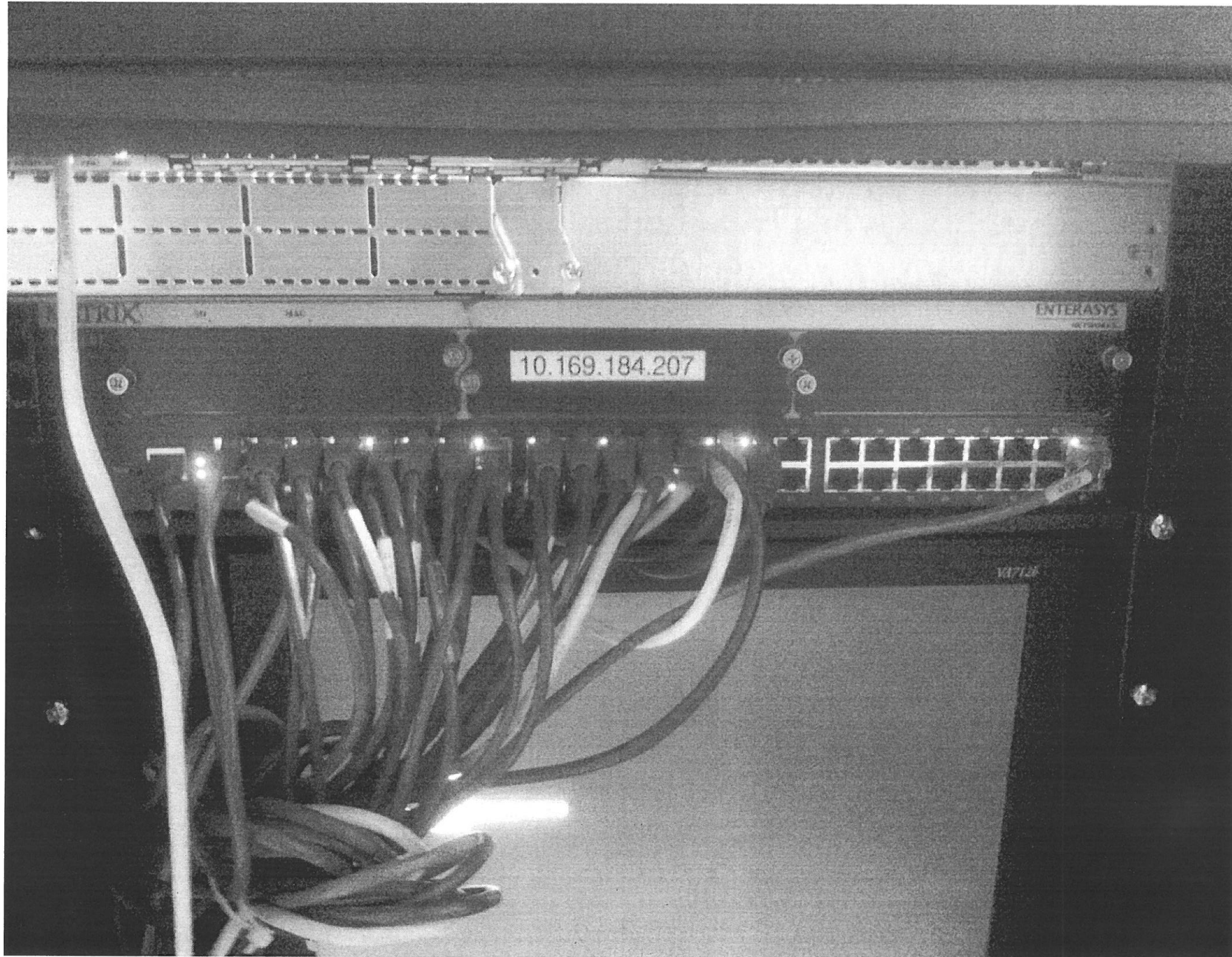
Contact Us

For more information, call Enterasys Networks toll free at 1-877-801-7082, or +1-978-684-1000 and visit us on the Web at enterasys.com



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COR61681_02 Q2 & A2 response is inaccurate effecting the outcome of this bid, please see below.

If just using GVRP, that protocol does "only dynamically add VLANs to aid in trunking", however to synchronize between switches the GARP (Generic Attribute Registration Protocol) does dynamically add VLANs throughout the entire infrastructure, A standard which every manufacturer supports, acting just like VTP and eliminating a proprietary "lock-in" of a single vendor.

GARP is used to dynamically create VLANs across a switched network, it is also used to propagate state information throughout a switched network. It creates a list of all eligible VLANs whose frames can be forwarded out one specific port and the frame format can be tagged or untagged for that port. The VLAN list can be a unique VLAN between 1 and 4094 that identifies a particular VLAN. A 32-character alphanumeric name can be associated with the VLAN ID. The VLAN name is intended to make user-defined VLANs easier to identify and remember.

The information contained in answer 2 in addendum COR61681_2 where "GVRP does not synchronize between switches, but only adds VLANs on devices that have dynamic creation enabled in order to pass traffic between trunks" **is incorrect and the article is outdated from 2002.** As seen here:

<http://www.ciscopress.com/articles/article.asp?p=29803&seqNum=5>

This is the response in question within COR61681 Q2 A2:

VTP and GVRP do indeed do many of the same things, however, the long term plan for the infrastructure requires that we have a structure that will quickly propagate changes across the entire framework. GVRP will only dynamically add VLANs to aid in trunking, and does not synchronize between switches.

The Agency requires an infrastructure that will automatically synchronize and replicate VLAN changes from switch to switch across the LAN, reducing programming and implementation time. It is for this reason that Virtual Local Area Network Trunking Protocol (VTP), or equal, is a mandatory requirement of this RFQ.

COR61681_02 Q4 and A4: Response to the question about switch performance and speed:

This BID response from Extreme Networks and Pomeroy is providing 10 X times the performance of the requested 10/100 Mbps switches with 10/100/1000 Mbps. We strongly suggest that you please consider this because every device that ships today comes equipped with at least a 1000 Mbps interface and the longevity of these switches will far better serve the agency in the long run regarding return on investment.

Original COR61681_02 Q4 and A4 Response to question about switch performance and speed:

Q4: It appears that the switches specified are WS-C2960S-F48FPS-L are a 10/100 mbps switch. Question: Does the State really want 10/100/1000 mbps current switch technology since most networking devices come equipped with 1000 mbps interfaces?

A4: The 10/100 mbps switch technology meets our current and anticipated requirements.