Datasheet

NXDA-PP28-1M

SFP28 25GBASE-CR 1m DAC Twinax

Features

- SFP28 Form Factor
- 25 Gb/s bitrate
- Up to 1 m over DAC Twinax
- Up to 1 W power consumption
- +0/+70°C temperature range
- Built in digital diagnostic monitoring

Applications

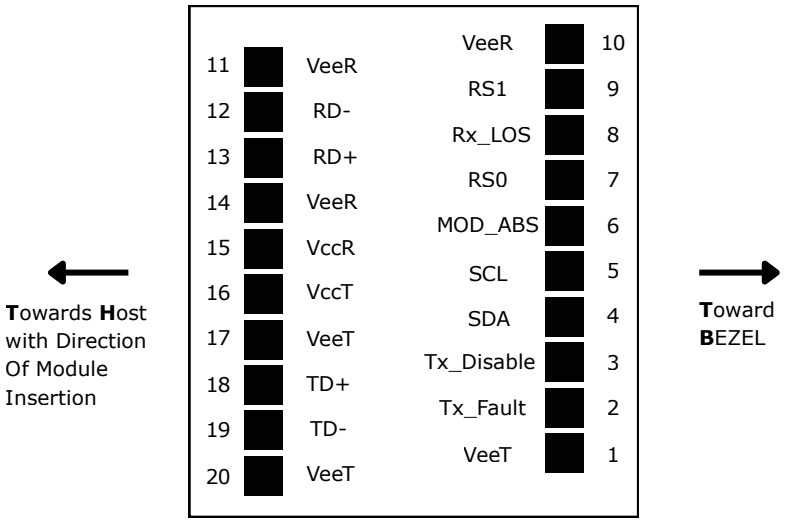
- 25GBase Ethernet

Recommended operating conditions

Parameter	Value	Unit
Storage temperature	0/70	°C
Operating case temperature	0/70	°C
Relative Humidity	5~85	%
Power supply voltage	3,3	V
Power supply current	300	mA
Power consumption	1	W
MTBF	9676795,04	h

Laserclass 1 CE RoHS

Transceiver electrical pad layout



Module electrical PIN definition

SFP28 - SFF 8472

Pin	Symbol	Description	Note
1	VeeT	Transmitter Ground (Common with Receiver Ground)	1
2	Tx_Fault	Transmitter Fault.	2
3	Tx_Disable	Transmitter Disable. Laser output disabled on high or open.	3
4	SDA	2-wire Serial Interface Data Line	3
5	SCL	2-wire Serial Interface Clock Line	3
6	MOD_ABS	Module Absent. Grounded within the module	4
7	RS0	Rate Select 0	5
8	Rx_LOS	Loss of Signal indication. Logic 0 indicates normal operation.	6
9	RS1	No connection required	1
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

Note

1. Circuit ground is internally isolated from chassis ground.

2. Tx_Fault is an open collector/drain output, which should be pulled up with a 4.7kΩ – 10kΩ resistor on the host board if intended for use. Pull up voltage should be between 2.0V to Vcc + 0.3V.A high output indicates a transmitter fault caused by either the TX bias current or the TX output power exceeding the preset alarm threshold. A low output indicates normal operation. In the low state, the output is pulled to <0.8V.

3. Laser output disabled on Tx_Disable >2.0V or open, enabled on Tx_Disable <0.8V.

4. Should be pulled up with 4.7kΩ- 10kΩ host board to a voltage between 2.0V and 3.6V. MOD_ABS pulls line low to indicate module is plugged in.

5. Internally pulled down per SFF-8431 Rev 4.1.

6. LOS is open collector output. It should be pulled up with 4.7kΩ – 10kΩ on host board to a voltage between 2.0V and 3.6V. Logic 0 indicates normal operation; logic 1 indicates loss of signal.

Datasheet

NXDA-PP28-1M5

SFP28 25GBASE-CR 1,5m DAC Twinax

Features

- SFP28 Form Factor
- 25 Gb/s bitrate
- Up to 1,5 m over DAC Twinax
- Up to 1 W power consumption
- +0/+70°C temperature range
- Built in digital diagnostic monitoring

