

#### QSFP-100G-PSM4-AR-AO

Arista Networks® QSFP-100G-PSM4 Compatible TAA Compliant 100GBase-PSM4 QSFP28 Transceiver (SMF, 1310nm, 500m, MPO, DOM)

#### **Features**

- SFF-8665 Compliance
- MPO Connector
- Commercial Temperature 0 to 70 Celsius
- Single-mode Fiber
- Hot Pluggable
- Excellent ESD Protection
- Metal with Lower EMI
- RoHS Compliant and Lead Free



## **Applications**

- 100GBase Ethernet
- Access and Enterprise

#### **Product Description**

This Arista Networks® QSFP-100G-PSM4 compatible QSFP28 transceiver provides 100GBase-PSM4 throughput up to 500m over single-mode fiber (SMF) using a wavelength of 1310nm via an MPO connector. It is guaranteed to be 100% compatible with the equivalent Arista 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."



# **Regulatory Compliance**

- ESD to the Electrical PINs: compatible with MIL-STD-883E Method 3015.4
- ESD to the LC Receptacle: compatible with IEC 61000-4-3
- EMI/EMC compatible with FCC Part 15 Subpart B Rules, EN55022:2010
- Laser Eye Safety compatible with FDA 21CFR, EN60950-1& EN (IEC) 60825-1,2
- RoHS compliant with EU RoHS 2.0 directive 2015/863/EU

## **Absolute Maximum Ratings**

Parameter	Symbol	Min.	Тур	Max.	Unit
Maximum Supply Voltage	Vcc	-0.5		4.0	V
Storage Temperature	TS	-40		+85	°C
Operating Case Temperature	Тс	-5	25	70	°C
Relative Humidity	RH	5		95	%
Data Rate PER Channel			25.78125		Gb/s

### **Electrical Characteristics**

Parameter	Symbol	Min.	Тур.	Max.	Unit	Notes
Power Supply Voltage	Vcc	3.135	3.3	3.465	V	
Power Dissipation	PD			3500	mW	
Module Supply Current	Icc			1100	mA	
Transmitter						
Differential Data Input Swing	V <sub>IN, P-P</sub>	190		700	mV <sub>p-p</sub>	
Input Differential Impedance	Zin	90	100	110	Ω	
AC Common Mode Input Voltage Tolerance		15			mV	
Receiver						
Output Differential Impedance	Zo	90	100	110	Ω	
Differential Data Output Swing	VOUT, P-P	300		850	mV <sub>P-P</sub>	
AC Common Mode Output Voltage				7.5	mV	
Single-ended Output Voltage		-0.3		4	V	

### Notes:

1. Internally AC Coupled, but requires an external  $100\Omega$  differential load termination.

# **Optical Characteristics**

Parameter	Symbol	Min.	Тур.	Max.	Unit	Notes
Transmitter						
Launch Optical Power per lane	Ро	-9		+2	dBm	1
Side Mode Suppression Ratio	SMSR	30			dB	
Center Wavelength Range	٨	1295	1310	1325	nm	
Extinction Ratio	EX	3.5			dB	2
Optical Return Loss Tolerance	ORLT			12	dB	
Pout @TX-Disable Asserted	Poff			-30	dBm	1
Transmitter Eye Mask Definition {X1, X2, X3, Y1, Y2, Y3}		{0.31, 0.4, 0.45, 0.34, 0.38, 0.4}				
Receiver						
Center Wavelength	λς	1295		1325	Nm	
Receiver Sensitivity	S			-12.0	dBm	3
Damage Threshold	POL	3.0			dBm	
LOS Assert	LOSA	-24			dBm	
LOS De-Assert	LOSD			-12.5	dBm	
LOS Hysteresis		0.5			dB	

### Notes:

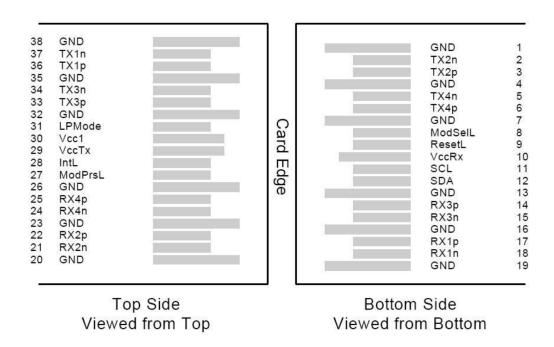
- 1. The optical power is launched into SMF.
- Measured with a PRBS 2<sup>31</sup>-1 test pattern @25.78125Gbps
   Measured with a PRBS 2<sup>31</sup>-1 test pattern, 25.78125Gb/s, BER of 5×10<sup>-5</sup> (informative)

