

# **Alpha Bridge AQS28-T-04-P/SF28/4**

## **Datasheet**



### Features

- QSFP28 End: Compliant with QSFP28 MSA specifications
- SFP28 End: Compliant with SFP28 MSA specifications
- 4 independent duplex channels operating at 25Gbps
- AC coupled inputs and outputs
- 100 Ohm differential impedance
- All-metal housing for superior EMI performance
- Single power supply 3.3V, low power consumption
- RoHS Compliance
- Operating temperature range: 0°C to 70°C.

### Application

- 100G Ethernet
- Infiniband EDR
- Serial Data Transmission
- Networking
- Storage
- Fiber Channel

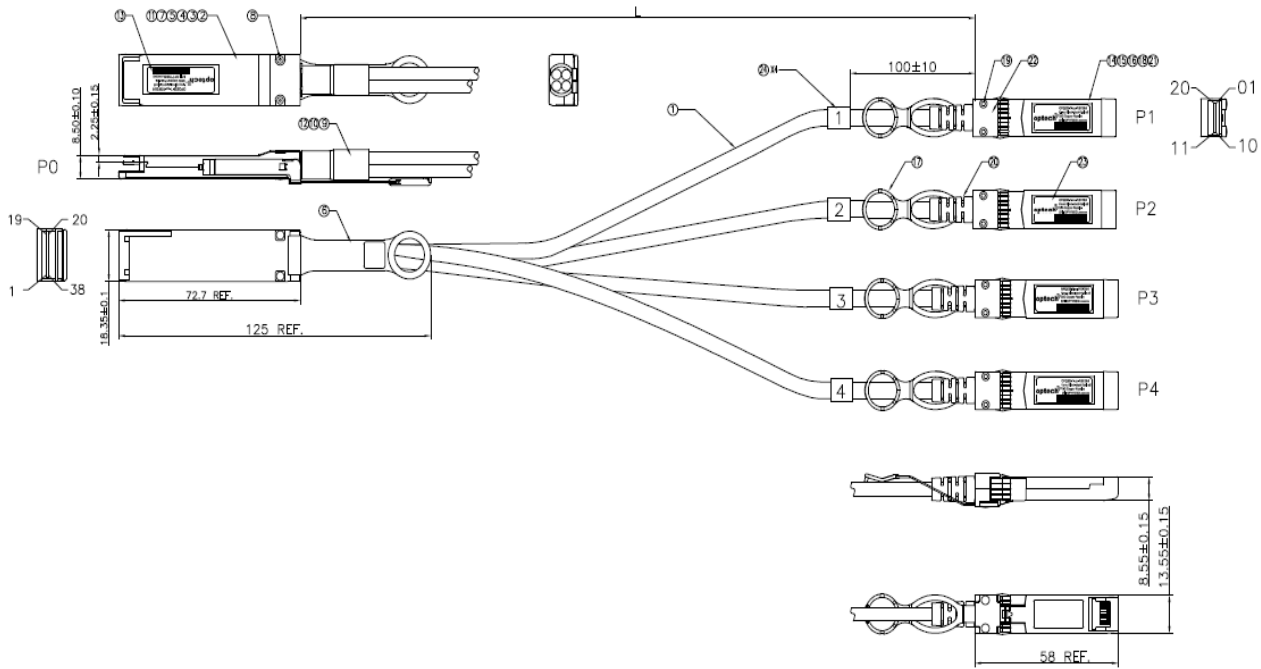
### General Specification

Parameter	Symbol	Min.	Typ	Max.	Units	Note
Bit Error Rate	BER			10 <sup>-12</sup>		
Operating Temperature	TOP	0		70	°C	Case temperature
Storage Temperature	TSTO	-40		85	°C	Ambient temperature
Input Voltage	Vcc	3.13		3.46	V	
Maximum Voltage	VMAX	-0.5	3.3	4	V	For electrical power interface

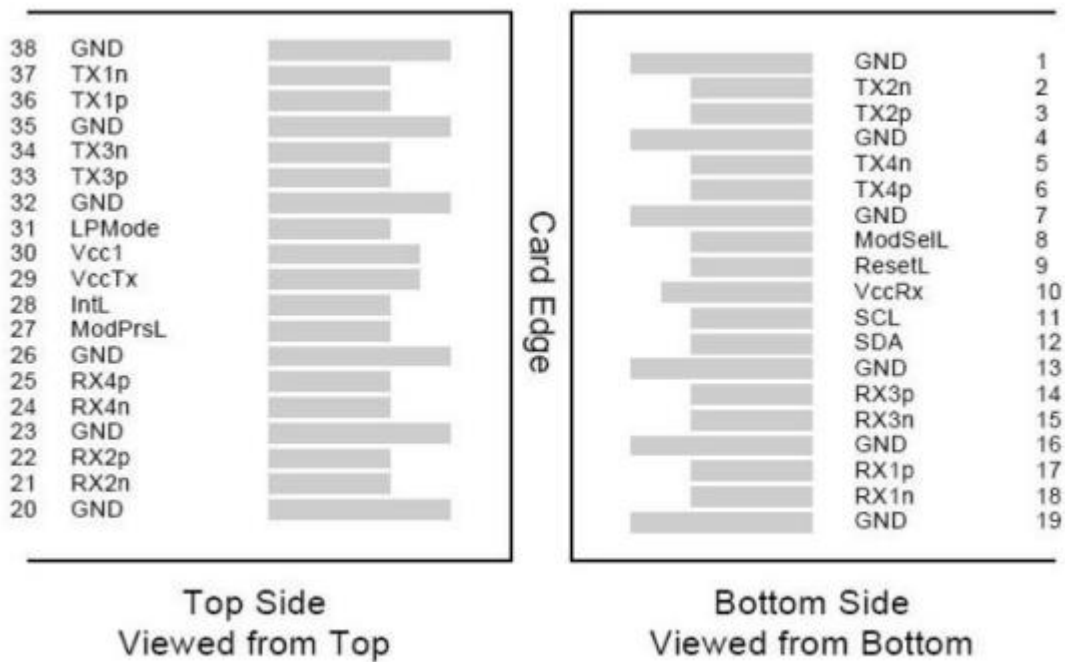
### Cable Mechanical Specifications

Parameter	Symbol	Min.	Typical	Max.	Units	Note
Wire Gauge		30AWG		26AWG		
Cable Impedance	Z	95	100	105	Ohm	