Applications

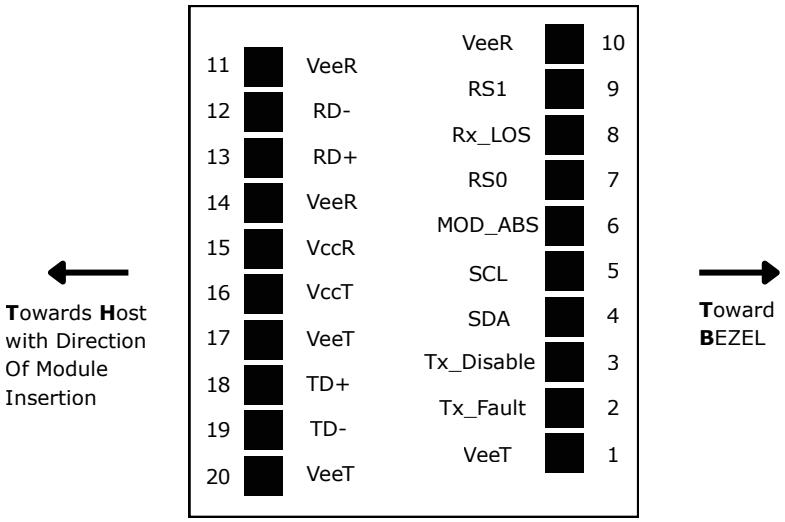
- 25GBase Ethernet

Recommended operating conditions

Parameter	Value	Unit
Storage temperature	0/70	°C
Operating case temperature	0/70	°C
Relative Humidity	5~85	%
Power supply voltage	3,3	V
Power supply current	300	mA
Power consumption	1	W
MTBF	9676795,04	h

Laserclass 1 CE RoHS

Transceiver electrical pad layout



Module electrical PIN definition

SFP28 - SFF 8472

Pin	Symbol	Description	Note
1	VeeT	Transmitter Ground (Common with Receiver Ground)	1
2	Tx_Fault	Transmitter Fault.	2
3	Tx_Disable	Transmitter Disable. Laser output disabled on high or open.	3
4	SDA	2-wire Serial Interface Data Line	3
5	SCL	2-wire Serial Interface Clock Line	3
6	MOD_ABS	Module Absent. Grounded within the module	4
7	RS0	Rate Select 0	5
8	Rx_LOS	Loss of Signal indication. Logic 0 indicates normal operation.	6
9	RS1	No connection required	1
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

Note

1. Circuit ground is internally isolated from chassis ground.

2. Tx_Fault is an open collector/drain output, which should be pulled up with a 4.7kΩ – 10kΩ resistor on the host board if intended for use. Pull up voltage should be between 2.0V to Vcc + 0.3V.A high output indicates a transmitter fault caused by either the TX bias current or the TX output power exceeding the preset alarm threshold. A low output indicates normal operation. In the low state, the output is pulled to <0.8V.

3. Laser output disabled on Tx_Disable >2.0V or open, enabled on Tx_Disable <0.8V.

4. Should be pulled up with 4.7kΩ- 10kΩ host board to a voltage between 2.0V and 3.6V. MOD_ABS pulls line low to indicate module is plugged in.

5. Internally pulled down per SFF-8431 Rev 4.1.

6. LOS is open collector output. It should be pulled up with 4.7kΩ – 10kΩ on host board to a voltage between 2.0V and 3.6V. Logic 0 indicates normal operation; logic 1 indicates loss of signal.

Datasheet

NXDA-PP28-2M

SFP28 25GBASE-CR 2m DAC Twinax

Features

- SFP28 Form Factor
- 25 Gb/s bitrate
- Up to 2 m over DAC Twinax
- Up to 1 W power consumption
- +0/+70°C temperature range
- Built in digital diagnostic monitoring

Applications

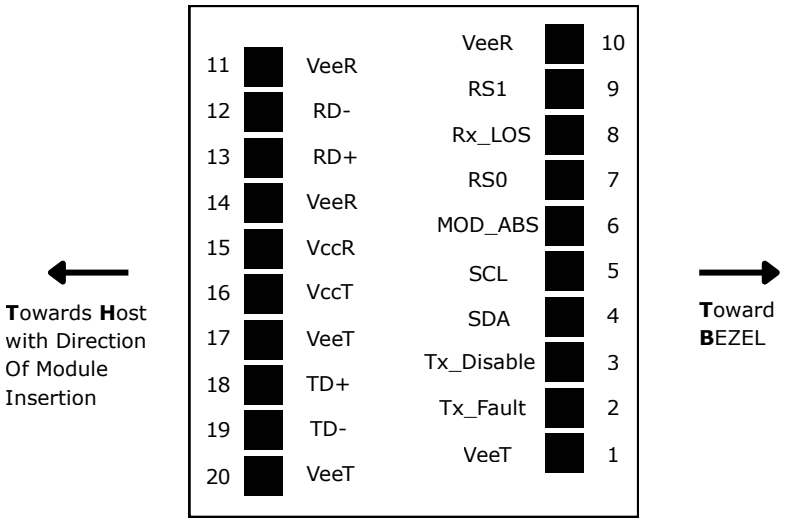
- 25GBase Ethernet

Recommended operating conditions

Parameter	Value	Unit
Storage temperature	0/70	°C
Operating case temperature	0/70	°C
Relative Humidity	5~85	%
Power supply voltage	3,3	V
Power supply current	300	mA
Power consumption	1	W
MTBF	9676795,04	h