**Pin Descriptions** 

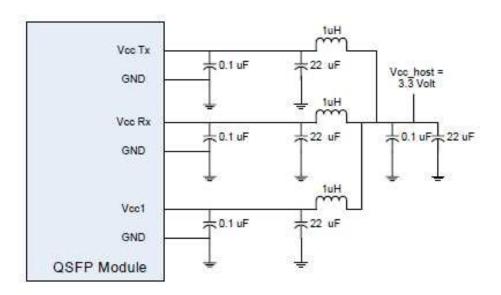
1         GND         Transmitter Ground (Common with Receiver Ground)         1           2         Tx2-         Transmitter Inverted Data Input           3         Tx2+         Transmitter Non-Inverted Data output           4         GND         Transmitter Inverted Data Input           5         Tx4-         Transmitter Inverted Data Input           6         Tx4+         Transmitter Ground (Common with Receiver Ground)         1           7         GND         Transmitter Ground (Common with Receiver Ground)         1           8         ModSell.         Module Reset         2           9         Resett.         Module Reset         2           10         VccRx         3.3V Power Supply Receiver         1           11         SCL         2-Wire serial Interface Clock         2           12         SDA         2-Wire serial Interface Data         2           13         GND         Transmitter Ground (Common with Receiver Ground)         1           14         Rx3+         Receiver Inverted Data Output         1           15         Rx3-         Receiver Inverted Data Output         1           16         GND         Transmitter Ground (Common with Receiver Ground)         1           17 <th>Pin Des</th> <th>scriptions Symbol</th> <th>Name/Descriptions</th> <th>Ref.</th>	Pin Des	scriptions Symbol	Name/Descriptions	Ref.
Tx2-		Symbol	Name, Descriptions	nei.
Transmitter Non-Inverted Data output    Solution   Transmitter Ground (Common with Receiver Ground)   1   1   1   1   1   1   1   1   1	1	GND	Transmitter Ground (Common with Receiver Ground)	1
GND Transmitter Ground (Common with Receiver Ground)  Transmitter Inverted Data Input  Transmitter Non-Inverted Data Output  Receiver Inverted Data Output  Transmitter Ground (Common with Receiver Ground)  Transmitter Ground (Common with Receiver	2	Tx2-	Transmitter Inverted Data Input	
5 Tx4- Transmitter Inverted Data Input 6 Tx4+ Transmitter Ground (Common with Receiver Ground) 7 GND Transmitter Ground (Common with Receiver Ground) 8 ModSelL Module Select 9 ResetL Module Reset 2 10 VccRx 3.3V Power Supply Receiver 11 SCL 2-Wire serial Interface Clock 2 Type SDA 2-Wire serial Interface Data 13 GND Transmitter Ground (Common with Receiver Ground) 1 Rx3+ Receiver Non-Inverted Data Output 15 Rx3- Receiver Inverted Data Output 16 GND Transmitter Ground (Common with Receiver Ground) 17 Rx1+ Receiver Non-Inverted Data Output 18 Rx1- Receiver Inverted Data Output 19 GND Transmitter Ground (Common with Receiver Ground) 1 Rx2- Receiver Inverted Data Output 1 Rx2- Receiver Inverted Data Output 1 Rx2- Receiver Inverted Data Output 1 Rx4- Receiver Non-Inverted Data Output 1 Rx4- Rx4- Receiver Non-Inverted Data Output 1 Rx4- Rx4- Rx4- Rx4- Rx4- Rx4- Rx4- Rx4-	3	Tx2+	Transmitter Non-Inverted Data output	
6 Tx4+ Transmitter Non-Inverted Data output 7 GND Transmitter Ground (Common with Receiver Ground) 8 ModSell. Module Select 9 Resett. Module Reset 2 10 VccRx 3.3V Power Supply Receiver 11 SCL 2-Wire serial Interface Clock 12 SDA 2-Wire serial Interface Data 13 GND Transmitter Ground (Common with Receiver Ground) 14 Rx3+ Receiver Non-Inverted Data Output 15 Rx3- Receiver Inverted Data Output 16 GND Transmitter Ground (Common with Receiver Ground) 17 Rx1+ Receiver Inverted Data Output 18 Rx1- Receiver Inverted Data Output 19 GND Transmitter Ground (Common with Receiver Ground) 1 Transmitter Ground (Common with Receiver Ground) 1 Rx2- Receiver Inverted Data Output 10 GND Transmitter Ground (Common with Receiver Ground) 1 Rx2- Receiver Inverted Data Output 10 GND Transmitter Ground (Common with Receiver Ground) 1 Rx2- Receiver Inverted Data Output 10 GND Transmitter Ground (Common with Receiver Ground) 1 Rx2- Receiver Inverted Data Output 10 GND Transmitter Ground (Common with Receiver Ground) 1 Rx2- Receiver Non-Inverted Data Output 10 GND Transmitter Ground (Common with Receiver Ground) 1 Can Rx4- Receiver Non-Inverted Data Output 1 Rx4- Receiver Inverted Data Output 1 GND Transmitter Ground (Common with Receiver Ground) 1 Interrupt 10 GND Transmitter Ground (Common with Receiver Ground) 1 Can ModPrsi Module Present 10 Intl Interrupt 11 Interrupt 12 GND Transmitter Ground (Common with Receiver Ground) 1 GND Transmitter Inverted Data Input 10 GND Transmitter Inverted Data Input 11 Transmitter Inverted Data Input 12 Transmitter Inverted Data Input	4	GND	Transmitter Ground (Common with Receiver Ground)	1
