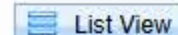




The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at ***WVPurchasing.gov*** with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

Header 1

 List View

General Information

Contact

Default Values

Discount

Document Information

Clarification Request

Procurement Folder: 1807588

Procurement Type: Central Purchase Order

Vendor ID: 000000223571 

Legal Name: ADVANTAGE TECHNOLOGY LLC

Alias/DBA:

Total Bid: \$21,267.30

Response Date: 11/04/2025 

Response Time: 12:52

Responded By User ID: advjstewart 

First Name: James

Last Name: Stewart

Email: jstewart@advantage.tech

Phone: 304-342-0796

SO Doc Code: CRFQ

SO Dept: 0708

SO Doc ID: ABC2600000001

Published Date: 11/13/25

Close Date: 11/19/25

Close Time: 13:30

Status: Closed

Solicitation Description: Network Switches, accessories,
Subscription & Support

Total of Header Attachments: 1

Total of All Attachments: 1



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

State of West Virginia
Solicitation Response

Proc Folder: 1807588
Solicitation Description: Network Switches, accessories, Subscription & Support
Proc Type: Central Purchase Order

Solicitation Closes	Solicitation Response	Version
2025-11-19 13:30	SR 0708 ESR11042500000002940	1

VENDOR
000000223571
ADVANTAGE TECHNOLOGY LLC

Solicitation Number: CRFQ 0708 ABC2600000001
Total Bid: 21267.29999999999927240423858 **Response Date:** 2025-11-04 **Response Time:** 12:52:29
Comments:

FOR INFORMATION CONTACT THE BUYER
James W Atkins
(304) 558-0094
james.w.atkins@wv.gov

Vendor Signature X	FEIN#	DATE
---------------------------	--------------	-------------

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Ethernet Switch POE+ or Equal	6.00000	EA	3076.000000	18456.00

Comm Code	Manufacturer	Specification	Model #
43222612			

Commodity Line Comments:

Extended Description:

A contract for the one time purchase of 6 Extreme Networks Ethernet Switches or equal, 4 Extreme Networks Transceiver modules or equal, 6 Power Cords, 4 Twinaxial cables, and 6 Extreme Cloud IQ Pilot SaaS Subscription and EW SaaS support - 3 years or equal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	SFP+transceiver module	4.00000	EA	310.000000	1240.00

Comm Code	Manufacturer	Specification	Model #
43210000			

Commodity Line Comments:

Extended Description:

SFP+transceiver module

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	Power Cord	6.00000	EA	13.550000	81.30

Comm Code	Manufacturer	Specification	Model #
43210000			

Commodity Line Comments:

Extended Description:

Power Cord

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	Ethernet Switch POE+ or Equal	4.00000	EA	47.000000	188.00

Comm Code	Manufacturer	Specification	Model #
43210000			

Commodity Line Comments:

Extended Description:

A contract for the one time purchase of 6 Extreme Networks Ethernet Switches or equal, 4 Extreme Networks Transceiver modules or equal, 6 Power Cords, 4 Twinaxial cables, and 6 Extreme Cloud IQ Pilot SaaS Subscription and EW SaaS support - 3 years or equal.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
5	SaaS Subscription 3 yr & EW SaaS Support	6.00000	EA	217.000000	1302.00

Comm Code	Manufacturer	Specification	Model #
81162000			

Commodity Line Comments:

Extended Description:
SaaS Subscription 3 yr & EW SaaS Support



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

State of West Virginia
Centralized Request for Quote
Info Technology

Proc Folder: 1807588

Doc Description: Network Switches, accessories, Subscription & Support

Reason for Modification:

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2025-10-30	2025-11-19 13:30	CRFQ 0708 ABC2600000001	1

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Customer Code: 00000023571

Vendor Name : Advantage Technology

Address :

Street : 950 Kanawha Blvd East Ste 100

City : Charleston

State : WV

Country : USA

Zip : 25301

Principal Contact : James Stewart, Sales Engineer

Vendor Contact Phone: 304-941-4272

Extension:

FOR INFORMATION CONTACT THE BUYER

James W Atkins
(304) 558-0094
james.w.atkins@wv.gov

Vendor
Signature X

James Stewart

FEIN# 74-3077314

DATE 11.03.2025

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION

The West Virginia Purchasing Division is soliciting bids on behalf of Alcohol Beverage and Control Administration to establish a contract for the one time purchase of 6 Extreme Networks Ethernet Switches or equal, 4 Extreme Networks Transceiver modules or equal, 6 Power Cords, 4 Twinaxial cables, and 6 ExtremeCloud IQ Pilot SaaS Subscription and EW SaaS support or equal for 3 years per the attached specifications and terms and conditions