Laserclass 1 CE RoHS

Transceiver electrical pad layout



Module electrical PIN definition

SFP28 - SFF 8472

Pin	Symbol	Description	Note
1	VeeT	Transmitter Ground (Common with Receiver Ground)	1
2	Tx_Fault	Transmitter Fault.	2
3	Tx_Disable	Transmitter Disable. Laser output disabled on high or open.	3
4	SDA	2-wire Serial Interface Data Line	3
5	SCL	2-wire Serial Interface Clock Line	3
6	MOD_ABS	Module Absent. Grounded within the module	4
7	RS0	Rate Select 0	5
8	Rx_LOS	Loss of Signal indication. Logic 0 indicates normal operation.	6
9	RS1	No connection required	1
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

Note

1. Circuit ground is internally isolated from chassis ground.

2. Tx_Fault is an open collector/drain output, which should be pulled up with a 4.7kΩ – 10kΩ resistor on the host board if intended for use. Pull up voltage should be between 2.0V to Vcc + 0.3V.A high output indicates a transmitter fault caused by either the TX bias current or the TX output power exceeding the preset alarm threshold. A low output indicates normal operation. In the low state, the output is pulled to <0.8V.

3. Laser output disabled on Tx_Disable >2.0V or open, enabled on Tx_Disable <0.8V.

4. Should be pulled up with 4.7kΩ- 10kΩ host board to a voltage between 2.0V and 3.6V. MOD_ABS pulls line low to indicate module is plugged in.

5. Internally pulled down per SFF-8431 Rev 4.1.

6. LOS is open collector output. It should be pulled up with 4.7kΩ – 10kΩ on host board to a voltage between 2.0V and 3.6V. Logic 0 indicates normal operation; logic 1 indicates loss of signal.

Datasheet

NXDA-PP28-2M5

SFP28 25GBASE-CR 2,5m DAC Twinax

Features

- SFP28 Form Factor
- 25 Gb/s bitrate
- Up to 2,5 m over DAC Twinax
- Up to 1 W power consumption
- +0/+70°C temperature range
- Built in digital diagnostic monitoring

Applications

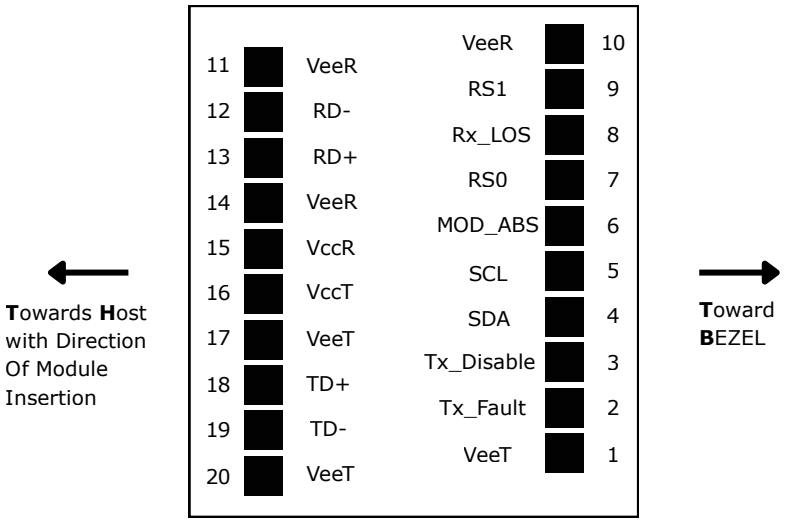
- 25GBase Ethernet

Recommended operating conditions

Parameter	Value	Unit
Storage temperature	0/70	°C
Operating case temperature	0/70	°C
Relative Humidity	5~85	%
Power supply voltage	3,3	V
Power supply current	300	mA
Power consumption	1	W
MTBF	9676795,04	h