7 GND Transmitter Ground (Common with Receiver Ground) 1 8 ModSell. Module Select 2 9 ResetL Module Reset 2 10 VccRx 3.3V Power Supply Receiver 2 11 SCL 2-Wire serial Interface Clock 2 12 SDA 2-Wire serial Interface Data 3 13 GND Transmitter Ground (Common with Receiver Ground) 1 14 Rx3+ Receiver Non-Inverted Data Output 1 15 Rx3- Receiver Inverted Data Output 1 16 GND Transmitter Ground (Common with Receiver Ground) 1 17 Rx1+ Receiver Non-Inverted Data Output 1 18 Rx1- Receiver Inverted Data Output 1 19 GND Transmitter Ground (Common with Receiver Ground) 1 20 GND Transmitter Ground (Common with Receiver Ground) 1 21 Rx2- Receiver Inverted Data Output 1 22 Rx2+ Receiver Inverted Data Output 1 23 GND Transmitter Ground (Common with Receiver Ground) 1 24 Rx4- Receiver Inverted Data Output 1 25 Rx4+ Receiver Non-Inverted Data Output 1 26 GND Transmitter Ground (Common with Receiver Ground) 1 27 ModPrsl Module Present 1 28 IntL Interrupt 2 29 VccTx 3.3V power supply transmitter 3.3V power supply transmitter 3.3V power supply Transmitter Ground (Common with Receiver Ground) 1 31 Tx3+ Transmitter Ground (Common with Receiver Ground) 1 33 Tx3+ Transmitter Ground (Common with Receiver Ground) 1 36 Tx1+ Transmitter Inverted Data Output 1 37 Tx1- Transmitter Ground (Common with Receiver Ground) 1	5	Tx4-	Transmitter Inverted Data Input	
8         ModSelL         Module Select         2           9         ResetL         Module Reset         2           10         VccRx         3.3V Power Supply Receiver         2           11         SCL         2-Wire serial Interface Clock         2           12         SDA         2-Wire serial Interface Data         2           13         GND         Transmitter Ground (Common with Receiver Ground)         1           14         Rx3+         Receiver Non-Inverted Data Output         1           15         Rx3-         Receiver Inverted Data Output         1           16         GND         Transmitter Ground (Common with Receiver Ground)         1           17         Rx1+         Receiver Inverted Data Output         1           18         Rx1-         Receiver Inverted Data Output         1           19         GND         Transmitter Ground (Common with Receiver Ground)         1           20         GND         Transmitter Ground (Common with Receiver Ground)         1           21         Rx2-         Receiver Inverted Data Output         1           22         Rx2+         Receiver Non-Inverted Data Output         1           23         GND         Transmitter Ground (Common with	6	Tx4+	Transmitter Non-Inverted Data output	
9         ResetL         Module Reset         2           10         VccRx         3.3V Power Supply Receiver           11         SCL         2-Wire serial Interface Clock         2           12         SDA         2-Wire serial Interface Data         2           13         GND         Transmitter Ground (Common with Receiver Ground)         1           14         Rx3+         Receiver Non-Inverted Data Output         1           15         Rx3-         Receiver Inverted Data Output         1           16         GND         Transmitter Ground (Common with Receiver Ground)         1           17         Rx1+         Receiver Inverted Data Output         1           18         Rx1-         Receiver Inverted Data Output         1           19         GND         Transmitter Ground (Common with Receiver Ground)         1           20         GND         Transmitter Ground (Common with Receiver Ground)         1           21         Rx2+         Receiver Inverted Data Output         1           23         GND         Transmitter Ground (Common with Receiver Ground)         1           24         Rx4-         Receiver Inverted Data Output         1           25         Rx4+         Receiver Non-Inverted	7	GND	Transmitter Ground (Common with Receiver Ground)	1
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11 SCL 2-Wire serial Interface Clock 2 12 SDA 2-Wire serial Interface Data 2 13 GND Transmitter Ground (Common with Receiver Ground) 1 14 Rx3+ Receiver Non-Inverted Data Output 1 15 Rx3- Receiver Inverted Data Output 1 16 GND Transmitter Ground (Common with Receiver Ground) 1 17 Rx1+ Receiver Non-Inverted Data Output 1 18 Rx1- Receiver Inverted Data Output 1 19 GND Transmitter Ground (Common with Receiver Ground) 1 10 GND Transmitter Ground (Common with Receiver Ground) 1 11 Rx2- Receiver Inverted Data Output 1 12 Rx4- Receiver Non-Inverted Data Output 1 12 Rx4- Receiver Inverted Data Input 1 13 LPMode 1 14 Low Power Mode 1 15 Low Power Mode 1 16 Common with Receiver Ground 1 17 Rx4- Transmitter Inverted Data Input 1 18 Rx4- Transmitter Inverted Data Input 1 18 Cruentification Inver	9	ResetL	Module Reset	2