INVOICE TO

ALCOHOL BEVERAGE
CONTROL COMMISSION
4TH FLOOR
900 PENNSYLVANIA AVE
CHARLESTON WV
US

SHIP TO

ALCOHOL BEVERAGE
CONTROL COMMISSION
4TH FLOOR
900 PENNSYLVANIA AVE
CHARLESTON WV
US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Ethernet Switch POE+ or Equal	6.00000	EA	\$3,076.00ea / \$18,456.00	

Comm Code**Manufacturer****Specification****Model #**

43222612

Extended Description:

A contract for the one time purchase of 6 Extreme Networks Ethernet Switches or equal, 4 Extreme Networks Transceiver modules or equal, 6 Power Cords, 4 Twinaxial cables, and 6 Extreme Cloud IQ Pilot SaaS Subscription and EW SaaS support - 3 years or equal.

INVOICE TO

ALCOHOL BEVERAGE
CONTROL COMMISSION
4TH FLOOR
900 PENNSYLVANIA AVE
CHARLESTON WV
US

SHIP TO

ALCOHOL BEVERAGE
CONTROL COMMISSION
4TH FLOOR
900 PENNSYLVANIA AVE
CHARLESTON WV
US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	SFP+transceiver module	4.00000	EA	\$310.00ea / \$1,240.00	

Comm Code**Manufacturer****Specification****Model #** 10301-AO

43210000

Extended Description:

SFP+transceiver module

INVOICE TO		SHIP TO	
ALCOHOL BEVERAGE CONTROL COMMISSION 4TH FLOOR 900 PENNSYLVANIA AVE CHARLESTON WV US		ALCOHOL BEVERAGE CONTROL COMMISSION 4TH FLOOR 900 PENNSYLVANIA AVE CHARLESTON WV US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
3	Power Cord	6.00000	EA	\$13.55ea / \$81.30	

Comm Code	Manufacturer	Specification	Model #
43210000			

Extended Description:

Power Cord

INVOICE TO		SHIP TO	
ALCOHOL BEVERAGE CONTROL COMMISSION 4TH FLOOR 900 PENNSYLVANIA AVE CHARLESTON WV US		ALCOHOL BEVERAGE CONTROL COMMISSION 4TH FLOOR 900 PENNSYLVANIA AVE CHARLESTON WV US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
4	Ethernet Switch POE+ or Equal	4.00000	EA	\$47.00ea / \$188.00	

Comm Code	Manufacturer	Specification	Model #
43210000			10304-AO

Extended Description:

A contract for the one time purchase of 6 Extreme Networks Ethernet Switches or equal, 4 Extreme Networks Transceiver modules or equal, 6 Power Cords, 4 Twinaxial cables, and 6 Extreme Cloud IQ Pilot SaaS Subscription and EW SaaS support - 3 years or equal.

INVOICE TO		SHIP TO	
ALCOHOL BEVERAGE CONTROL COMMISSION 4TH FLOOR 900 PENNSYLVANIA AVE CHARLESTON WV US		ALCOHOL BEVERAGE CONTROL COMMISSION 4TH FLOOR 900 PENNSYLVANIA AVE CHARLESTON WV US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
5	SaaS Subscription 3 yr & EW SaaS Support	6.00000	EA	\$217.00ea / \$1,302.00	

Comm Code	Manufacturer	Specification	Model #
81162000			

Extended Description:

SaaS Subscription 3 yr & EW SaaS Support

SCHEDULE OF EVENTS

<u>Line</u>	<u>Event</u>	<u>Event Date</u>
1	Questions due by 3:00pm EST	2025-11-06

	Document Phase	Document Description	Page 5
ABC2600000001	Final	Network Switches, accessories, Subscription & Support	

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

REQUEST FOR QUOTATION
Switches, Transceiver Modules, Power Cords, Twinaxial Cables, SaaS Support and Subscription