Laserclass 1 CE RoHS

Transceiver electrical pad layout



Module electrical PIN definition

SFP28 - SFF 8472

Pin	Symbol	Description	Note
1	VeeT	Transmitter Ground (Common with Receiver Ground)	1
2	Tx_Fault	Transmitter Fault.	2
3	Tx_Disable	Transmitter Disable. Laser output disabled on high or open.	3
4	SDA	2-wire Serial Interface Data Line	3
5	SCL	2-wire Serial Interface Clock Line	3
6	MOD_ABS	Module Absent. Grounded within the module	4
7	RS0	Rate Select 0	5
8	Rx_LOS	Loss of Signal indication. Logic 0 indicates normal operation.	6
9	RS1	No connection required	1
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

Note

1. Circuit ground is internally isolated from chassis ground.

2. Tx_Fault is an open collector/drain output, which should be pulled up with a 4.7kΩ – 10kΩ resistor on the host board if intended for use. Pull up voltage should be between 2.0V to Vcc + 0.3V.A high output indicates a transmitter fault caused by either the TX bias current or the TX output power exceeding the preset alarm threshold. A low output indicates normal operation. In the low state, the output is pulled to <0.8V.

3. Laser output disabled on Tx_Disable >2.0V or open, enabled on Tx_Disable <0.8V.

4. Should be pulled up with 4.7kΩ- 10kΩ host board to a voltage between 2.0V and 3.6V. MOD_ABS pulls line low to indicate module is plugged in.

5. Internally pulled down per SFF-8431 Rev 4.1.

6. LOS is open collector output. It should be pulled up with 4.7kΩ – 10kΩ on host board to a voltage between 2.0V and 3.6V. Logic 0 indicates normal operation; logic 1 indicates loss of signal.

Datasheet

NXDA-PP28-3M

SFP28 25GBASE-CR 3m DAC Twinax

Features

- SFP28 Form Factor
- 25 Gb/s bitrate
- Up to 3 m over DAC Twinax
- Up to 1 W power consumption
- +0/+70°C temperature range
- Built in digital diagnostic monitoring

Applications

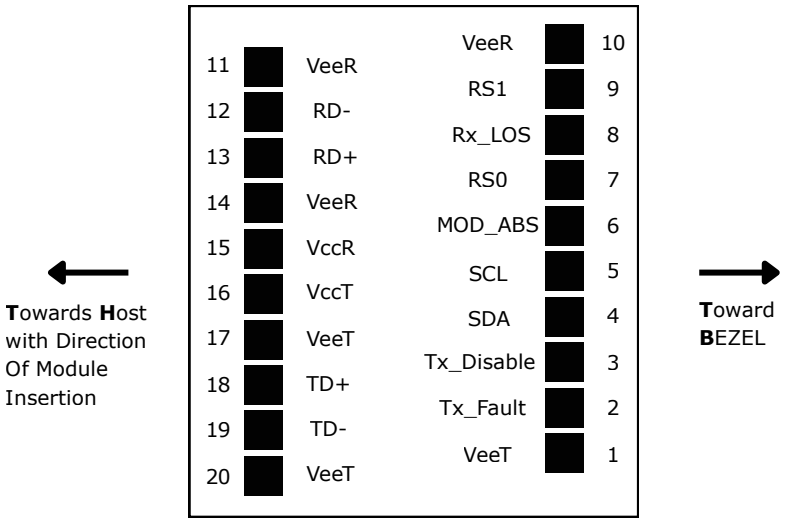
- 25GBase Ethernet

Recommended operating conditions

Parameter	Value	Unit
Storage temperature	0/70	°C
Operating case temperature	0/70	°C
Relative Humidity	5~85	%
Power supply voltage	3,3	V
Power supply current	300	mA
Power consumption	1	W
MTBF	9676795,04	h

Laserclass 1 CE RoHS

Transceiver electrical pad layout



Module electrical PIN definition

SFP28 - SFF 8472

Pin	Symbol	Description	Note
1	VeeT	Transmitter Ground (Common with Receiver Ground)	1
2	Tx_Fault	Transmitter Fault.	2
3	Tx_Disable	Transmitter Disable. Laser output disabled on high or open.	3
4	SDA	2-wire Serial Interface Data Line	3
5	SCL	2-wire Serial Interface Clock Line	3
6	MOD_ABS	Module Absent. Grounded within the module	4
7	RS0	Rate Select 0	5
8	Rx_LOS	Loss of Signal indication. Logic 0 indicates normal operation.	6
9	RS1	No connection required	1
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

Note

1. Circuit ground is internally isolated from chassis ground.

2. Tx_Fault is an open collector/drain output, which should be pulled up with a 4.7kΩ – 10kΩ resistor on the host board if intended for use. Pull up voltage should be between 2.0V to Vcc + 0.3V.A high output indicates a transmitter fault caused by either the TX bias current or the TX output power exceeding the preset alarm threshold. A low output indicates normal operation. In the low state, the output is pulled to <0.8V.