12 SDA 2-Wire serial Interface Data 2 13 GND Transmitter Ground (Common with Receiver Ground) 1 14 Rx3+ Receiver Non-Inverted Data Output 1 15 Rx3- Receiver Inverted Data Output 1 16 GND Transmitter Ground (Common with Receiver Ground) 1 17 Rx1+ Receiver Non-Inverted Data Output 1 18 Rx1- Receiver Inverted Data Output 1 19 GND Transmitter Ground (Common with Receiver Ground) 1 10 GND Transmitter Ground (Common with Receiver Ground) 1 10 GND Transmitter Ground (Common with Receiver Ground) 1 10 Rx2- Receiver Inverted Data Output 1 11 Rx2- Receiver Non-Inverted Data Output 1 12 Rx4- Receiver Non-Inverted Data Output 1 12 Rx4- Receiver Non-Inverted Data Output 1 12 Rx4- Receiver Inverted Data Output 1 12 Rx4- Receiver Inverted Data Output 1 12 Rx4- Receiver Non-Inverted Data Output 1 13 LPMode 1 Low Power Mode 1 14 Low Power Mode 1 15 GND Transmitter Ground (Common with Receiver Ground) 1 16 Tx3- Transmitter Inverted Data Input 1 17 Tx1- Transmitter Fround (Common with Receiver Ground) 1 18 Tx1- Transmitter Inverted Data Input 1 18 Tx1- Transmitter Inverted Data Output 1	10	VccRx	3.3V Power Supply Receiver	
13 GND Transmitter Ground (Common with Receiver Ground) 14 Rx3+ Receiver Non-Inverted Data Output 15 Rx3- Receiver Inverted Data Output 16 GND Transmitter Ground (Common with Receiver Ground) 1 Rx1+ Receiver Non-Inverted Data Output 18 Rx1- Receiver Inverted Data Output 19 GND Transmitter Ground (Common with Receiver Ground) 1 1 20 GND Transmitter Ground (Common with Receiver Ground) 1 1 21 Rx2- Receiver Inverted Data Output 22 Rx2+ Receiver Non-Inverted Data Output 23 GND Transmitter Ground (Common with Receiver Ground) 1 1 24 Rx4- Receiver Non-Inverted Data Output 25 Rx4+ Receiver Non-Inverted Data Output 26 GND Transmitter Ground (Common with Receiver Ground) 1 Tansmitter Ground (Common with Receiver Ground) 1 Data Rx4- Receiver Inverted Data Output 26 GND Transmitter Ground (Common with Receiver Ground) 27 ModPrsl Module Present 28 Intl. Interrupt 29 VccTx 3.33 power supply transmitter 30 Vcc1 3.39 power supply 31 LPMode Low Power Mode 2 GND Transmitter Ground (Common with Receiver Ground) 1 Transmitter Inverted Data Input 1 Tx3- Transmitter Inverted Data Input 1 Tx1- Transmitter Inverted Data Output	11	SCL	2-Wire serial Interface Clock	2
14 Rx3+ Receiver Non-Inverted Data Output 15 Rx3- Receiver Inverted Data Output 16 GND Transmitter Ground (Common with Receiver Ground) 1 17 Rx1+ Receiver Non-Inverted Data Output 18 Rx1- Receiver Inverted Data Output 19 GND Transmitter Ground (Common with Receiver Ground) 1 20 GND Transmitter Ground (Common with Receiver Ground) 1 21 Rx2- Receiver Inverted Data Output 22 Rx2+ Receiver Non-Inverted Data Output 23 GND Transmitter Ground (Common with Receiver Ground) 1 24 Rx4- Receiver Non-Inverted Data Output 1 25 Rx4+ Receiver Inverted Data Output 1 26 GND Transmitter Ground (Common with Receiver Ground) 1 27 ModPrsl Module Present 1 28 IntL Interrupt 2 29 VcCTx 3.3V power supply transmitter 3 30 Vcc1 3.3V power supply 1 31 LPMode Low Power Mode 2 32 GND Transmitter Ground (Common with Receiver Ground) 1 33 Tx3+ Transmitter Ground (Common with Receiver Ground) 1 34 Tx3- Transmitter Ground (Common with Receiver Ground) 1 35 GND Transmitter Ground (Common with Receiver Ground) 1 36 Tx1+ Transmitter Non-Inverted Data Input 1 37 Tx1- Transmitter Inverted Data Input 1 37 Tx1- Transmitter Inverted Data Input 1 37 Tx1- Transmitter Inverted Data Input 1	12	SDA	2-Wire serial Interface Data	2
15 Rx3- Receiver Inverted Data Output 16 GND Transmitter Ground (Common with Receiver Ground) 17 Rx1+ Receiver Non-Inverted Data Output 18 Rx1- Receiver Inverted Data Output 19 GND Transmitter Ground (Common with Receiver Ground) 1 1 20 GND Transmitter Ground (Common with Receiver Ground) 1 1 21 Rx2- Receiver Inverted Data Output 22 Rx2+ Receiver Inverted Data Output 23 GND Transmitter Ground (Common with Receiver Ground) 1 1 24 Rx4- Receiver Non-Inverted Data Output 25 Rx4+ Receiver Inverted Data Output 26 GND Transmitter Ground (Common with Receiver Ground) 1 1 27 ModPrsl Module Present 28 IntL Interrupt 29 VccTx 3.3V power supply transmitter 30 Vcc1 3.3V power supply transmitter 31 LPMode Low Power Mode 32 GND Transmitter Ground (Common with Receiver Ground) 1 Transmitter Fransmitter Ground (Common with Receiver Ground) 1 Transmitter Inverted Data Output 1 Transmitter Ground (Common with Receiver Ground) 1 Transmitter Ground (Common with Receiver Ground) 1 Transmitter Inverted Data Input 1 Transmitter Inverted Data Output	13	GND	Transmitter Ground (Common with Receiver Ground)	1