Exhibit A

<u>Item</u>	<u>Specification</u>	<u>Description</u>	<u>Brand Bid</u>	<u>Model Bid</u>	<u>UM</u>	<u>Unit Cost</u>	<u>Qty</u>	<u>Extended Cost</u>
1.	3.1.1	Extreme Networks 48x10/100/1000Base-T Ethernet Switch POE+ or Equal (PN 5320-48P-8XE)	<u>Extreme</u>	<u>5320-48P-8XE</u>	Each	<u>\$3,076.00</u>	X6	<u>\$ 18,456.00</u>
2.	3.1.2	Extreme Networks - SFP+ transceiver module - 10GigE - 10G-SR or Equal (PN 10301)	<u>Add-On</u>	<u>10301-AO</u>	Each	<u>\$ 310.00</u>	X4	<u>\$ 1,240.00</u>
3.	3.1.3	Power Cord, 15A, USA, NEMA 5-15, IEC320-C15 or Equal (PN 10099)	<u>Extreme</u>	<u>10099</u>	Each	<u>\$ 13.55</u>	X6	<u>\$ 81.30</u>
4	3.1.4	Extreme Networks 1M SFP+ Twinaxial Cable (PN 10304)	<u>Add-On</u>	<u>10304-AO</u>	Each	<u>\$ 47.00</u>	X4	<u>\$ 188.00</u>
5.	3.1.5	ExtremeCloud IQ Pilot SaaS Subscription and EW SaaS Support - 3 years or Equal (PN XIQ-PIL-S-C-EW-3YR)	<u>Extreme</u>	<u>XIQ-PIL-S-C-EW-3YR</u>	Each	<u>\$ 217.00</u>	X6	<u>\$1,302.00</u>
Total Bid Amount								<u>\$21,267.30</u>

(PRICING PAGE MUST BE COMPLETED AND SUBMITTED WITH BID)

Vendor Name (PRINT)	<u>Advantage Technology</u>	
Vendor Signature	<u>James Stewart</u>	<u>James Stewart, Sales Engineer</u>
Email Address	<u>jstewart@advantage.tech</u>	<u>11.03.2025</u>

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

James Stewart, Sales Engineer

(Printed Name and Title)

950 Kanawha Blvd East Ste 100 Charleston, WV 25301

(Address)

304-973-9537 / NA

(Phone Number) / (Fax Number)

jstewart@advantage.tech

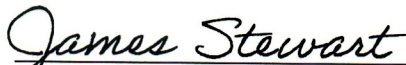
(E-mail address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; ; that this bid or offer was made without prior understanding, agreement, or connection with any entity submitting a bid or offer for the same material, supplies, equipment or services; that this bid or offer is in all respects fair and without collusion or fraud; 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; that I am authorized by the Vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on Vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the Vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

Advantage Technology

(Company)


(Signature of Authorized Representative)

James Stewart, Sales Engineer

(Printed Name and Title of Authorized Representative)

11.03.2025

(Date)

304-973-9537 / NA

(Phone Number) (Fax Number)

Revised 8/24/2023

STATE OF WEST VIRGINIA

Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: 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: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, 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: Advantage Technology

Authorized Signature: James Stewart

Date: 11.03.2025

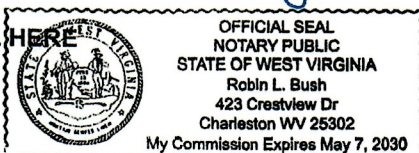
State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 3 day of November, 2025.

My Commission expires May 7, 2030

AFFIX SEAL HERE



NOTARY PUBLIC

Robin L Bush

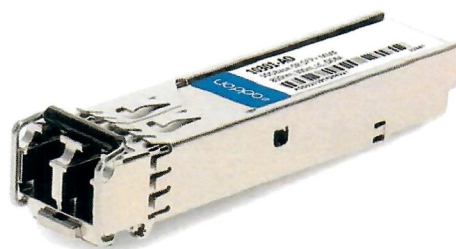
Purchasing Affidavit (Revised 01/19/2018)

10301-AO

Extreme Networks® 10301 Compatible TAA Compliant 10GBase-SR SFP+ Transceiver (MMF, 850nm, 300m, LC, DOM)

Features

- SFF-8432 and SFF-8472 Compliance
- VCSEL transmitter and PIN receiver
- Duplex LC Connector
- Commercial Temperature 0 to 70 Celsius
- Multi-mode Fiber
- Hot Pluggable
- Excellent ESD Protection
- Metal with Lower EMI
- RoHS Compliant and Lead Free



Applications

- 8x/10x Fibre Channel
- 10GBase-SR Ethernet
- Access, Datacenter and Enterprise
- Mobile Fronthaul CPRI/OBSAI

Product Description

This Extreme Networks® 10301 compatible SFP+ transceiver provides 10GBase-SR throughput up to 300m over multi-mode fiber (MMF) using a wavelength of 850nm via an LC connector. It is guaranteed to be 100% compatible with the equivalent Extreme Networks® transceiver. This easy to install, hot swappable transceiver has been programmed, uniquely serialized and data-traffic and application tested to ensure that it will initialize and perform identically. Digital optical monitoring (DOM) support is also present to allow access to real-time operating parameters. This transceiver is Trade Agreements Act (TAA) compliant. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

AddOn's transceivers are RoHS compliant and lead-free.