3. Laser output disabled on Tx_Disable >2.0V or open, enabled on Tx_Disable <0.8V.

4. Should be pulled up with 4.7kΩ- 10kΩ host board to a voltage between 2.0V and 3.6V. MOD_ABS pulls line low to indicate module is plugged in.

5. Internally pulled down per SFF-8431 Rev 4.1.

6. LOS is open collector output. It should be pulled up with 4.7kΩ – 10kΩ on host board to a voltage between 2.0V and 3.6V. Logic 0 indicates normal operation; logic 1 indicates loss of signal.

Nexolight

Datasheet

NXDA-PP28-5M

SFP28 25GBASE-CR 5m DAC Twinax

Features

- SFP28 Form Factor
- 25 Gb/s bitrate
- Up to 5 m over DAC Twinax
- Up to 1 W power consumption
- +0/+70°C temperature range
- Built in digital diagnostic monitoring

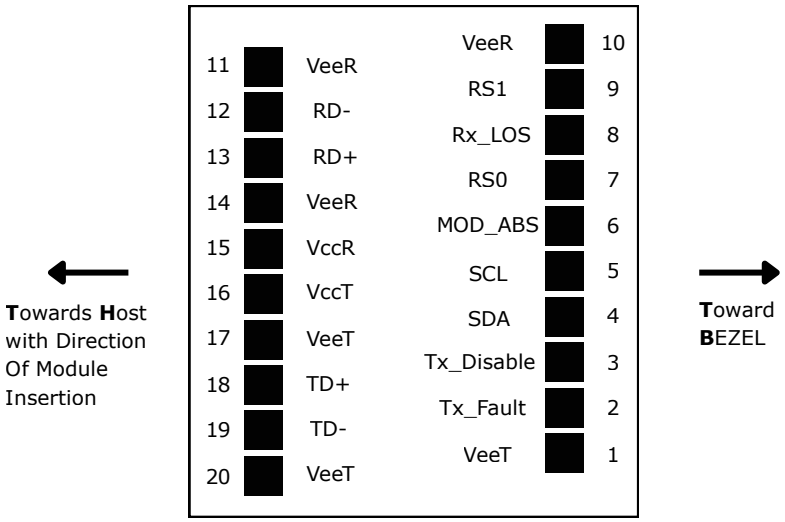
Applications

- 25GBase Ethernet

Recommended operating conditions

Parameter	Value	Unit
Storage temperature	0/70	°C
Operating case temperature	0/70	°C
Relative Humidity	5~85	%
Power supply voltage	3,3	V
Power supply current	300	mA
Power consumption	1	W
MTBF	9676795,04	h

Transceiver electrical pad layout



Module electrical PIN definition

SFP28 - SFF 8472

Pin	Symbol	Description	Note
1	VeeT	Transmitter Ground (Common with Receiver Ground)	1
2	Tx_Fault	Transmitter Fault.	2
3	Tx_Disable	Transmitter Disable. Laser output disabled on high or open.	3
4	SDA	2-wire Serial Interface Data Line	3
5	SCL	2-wire Serial Interface Clock Line	3
6	MOD_ABS	Module Absent. Grounded within the module	4
7	RS0	Rate Select 0	5
8	Rx_LOS	Loss of Signal indication. Logic 0 indicates normal operation.	6
9	RS1	No connection required	1
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

Note

1. Circuit ground is internally isolated from chassis ground.

2. Tx_Fault is an open collector/drain output, which should be pulled up with a 4.7kΩ – 10kΩ resistor on the host board if intended for use. Pull up voltage should be between 2.0V to Vcc + 0.3V.A high output indicates a transmitter fault caused by either the TX bias current or the TX output power exceeding the preset alarm threshold. A low output indicates normal operation. In the low state, the output is pulled to <0.8V.

3. Laser output disabled on Tx_Disable >2.0V or open, enabled on Tx_Disable <0.8V.

4. Should be pulled up with 4.7kΩ- 10kΩ host board to a voltage between 2.0V and 3.6V. MOD_ABS pulls line low to indicate module is plugged in.

5. Internally pulled down per SFF-8431 Rev 4.1.

6. LOS is open collector output. It should be pulled up with 4.7kΩ – 10kΩ on host board to a voltage between 2.0V and 3.6V. Logic 0 indicates normal operation; logic 1 indicates loss of signal.