16     GND     Transmitter Ground (Common with Receiver Ground)     1       17     Rx1+     Receiver Non-Inverted Data Output     1       18     Rx1-     Receiver Inverted Data Output     1       19     GND     Transmitter Ground (Common with Receiver Ground)     1       20     GND     Transmitter Ground (Common with Receiver Ground)     1       21     Rx2-     Receiver Inverted Data Output     2       22     Rx2+     Receiver Non-Inverted Data Output     1       23     GND     Transmitter Ground (Common with Receiver Ground)     1       24     Rx4-     Receiver Inverted Data Output     1       25     Rx4+     Receiver Non-Inverted Data Output     1       26     GND     Transmitter Ground (Common with Receiver Ground)     1       27     ModPrsl     Module Present       28     IntL     Interrupt     2       29     VccTx     3.3V power supply transmitter       30     Vcc1     3.3V power supply       31     LPMode     Low Power Mode     2       32     GND     Transmitter Ground (Common with Receiver Ground)     1       33     Tx3+     Transmitter Inverted Data Output       34     Tx3-     Transmitter Ground (Common with Receiver Ground)	14	Rx3+	Receiver Non-Inverted Data Output	
17     Rx1+     Receiver Non-Inverted Data Output       18     Rx1-     Receiver Inverted Data Output       19     GND     Transmitter Ground (Common with Receiver Ground)     1       20     GND     Transmitter Ground (Common with Receiver Ground)     1       21     Rx2-     Receiver Inverted Data Output     2       22     Rx2+     Receiver Non-Inverted Data Output     1       23     GND     Transmitter Ground (Common with Receiver Ground)     1       24     Rx4-     Receiver Inverted Data Output     1       25     Rx4+     Receiver Non-Inverted Data Output     1       26     GND     Transmitter Ground (Common with Receiver Ground)     1       27     ModPrsl     Module Present     2       28     IntL     Interrupt     2       29     VccTx     3.3V power supply transmitter     2       30     Vcc1     3.3V power supply     2       31     LPMode     Low Power Mode     2       32     GND     Transmitter Ground (Common with Receiver Ground)     1       33     Tx3+     Transmitter Non-Inverted Data Input       34     Tx3-     Transmitter Inverted Data Input       35     GND     Transmitter Mon-Inverted Data Input       37	15	Rx3-	Receiver Inverted Data Output	
18       Rx1-       Receiver Inverted Data Output         19       GND       Transmitter Ground (Common with Receiver Ground)       1         20       GND       Transmitter Ground (Common with Receiver Ground)       1         21       Rx2-       Receiver Inverted Data Output          22       Rx2+       Receiver Non-Inverted Data Output       1         23       GND       Transmitter Ground (Common with Receiver Ground)       1         24       Rx4-       Receiver Inverted Data Output       1         25       Rx4+       Receiver Non-Inverted Data Output       1         26       GND       Transmitter Ground (Common with Receiver Ground)       1         27       ModPrsl       Module Present       2         28       IntL       Interrupt       2         29       VccTx       3.3V power supply transmitter       2         30       Vcc1       3.3V power supply       2         31       LPMode       Low Power Mode       2         32       GND       Transmitter Ground (Common with Receiver Ground)       1         33       Tx3+       Transmitter Inverted Data Output         35       GND       Transmitter Ground (Common with Receiver Ground)       <	16	GND	Transmitter Ground (Common with Receiver Ground)	1
19 GND Transmitter Ground (Common with Receiver Ground) 1 20 GND Transmitter Ground (Common with Receiver Ground) 1 21 Rx2- Receiver Inverted Data Output 22 Rx2+ Receiver Non-Inverted Data Output 1 23 GND Transmitter Ground (Common with Receiver Ground) 1 24 Rx4- Receiver Inverted Data Output 1 25 Rx4+ Receiver Inverted Data Output 1 26 GND Transmitter Ground (Common with Receiver Ground) 1 27 ModPrsl Module Present 1 28 IntL Interrupt 2 29 VccTx 3.3V power supply transmitter 3 30 Vcc1 3.3V power supply Transmitter 3 31 LPMode Low Power Mode 2 32 GND Transmitter Ground (Common with Receiver Ground) 1 33 Tx3+ Transmitter Non-Inverted Data Input 1 34 Tx3- Transmitter Inverted Data Output 1 35 GND Transmitter Ground (Common with Receiver Ground) 1 36 Tx1+ Transmitter Non-Inverted Data Input 1 37 Tx1- Transmitter Inverted Data Output	17	Rx1+	Receiver Non-Inverted Data Output	
