

Preliminary DATA SHEET

CFORTH-SFP-H10GB-ACUxM

10Gb/s SFP10 (Small Form Pluggable) Active Copper Cable Assembly

Overview

CFORTH-SFP-H10GB-ACUxM uses shielded high-speed differential cables with high-speed electrical signal compensation such as pre-emphasis and equalization to increase the data transmission distance between uncompensated switches. The product is compliant with 10 Gigabit Ethernet standards and SFP Multi-Source Agreement (MSA) standards, supports 10G transmission rates, and is backward compatible with low-rate applications. Its biggest feature is the use of thinner cables and longer transmission distances. Low power consumption, low cost and high reliability are the preferred solutions for 10G rate short-range applications. They are commonly used for data transmission between data centers and cabinets or adjacent cabinets.

Product Features

- Up to 10 Gb/s bi-directional data links
- 28AWG through 30AWG cable available
- Dual SFP+ Connectors
- Industry standard small form pluggable (SFP+) package
- Spans up to 10 meters
- Hot Pluggable
- Single power supply 3.3V
- RoHS Compliant
- Operating temperature range: 0°C to 70°C

Applications

10G Ethernet

Ordering Information

Part Number	Description	Gauge	Length
CFORTH-SFP-H10GB-ACU7M	10 Gb/s SFP+ Active Copper Cable, 7m	30AWG	7m
CFORTH-SFP-H10GB-ACU10M	10 Gb/s SFP+ Active Copper Cable, 10m	28AWG	10m

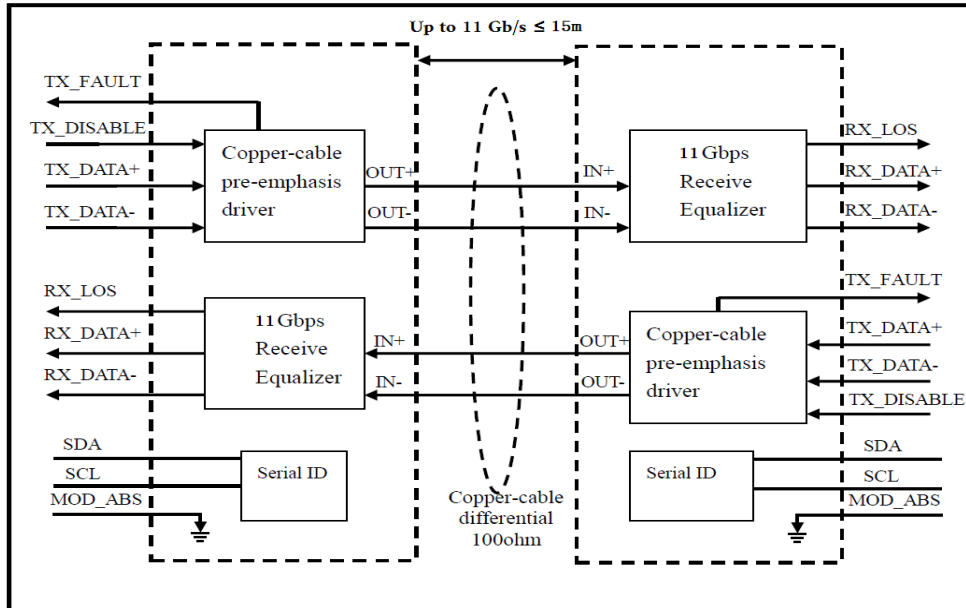
General Specifications

Parameter	Symbol	Min	Typ	Max	Unit	Remarks
Data Rate	DR		10.3125		Gb/s	1
Bit Error Rate	BER			10^{-12}		
Operating Temperature	T _C	0		70	°C	2
Storage Temperature	T _{STO}	-40		85	°C	3
Input Voltage	V _{CC}	3.14	3.3	3.46	V	4
Supply Current	I _{CC}		100	300	mA	4

Notes:

1. IEEE 802.3ae compatible
2. Case temperature
3. Ambient temperature
4. For electrical power interface

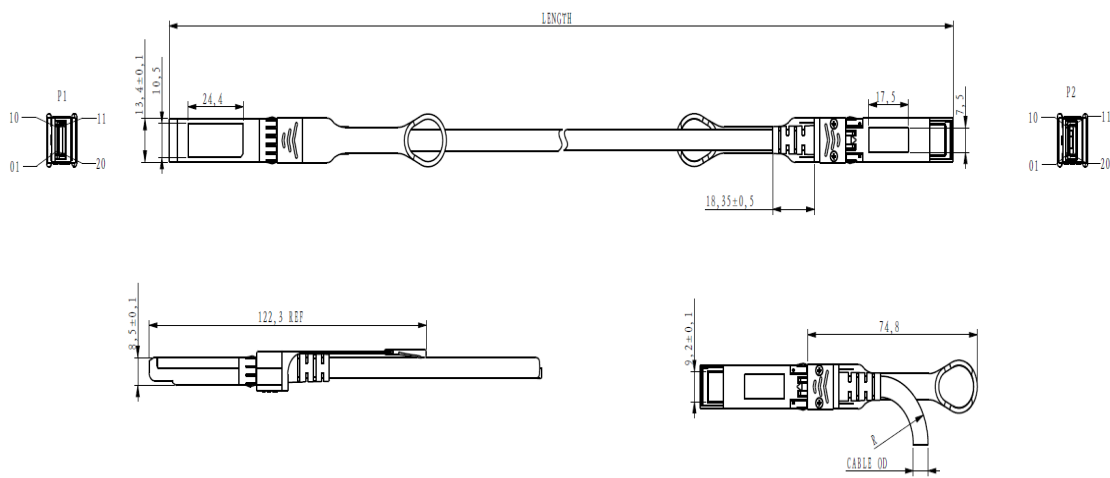
Block Diagram of Transceiver



Cable Specifications

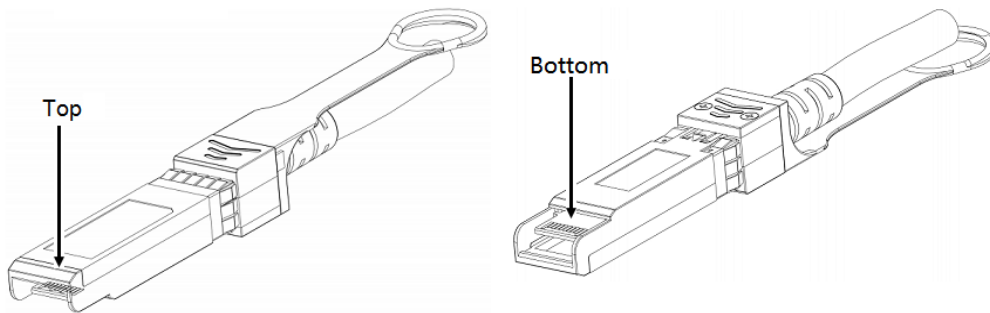
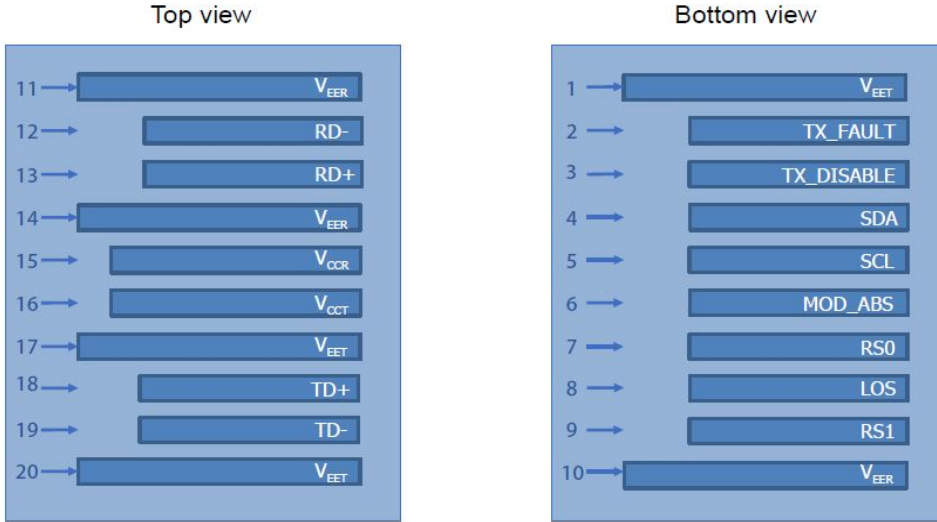
Parameter	Symbol	Min	Typ	Max	Unit	Remarks
Wire Gauge		30		28	AWG	
Cable Impedance	Z	90	100	110	Ohm	

Dimensions



ALL DIMENSIONS ARE ±0.2mm UNLESS OTHERWISE SPECIFIED
UNIT: mm

Electrical Pad Layout



Pin Assignment

PIN #	Symbol	Description	Remarks
1	V _{EET}	Transmitter ground (common with receiver ground)	1
2	TX_FAULT	Transmitter Fault.	
3	TX_DISABLE	Transmitter Disable. Laser output disabled on high or open	2
4	SDA	Data line for serial ID	3
5	SCL	Clock line for serial ID	3
6	MOD_ABS	Module Absent. Grounded within the module	3
7	RS0	No connection required	
8	LOS	Loss of Signal indication. Logic 0 indicates normal operation	4
9	RS1	No connection required	
10	V _{EER}	Receiver ground (common with transmitter ground)	1
11	V _{EER}	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	V _{EER}	Receiver ground (common with transmitter ground)	1
15	V _{CCR}	Receiver power supply	
16	V _{CCT}	Transmitter power supply	
17	V _{EET}	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	V _{EET}	Transmitter ground (common with receiver ground)	1

Notes:

1. Circuit ground is isolated from chassis ground
2. Disabled: T_{DIS}>2V or open, Enabled: T_{DIS}<0.8V
3. Should Be pulled up with 4.7k - 10k ohm on host board to a voltage between 2V and 3.6V
4. LOS is open collector output

References

1. IEEE standard 802.3ae. IEEE Standard Department, 2005.