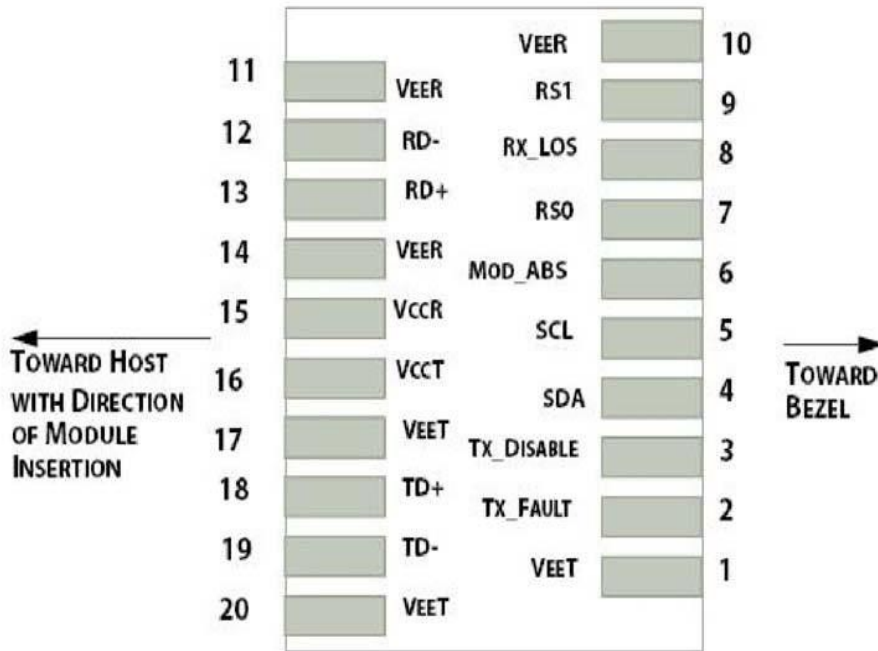
Outline Dimensions



Electrical Pad Layout (QSFP28 END)



Electrical Pad Layout (SFP28 END)



Pin Assignment (QSFP28 END)

Pin	Symbol	Description
1	GND	Ground
2	Tx2n	Transmitter Inverted Data Input
3	Tx2p	Transmitter Non-inverted Data Input
4	GND	Ground
5	Tx4n	Transmitter Inverted Data Input
6	Tx4p	Transmitter Non-inverted Data Input
7	GND	Ground
8	ModSelL	Module Select
9	ResetL	Module Reset
10	VccRx	+3.3V Power Supply Receiver
11	SCL	2-Wire Serial Interface Clock
12	SDA	2-Wire Serial Interface Data
13	GND	Ground
14	Rx3p	Receiver Non-Inverted Data Output
15	Rx3n	Receiver Inverted Data Output
16	GND	Ground
17	Rx1p	Receiver Non-Inverted Data Output
18	Rx1n	Receiver Inverted Data Output
19	GND	Ground
20	GND	Ground

21	Rx2n	Receiver Inverted Data Output
22	Rx2p	Receiver Non-Inverted Data Output
23	GND	Ground
24	Rx4n	Receiver Inverted Data Output
25	Rx4p	Receiver Non-Inverted Data Output
26	GND	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
32	GND	Ground
33	Tx3p	Transmitter Non-Inverted Data Input
34	Tx3n	Transmitter Inverted Data Input
35	GND	Ground
36	Tx1p	Transmitter Non-Inverted Data Input
37	Tx1n	Transmitter Inverted Data Input
38	GND	Ground

### Pin Description – SFP28 Terminal

Pin	Symbol	Description
1	VeeT	Module Transmitter Ground
2	TX_Fault	Module Transmitter Fault
3	TX_Dis	Transmitter Disable; Turns off transmitter laser output
4	SDA	2-Wire Serial Interface Data Line
5	SCL	2-Wire Serial Interface Clock
6	MOD_DEF0	Module Definition, Grounded in the module
7	RS0	No connection required
8	RX-LOS	Receiver Loss of Signal Indication. Logic 0 indicates normal operation
9	RS1	No connection required
10	VeeR	Module Receiver Ground
11	VeeR	Module Receiver Ground
12	RD-	Receiver Inverted Data Output
13	RD+	Receiver Data Output
14	VeeR	Module Receiver Ground
15	VccR	Module Receiver 3.3 V Supply
16	VccT	Module Receiver 3.3 V Supply
17	VeeT	Module Transmitter Ground
18	TD+	Transmitter Non-Inverted Data Input

19	TD-	Transmitter Inverted Data Input
20	VeeT	Module Transmitter Ground

**References**

1. IEEE standard 802.3bj. IEEE Standard Department, 2008.

**Ordering Information**

<i>Part Number</i>	<i>Model Number</i>	<i>Length (M)</i>	<i>AWG</i>	<i>Voltage</i>	<i>Temperature</i>
<b>AQS28-T-04-P/SF28/4</b>	Fanout Cable	3	26	3.3V	0 °C to 70 °C

Note: All information contained in this document is subject to change without notice.