20 GND Transmitter Ground (Common with Receiver Ground) 21 Rx2- Receiver Inverted Data Output 22 Rx2+ Receiver Non-Inverted Data Output 23 GND Transmitter Ground (Common with Receiver Ground) 24 Rx4- Receiver Inverted Data Output 25 Rx4+ Receiver Non-Inverted Data Output 26 GND Transmitter Ground (Common with Receiver Ground) 27 ModPrsl Module Present 28 IntL Interrupt 29 VccTx 3.3V power supply transmitter 30 Vcc1 3.3V power supply 31 LPMode Low Power Mode 20 GND Transmitter Ground (Common with Receiver Ground) 31 Tx3+ Transmitter Ground (Common with Receiver Ground) 31 Tx3+ Transmitter Non-Inverted Data Input 35 GND Transmitter Ground (Common with Receiver Ground) 36 Tx1+ Transmitter Non-Inverted Data Input 37 Tx1- Transmitter Inverted Data Output	18	Rx1-	Receiver Inverted Data Output	
21 Rx2- Receiver Inverted Data Output 22 Rx2+ Receiver Non-Inverted Data Output 23 GND Transmitter Ground (Common with Receiver Ground) 1 24 Rx4- Receiver Inverted Data Output 25 Rx4+ Receiver Non-Inverted Data Output 26 GND Transmitter Ground (Common with Receiver Ground) 1 1 27 ModPrsl Module Present 28 IntL Interrupt 2 2 29 VccTx 3.3V power supply transmitter 30 Vcc1 3.3V power supply 31 LPMode Low Power Mode 2 32 GND Transmitter Ground (Common with Receiver Ground) 1 1 33 Tx3+ Transmitter Non-Inverted Data Input 34 Tx3- Transmitter Ground (Common with Receiver Ground) 1 Transmitter Ground (Common with Receiver Ground) 1 Transmitter Ground (Common with Receiver Ground) 1 Transmitter Inverted Data Input 1 Transmitter Ground (Common with Receiver Ground) 1 Transmitter Ground (Common with Receiver Ground) 1 Transmitter Inverted Data Input 1 Transmitter Inverted Data Input 1 Transmitter Non-Inverted Data Input 1 Transmitter Inverted Data Input	19	GND	Transmitter Ground (Common with Receiver Ground)	1
22 Rx2+ Receiver Non-Inverted Data Output 23 GND Transmitter Ground (Common with Receiver Ground) 1 24 Rx4- Receiver Inverted Data Output 1 25 Rx4+ Receiver Non-Inverted Data Output 26 GND Transmitter Ground (Common with Receiver Ground) 1 27 ModPrsl Module Present 28 IntL Interrupt 29 VccTx 3.3V power supply transmitter 30 Vcc1 3.3V power supply 31 LPMode Low Power Mode 2 32 GND Transmitter Ground (Common with Receiver Ground) 1 33 Tx3+ Transmitter Non-Inverted Data Input 34 Tx3- Transmitter Inverted Data Input 35 GND Transmitter Ground (Common with Receiver Ground) 1 Transmitter Inverted Data Input 36 Tx1+ Transmitter Non-Inverted Data Input 37 Tx1- Transmitter Inverted Data Output	20	GND	Transmitter Ground (Common with Receiver Ground)	1
GND Transmitter Ground (Common with Receiver Ground)  Rx4- Receiver Inverted Data Output  Rx4- Receiver Non-Inverted Data Output  GND Transmitter Ground (Common with Receiver Ground)  Module Present  IntL Interrupt  VccTx 3.3V power supply transmitter  Vcc1 3.3V power supply  LPMode Low Power Mode  GND Transmitter Ground (Common with Receiver Ground)  Transmitter Inverted Data Input  GND Transmitter Ground (Common with Receiver Ground)  Transmitter Inverted Data Output  Transmitter Ground (Common with Receiver Ground)  Transmitter Ground (Common with Receiver Ground)  Transmitter Inverted Data Input  Transmitter Non-Inverted Data Input  Transmitter Inverted Data Input  Transmitter Inverted Data Input	21	Rx2-	Receiver Inverted Data Output	
24Rx4-Receiver Inverted Data Output125Rx4+Receiver Non-Inverted Data Output126GNDTransmitter Ground (Common with Receiver Ground)127ModPrsIModule Present228IntLInterrupt229VccTx3.3V power supply transmitter30Vcc13.3V power supply31LPModeLow Power Mode232GNDTransmitter Ground (Common with Receiver Ground)133Tx3+Transmitter Non-Inverted Data Input34Tx3-Transmitter Inverted Data Output35GNDTransmitter Ground (Common with Receiver Ground)136Tx1+Transmitter Non-Inverted Data Input37Tx1-Transmitter Inverted Data Output	22	Rx2+	Receiver Non-Inverted Data Output	