TAA refers to the Trade Agreements Act (19 U.S.C. & 2501-2581), which is intended to foster fair and open international trade. TAA requires that the U.S. Government may acquire only "U.S. – made or designated country end products."



Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Maximum Supply Voltage	V _{CC}	-0.5	4.0	V
Storage Temperature	T _S	-40	85	°C
Operating Case Temperature	T _C	0	70	°C
Operating Humidity	RH	5	85	%
Receiver Power	R _{MAX}		-1	dBm
Maximum Bitrate	B _{max}		11.3	Gbps

Electrical Characteristics (TOP=25°C, V_{CC}=3.3Volts)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Power Supply Voltage	V _{CC}	3.15	3.30	3.43	V	
Power Supply Current	I _{CC}			303	mA	
Power Consumption	P _{DISS}			1	W	
Transmitter						
Differential data input swing	V _{in,pp}	120		850	mV	
Input differential impedance	Z _{in}	80	100	120	Ω	
Receiver						
Differential data output swing	V _{out, pp}	300		850	mV	
Output differential impedance	Z _{in}	80	100	120	Ω	

Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
Optical Power (average)	P _{AVE}	-7.3		-1.2	dBm	1
Optical Modulation amplitude (OMA)	P _{OMA}	-1.5			dBm	2
Optical Extinction Ratio	ER	3			dB	
Optical Wavelength	Tλ	840	850	860	nm	
Insertion loss	IL		2			
Receiver						
Receiver Sensitivity (average)	R _{AVE}			-9.9	dBm	3
Receiver Sensitivity (OMA)	R _{OMA}			-11.1		2
Receiver overload	P _{max}	-1			dBm	4
Receiver wavelength	Rλ	840		860	nm	

Notes:

1. Coupled into a Multi-mode fibre
2. Per IEEE 802.3ae specification
3. Average power, back-to-back, @10.31Gbps, BER 1E-12, PRBS 231-1.
4. Exceeding the Receiver overload can physically damage the module. Please use appropriate attenuation.

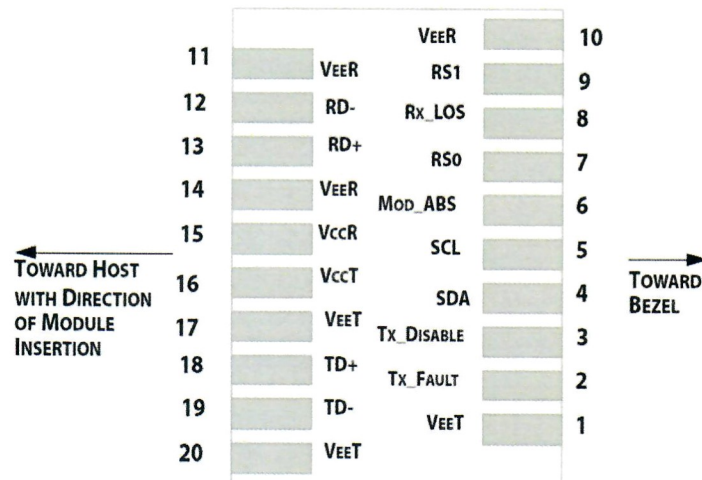
Pin Descriptions

Pin	Symbol	Name/Descriptions	Ref.
1	VeeT	Transmitter Ground (Common with Receiver Ground).	1
2	TX Fault	Transmitter Fault. LVTTTL-O	2
3	TX Disable	Transmitter Disable. Laser output disabled on high or open. LVTTTL-I.	3
4	SDA	2-Wire Serial Interface Data Line (Same as MOD-DEF2 in INF-8074i). LVTTTL-I/O.	
5	SCL	2-Wire Serial Interface Data Line (Same as MOD-DEF2 in INF-8074i). LVTTTL-I.	
6	MOD_ABS	Module Absent, Connect to VeeT or VeeR in Module.	4
7	RS0	Rate Select 0. Not used	5
8	LOS	Loss of Signal indication. Logic 0 indicates normal operation. LVTTTL-O.	2
9	RS1	Rate Select 1. Not used	5
10	VeeR	Receiver Ground (Common with Transmitter Ground).	1
11	VeeR	Receiver Ground (Common with Transmitter Ground).	1
12	RD-	Receiver Inverted DATA out. AC Coupled. CML-O.	
13	RD+	Receiver Non-inverted DATA out. AC Coupled. CML-O.	
14	VeeR	Receiver Ground (Common with Transmitter Ground).	1
15	VccR	Receiver Power Supply.	
16	VccT	Transmitter Power Supply.	
17	VeeT	Transmitter Ground (Common with Receiver Ground).	1
18	TD+	Transmitter Non-Inverted DATA in. AC Coupled. CML-I.	
19	TD-	Transmitter Inverted DATA in. AC Coupled. CML-O.	
20	VeeT	Transmitter Ground (Common with Receiver Ground).	1

Notes:

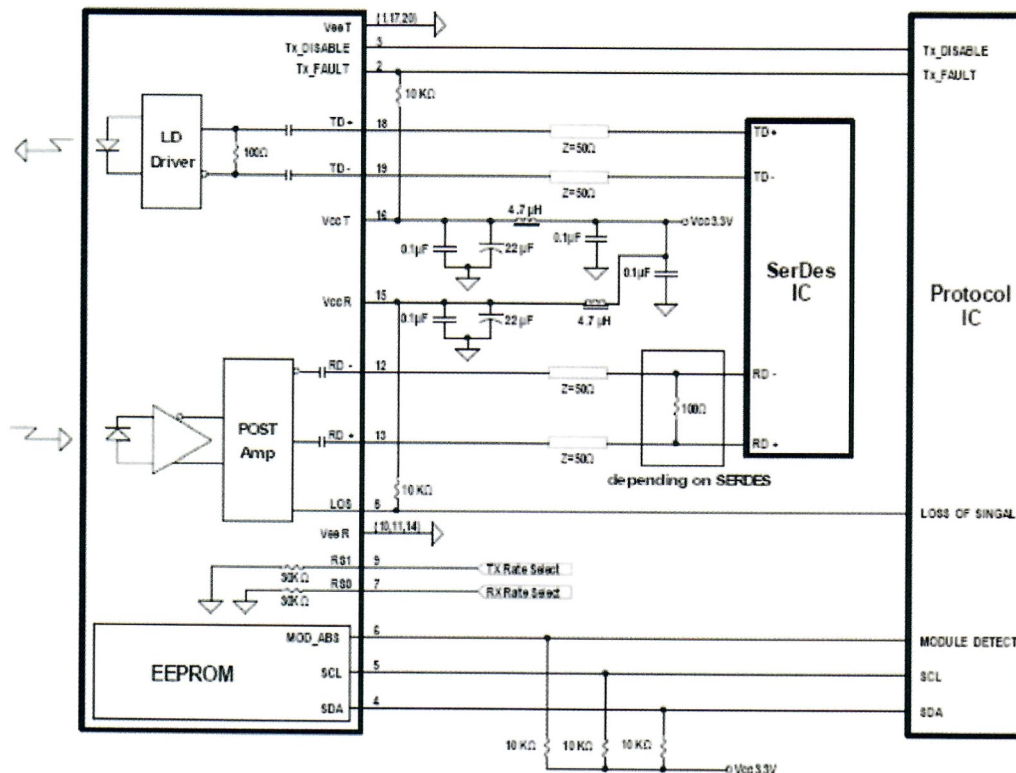
1. The module signal ground contacts, VeeR and VeeT, should be isolated from the module case.
2. This contact is an open collector/drain output and should be pulled up to the Vcc_Host with resistor in the range 4.7KΩ to 10KΩ. Pull ups can be connected to one or several power supplies, however the host board design shall ensure that no module contract has voltage exceeding module VccT/R +0.5.V.
3. Tx_Disable is an input contact with a 4.7KΩ to 10KΩ pull-up resistor to VccT inside module.

4. Mod_ABS is connected to VeeT or VeeR in the SFP+ module. The host may pull the contract up to Vcc_Host with a resistor in the range from 4.7KΩ to 10KΩ. Mod_ABS is asserted "High" when the SFP+ module is physically absent from a host slot.
5. Internally pulled down per SFF-8431