25 Rx4+ Receiver Non-Inverted Data Output 26 GND Transmitter Ground (Common with Receiver Ground) 27 ModPrsl Module Present 28 IntL Interrupt 29 VccTx 3.3V power supply transmitter 30 Vcc1 3.3V power supply 31 LPMode Low Power Mode 2 32 GND Transmitter Ground (Common with Receiver Ground) 33 Tx3+ Transmitter Non-Inverted Data Input 34 Tx3- Transmitter Inverted Data Output 35 GND Transmitter Ground (Common with Receiver Ground) 36 Tx1+ Transmitter Non-Inverted Data Input 37 Tx1- Transmitter Inverted Data Output	23	GND	Transmitter Ground (Common with Receiver Ground)	1
26GNDTransmitter Ground (Common with Receiver Ground)127ModPrsIModule Present28IntLInterrupt229VccTx3.3V power supply transmitter30Vcc13.3V power supply31LPModeLow Power Mode232GNDTransmitter Ground (Common with Receiver Ground)133Tx3+Transmitter Non-Inverted Data Input34Tx3-Transmitter Inverted Data Output35GNDTransmitter Ground (Common with Receiver Ground)136Tx1+Transmitter Non-Inverted Data Input37Tx1-Transmitter Inverted Data Output	24	Rx4-	Receiver Inverted Data Output	1
27ModPrsIModule Present28IntLInterrupt229VccTx3.3V power supply transmitter30Vcc13.3V power supply31LPModeLow Power Mode232GNDTransmitter Ground (Common with Receiver Ground)133Tx3+Transmitter Non-Inverted Data Input34Tx3-Transmitter Inverted Data Output35GNDTransmitter Ground (Common with Receiver Ground)136Tx1+Transmitter Non-Inverted Data Input37Tx1-Transmitter Inverted Data Output	25	Rx4+	Receiver Non-Inverted Data Output	
28 IntL Interrupt 2 29 VccTx 3.3V power supply transmitter 30 Vcc1 3.3V power supply 31 LPMode Low Power Mode 2 32 GND Transmitter Ground (Common with Receiver Ground) 1 33 Tx3+ Transmitter Non-Inverted Data Input 34 Tx3- Transmitter Inverted Data Output 35 GND Transmitter Ground (Common with Receiver Ground) 1 36 Tx1+ Transmitter Non-Inverted Data Input 37 Tx1- Transmitter Non-Inverted Data Output	26	GND	Transmitter Ground (Common with Receiver Ground)	1
29 VccTx 3.3V power supply transmitter  30 Vcc1 3.3V power supply  31 LPMode Low Power Mode 2  32 GND Transmitter Ground (Common with Receiver Ground) 1  33 Tx3+ Transmitter Non-Inverted Data Input  34 Tx3- Transmitter Inverted Data Output  35 GND Transmitter Ground (Common with Receiver Ground) 1  36 Tx1+ Transmitter Non-Inverted Data Input  37 Tx1- Transmitter Inverted Data Output	27	ModPrsl	Module Present	
30 Vcc1 3.3V power supply  31 LPMode Low Power Mode 2  32 GND Transmitter Ground (Common with Receiver Ground) 1  33 Tx3+ Transmitter Non-Inverted Data Input 34 Tx3- Transmitter Inverted Data Output 35 GND Transmitter Ground (Common with Receiver Ground) 1  36 Tx1+ Transmitter Non-Inverted Data Input 37 Tx1- Transmitter Inverted Data Output	28	IntL	Interrupt	2
31 LPMode Low Power Mode 2  32 GND Transmitter Ground (Common with Receiver Ground) 1  33 Tx3+ Transmitter Non-Inverted Data Input  34 Tx3- Transmitter Inverted Data Output  35 GND Transmitter Ground (Common with Receiver Ground) 1  36 Tx1+ Transmitter Non-Inverted Data Input  37 Tx1- Transmitter Inverted Data Output	29	VccTx	3.3V power supply transmitter	
32 GND Transmitter Ground (Common with Receiver Ground) 1  33 Tx3+ Transmitter Non-Inverted Data Input  34 Tx3- Transmitter Inverted Data Output  35 GND Transmitter Ground (Common with Receiver Ground) 1  36 Tx1+ Transmitter Non-Inverted Data Input  37 Tx1- Transmitter Inverted Data Output	30	Vcc1	3.3V power supply	
Transmitter Non-Inverted Data Input  Transmitter Inverted Data Output  GND Transmitter Ground (Common with Receiver Ground)  Transmitter Non-Inverted Data Input  Transmitter Inverted Data Output	31	LPMode	Low Power Mode	2
34     Tx3-     Transmitter Inverted Data Output       35     GND     Transmitter Ground (Common with Receiver Ground)     1       36     Tx1+     Transmitter Non-Inverted Data Input       37     Tx1-     Transmitter Inverted Data Output	32	GND	Transmitter Ground (Common with Receiver Ground)	1
35 GND Transmitter Ground (Common with Receiver Ground) 1 36 Tx1+ Transmitter Non-Inverted Data Input 37 Tx1- Transmitter Inverted Data Output	33	Tx3+	Transmitter Non-Inverted Data Input	
36 Tx1+ Transmitter Non-Inverted Data Input 37 Tx1- Transmitter Inverted Data Output	34	Tx3-	Transmitter Inverted Data Output	
37 Tx1- Transmitter Inverted Data Output	35	GND	Transmitter Ground (Common with Receiver Ground)	1
· · · · · · · · · · · · · · · · · · ·	36	Tx1+	Transmitter Non-Inverted Data Input	
38 GND Transmitter Ground (Common with Receiver Ground) 1	37	Tx1-	Transmitter Inverted Data Output	
Transmitter Ground (common man receiver Ground)	38	GND	Transmitter Ground (Common with Receiver Ground)	1