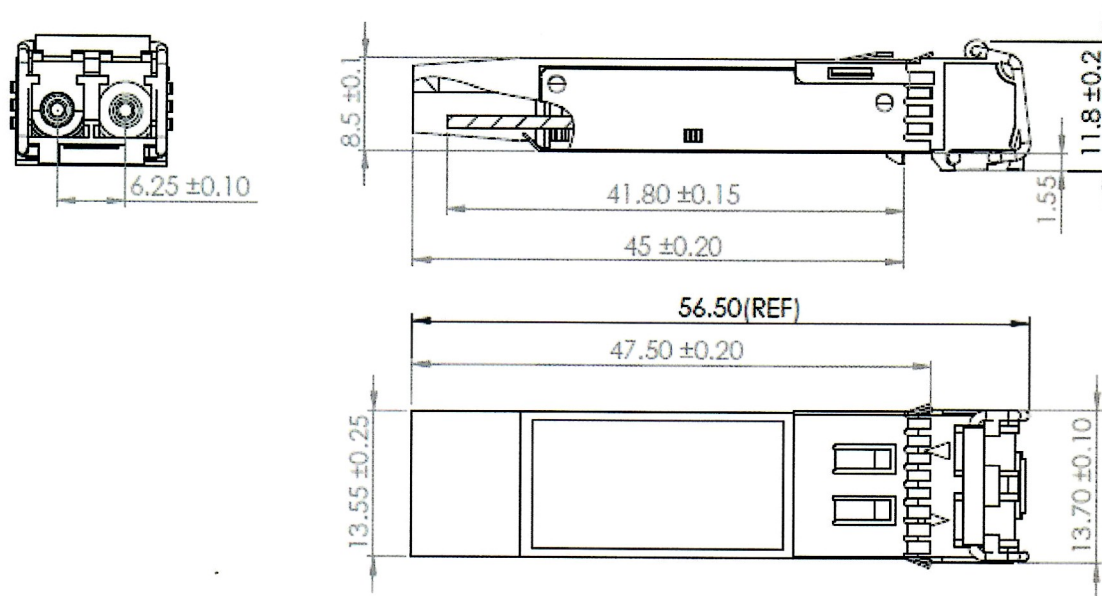
Pin-out of connector Block on Host board

Recommended Circuit Schematic



Mechanical Specifications

Small Form Factor Pluggable (SFP) transceivers are compatible with the dimensions defined by the SFP Multi-Sourcing Agreement (MSA).



EEPROM Information

EEPROM memory map specific data field description is as below:

2 wire address 1010000X (A0h)		2 wire address 1010001X (A2h)	
0	Serial ID Defined by SFP MSA (96 bytes)	0	Alarm and Warning Thresholds (56 bytes)
95		55	Cal Constants (40 bytes)
127		95	Real Time Diagnostic Interface (24 bytes)
	Vendor Specific (32 bytes)	119	Vendor Specific (8 bytes)
255		127	User Writable EEPROM (120 bytes)
	Reserved, SFF8079 (128 bytes)	247	Vendor Specific (8 bytes)
		255	

About AddOn Networks

In 1999, AddOn Networks entered the market with a single product. Our founders fulfilled a severe shortage for compatible, cost-effective optical transceivers that compete at the same performance levels as leading OEM manufacturers. Adhering to the idea of redefining service and product quality not previously had in the fiber optic networking industry, AddOn invested resources in solution design, production, fulfillment, and global support.

Combining one of the most extensive and stringent testing processes in the industry, an exceptional free tech support center, and a consistent roll-out of innovative technologies, AddOn has continually set industry standards of quality and reliability throughout its history.

Reliability is the cornerstone of any optical fiber network and is engrained in AddOn's DNA. It has played a key role in nurturing the long-term relationships developed over the years with customers. AddOn remains committed to exceeding industry standards with certifications from ranging from NEBS Level 3 to ISO 9001:2005 with every new development while maintaining the signature reliability of its products.



U.S. Headquarters

Email: sales@addonnetworks.com

Telephone: +1 877.292.1701

Fax: 949.266.9273

Europe Headquarters

Email: salesupportemea@addonnetworks.com

Telephone: +44 1285 842070

10304-AO

Extreme Networks® 10304 Compatible TAA Compliant 10GBase-CU SFP+ Direct Attach Cable (Passive Twinax, 1m)

Features

- Up to 10 Gbps bi-directional data links
- Compliant with SFF-8431
- Compliant with 10GFC
- 100 Ohm differential impedance
- Enhanced EMI design
- AC coupled inputs and outputs
- Operating Temperature Range: 0 to 70 Celsius
- Single 3.3V power supply
- RoHS Compliant and Lead-Free



Applications

- 10G Fibre Channel
- 10G Ethernet
- Serial Data Transmission

Product Description

This is a Extreme Networks® 10304 Compatible 10GBase-CU SFP+ to SFP+ direct attach cable that operates over passive copper with a maximum reach of 1m. It has been programmed, uniquely serialized, and data-traffic and application tested to ensure it is 100% compliant and functional. We stand behind the quality of our products and proudly offer a limited lifetime warranty. This cable is TAA (Trade Agreements Act) compliant and is built to comply with MSA (Multi-Source Agreement) standards.

AddOn's transceivers are RoHS compliant and lead-free.