#### Notes:

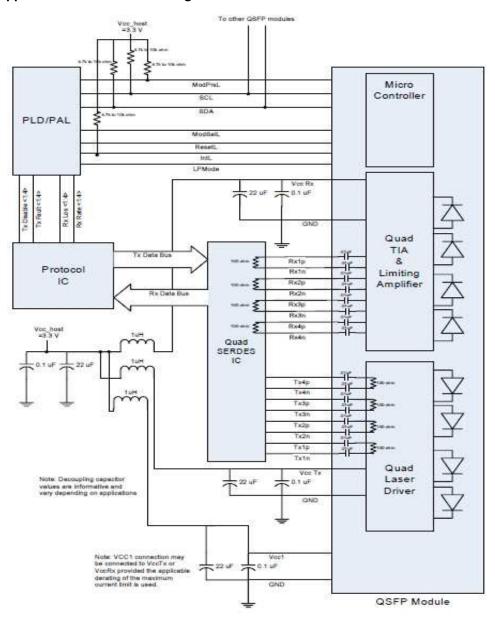
- 1. The module signal grounds are isolated from the module case.
- 2. This is an open collector/drain output that on the host board requires a  $4.7K\Omega$  to  $10K\Omega$  pull-up resistor to VccHost.



### **Recommended Host Board Power Supply Filter Network**

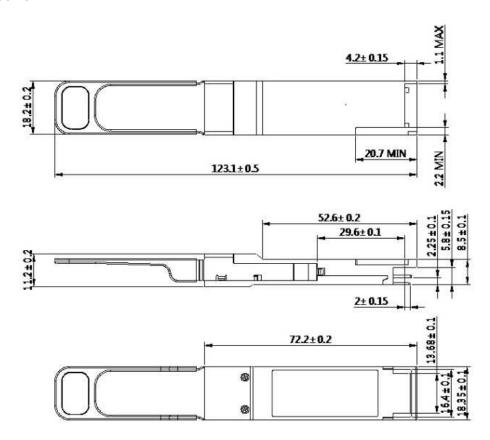


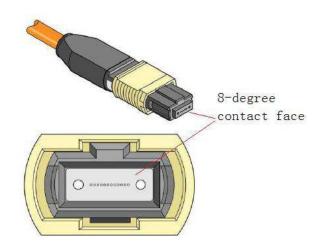
# **Recommended Application Interface Block Diagram**



# **Mechanical Specifications**

Measurement 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 in 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.

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