TAA refers to the Trade Agreements Act (19 U.S.C. & 2501-2581), which is intended to foster fair and open international trade. TAA requires that the U.S. Government may acquire only "U.S. – made or designated country end products."



General Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Data Rate	DR		10.3125		Gbps	1
Bit Error Rate	BER			10^{-12}		
Operating Temperature	Tc	0		70	°C	2
Storage Temperature	Tstg	-40		85	°C	3
Power Supply Voltage	Vcc	3.14	3.30	3.46	V	4

Notes:

1. IEEE 802.3ae.
2. Case Temperature.
3. Ambient Temperature.
4. For the electrical power interface.

Cable Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit
Wire Gauge			30AWG		AWG
Cable Impedance	Z	90	100	110	Ω
Cable Diameter	OD		4.2		mm
Minimum Bending Radius	R		25		mm
Tolerance Range $\pm$			2		cm

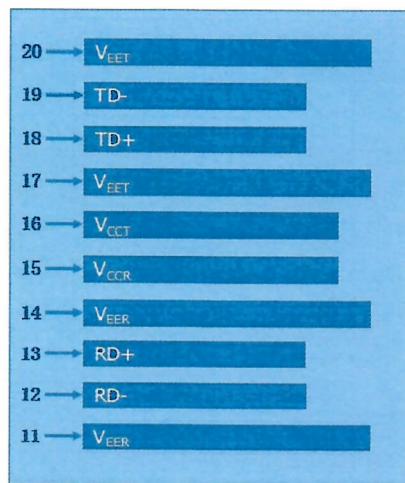
Pin Descriptions

Pin	Symbol	Name/Description	Notes
1	VeeT	Transmitter Ground (Common with Receiver Ground).	1
2	Tx_Fault	Transmitter Failure Alarm. Not Used.	
3	Tx_Disable	Not Used. The signal turns off the module transmitter when it is "high" or "open."	
4	SDA	Data Line for Serial ID.	2
5	SCL	Clock Line for Serial ID.	2
6	MOD_ABS	Module Absent. Grounded within the module.	2
7	RS0	No Connection Required.	
8	LOS	Loss of Signal Indication. "Logic 0" indicates normal operation.	
9	RS1	No Connection Required.	
10	VeeR	Receiver Ground (Common with Transmitter Ground).	1
11	VeeR	Receiver Ground (Common with Transmitter Ground).	1
12	RD-	Receiver Inverted Data Out. AC Coupled.	
13	RD+	Receiver Non-Inverted Data Out. AC Coupled.	
14	VeeR	Receiver Ground (Common with Transmitter Ground).	1
15	VccR	Receiver Power Supply.	
16	VccT	Transmitter Power Supply.	
17	VeeT	Transmitter Ground (Common with Receiver Ground).	1
18	TD+	Transmitter Non-Inverted Data In. AC Coupled.	
19	TD-	Transmitter Inverted Data In. AC Coupled.	
20	VeeT	Transmitter Ground (Common with Receiver Ground).	1

Notes:

1. The circuit ground is isolated from the chassis ground.
2. Should be pulled up with 4.7k Ω to 10k Ω on the host board to a voltage between 2V and 3.6V.

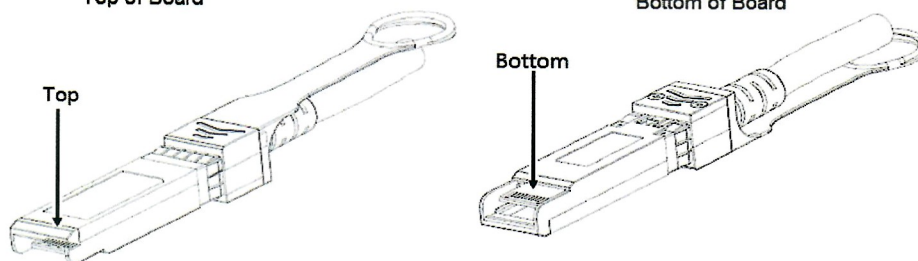
Electrical Pad Layout



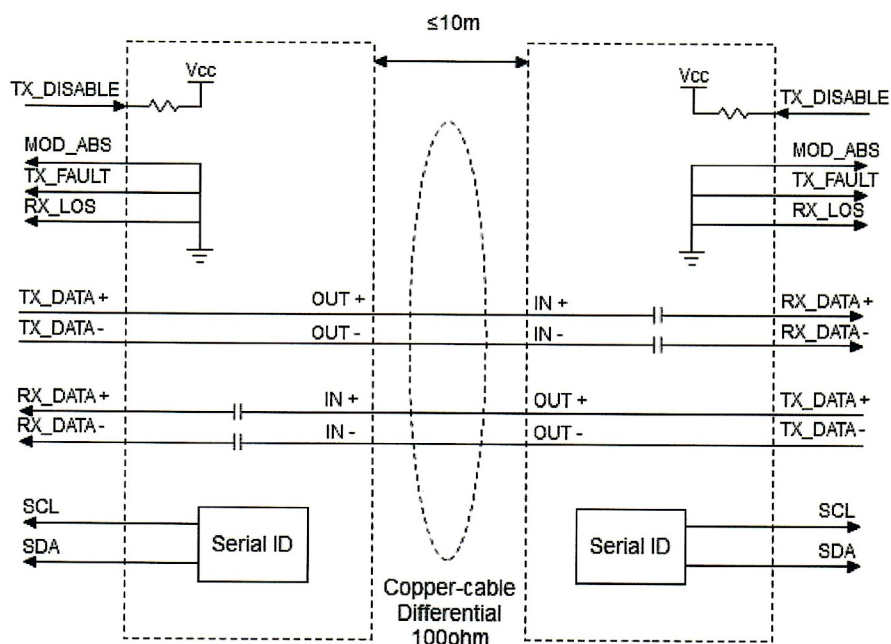
Top of Board



Bottom of Board



Block Diagram of Transceiver



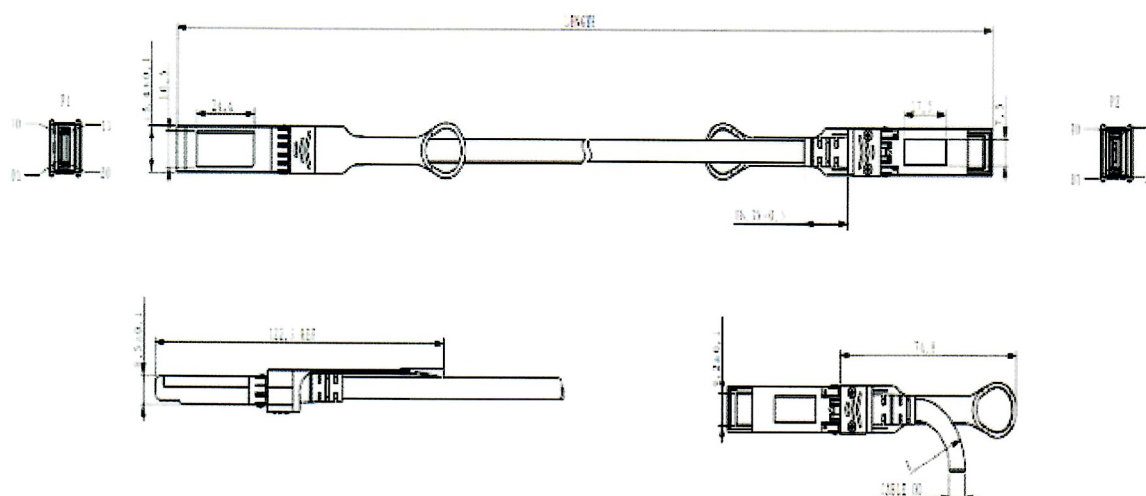
Weight

Parameter	Symbol	Typ.	Unit	Notes
30AWG Product Weight	GD30	72	g/PCS	1
30AWG Cable Weight	GC30	26	g/M	
Dust Cap Weight	GS	0.80	g/PCS	

Notes:

- For example, the weight of a 6m cable with 30AWG is: $72 + 26 * (6 - 1) + 0.80 * 2 = 203.6g$.

Mechanical Specifications



All Dimensions are $\pm 0.2\text{mm}$ Unless Otherwise Specified
Unit: mm

About AddOn Networks

In 1999, AddOn Networks entered the market with a single product. Our founders fulfilled a severe shortage for compatible, cost-effective optical transceivers that compete at the same performance levels as leading OEM manufacturers. Adhering to the idea of redefining service and product quality not previously had in the fiber optic networking industry, AddOn invested resources in solution design, production, fulfillment, and global support.

Combining one of the most extensive and stringent testing processes in the industry, an exceptional free tech support center, and a consistent roll-out of innovative technologies, AddOn has continually set industry standards of quality and reliability throughout its history.

Reliability is the cornerstone of any optical fiber network and is ingrained in AddOn's DNA. It has played a key role in nurturing the long-term relationships developed over the years with customers. AddOn remains committed to exceeding industry standards with certifications from ranging from NEBS Level 3 to ISO 9001:2005 with every new development while maintaining the signature reliability of its products.



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