

Dolphin PCPR5CPCIe 5.0 Cable Data Sheet



CopprLink 1.0 copper cable, PCIe 5.0 x16, CDFP Connectors



The CopprLink 1.0 cable assemblies are engineered to fulfill the evolving requirements of data centers and high-performance computing applications, offering high-density interconnect systems capable of delivering 32GT/s per lane (PCIe 5.0). With 16 lanes, the cable supports data transfer rates up to 512 GT/s. This interconnection system fully complies with the prevailing industry standard, SFF-TA-1032.

Features

- Cable lengths 1m to 3m
- PCIe 5.0 x16 support
- 360° EMI shielding
- PCI-SIG CopprLink 1.0 compliant
- 2 EEPROMs
- RoHS 2 compliant

Part Numbers

Part	Length	AWG	Length(mm)	Insertion Loss
PCPR5C-444-1M	1 Meter	29	1000+70/-30	<-15.4dB
PCPR5C-444-2M	2 Meters	29	2000+70/-30	<-15.4dB
PCPR5C-444-3M	3 Meters	29	3000+70/-50	-20.0dB

Note: PCPR5C-444-3M Insertion Loss exceeds the PCI Sig Specification still works well with Dolphins Product.

Pin-Out

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
D	GND	PERp11	PERn11	GND	PERp10	PERn10	GND	PERp9	PERn9	GND	PERp8	PERn8	GND	FLEX07	FLEX08
C	GND	PERp12	PERn12	GND	PERp13	PERn13	GND	PERp14	PERn14	GND	PERp15	PERn15	GND	FLEX05	FLEX06
B	GND	PETp11	PETn11	GND	PETp10	PETn10	GND	PETp9	PETn9	GND	PETp8	PETn8	GND	FLEX03	FLEX04
A	GND	PETp12	PETn12	GND	PETp13	PETn13	GND	PETp14	PETn14	GND	PETp15	PETn15	GND	FLEX01	FLEX02
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
D	GND	PERp7	PERn7	GND	PERp6	PERn6	GND	PERp5	PERn5	GND	PERp4	PERn4	GND	SCL	SDA
C	GND	PERp0	PERn0	GND	PERp1	PERn1	GND	PERp2	PERn2	GND	PERp3	PERn3	GND	VCC3V	PERST#
B	GND	PETp7	PETn7	GND	PETp6	PETn6	GND	PETp5	PETn5	GND	PETp4	PETn4	GND	VCC12V	PR/PE
A	GND	PETp0	PETn0	GND	PETp1	PETn1	GND	PETp2	PETn2	GND	PETp3	PETn3	GND	2WCL	2WDA

Signal positions at the P1 connector

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
D	GND	PERp11	PERn11	GND	PERp10	PERn10	GND	PERp9	PERn9	GND	PERp8	PERn8	GND	FLEX03	FLEX04
C	GND	PERp12	PERn12	GND	PERp13	PERn13	GND	PERp14	PERn14	GND	PERp15	PERn15	GND	FLEX01	FLEX02
B	GND	PETp11	PETn11	GND	PETp10	PETn10	GND	PETp9	PETn9	GND	PETp8	PETn8	GND	FLEX07	FLEX08
A	GND	PETp12	PETn12	GND	PETp13	PETn13	GND	PETp14	PETn14	GND	PETp15	PETn15	GND	FLEX05	FLEX06
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
D	GND	PERp7	PERn7	GND	PERp6	PERn6	GND	PERp5	PERn5	GND	PERp4	PERn4	GND	SCL	SDA
C	GND	PERp0	PERn0	GND	PERp1	PERn1	GND	PERp2	PERn2	GND	PERp3	PERn3	GND	VCC3V	PERST#
B	GND	PETp7	PETn7	GND	PETp6	PETn6	GND	PETp5	PETn5	GND	PETp4	PETn4	GND	VCC12V	PR/PE
A	GND	PETp0	PETn0	GND	PETp1	PETn1	GND	PETp2	PETn2	GND	PETp3	PETn3	GND	2WCL	2WDA

Signal positions at the P2 connector

Wiring Table

P1		Direction	P2	
Pin	Signal		Signal	Pin
A1	GND	-----	GND	C1
A2	PETp12	----->	PERp12	C2
A3	PETn12	----->	PERn12	C3
A4	GND	-----	GND	C4
A5	PETp13	----->	PERp13	C5
A6	PETn13	----->	PERn13	C6
A7	GND	-----	GND	C7
A8	PETp14	----->	PERp14	C8
A9	PETn14	----->	PERn14	C9
A10	GND	-----	GND	C10
A11	PETp15	----->	PERp15	C11
A12	PETn15	----->	PERn15	C12
A13	GND	-----	GND	C13
A14	FLEXIO1_RC	<----->	FLEXIO1_NRC	C14
A15	FLEXIO2_RC	<----->	FLEXIO2_NRC	C15
A16	GND	-----	GND	C16
A17	PETp0	----->	PERp0	C17
A18	PETn0	----->	PERn0	C18
A19	GND	-----	GND	C19
A20	PETp1	----->	PERp1	C20
A21	PETn1	----->	PERn1	C21
A22	GND	-----	GND	C22
A23	PETp2	----->	PERp2	C23
A24	PETn2	----->	PERn2	C24
A25	GND	-----	GND	C25
A26	PETp3	----->	PERp3	C26
A27	PETn3	----->	PERn3	C27
A28	GND	-----	GND	C28
A29	2WCL	----->	2WCL	A29
A30	2WDA	<----->	2WDA	A30

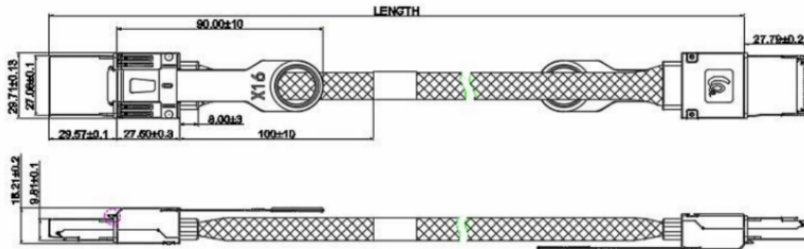
P1		Direction	P2	
Pin	Signal		Signal	Pin
C1	GND	-----	GND	A1
C2	PERp12	<-----	PETp12	A2
C3	PERn12	<-----	PETn12	A3
C4	GND	-----	GND	A4
C5	PERp13	<-----	PETp13	A5
C6	PERn13	<-----	PETn13	A6
C7	GND	-----	GND	A7
C8	PERp14	<-----	PETp14	A8
C9	PERn14	<-----	PETn14	A9
C10	GND	-----	GND	A10
C11	PERp15	<-----	PETp15	A11
C12	PERn15	<-----	PETn15	A12
C13	GND	-----	GND	A13
C14	FLEXIO5_RC	<----->	FLEXIO5_NRC	A14
C15	FLEXIO6_RC	<----->	FLEXIO6_NRC	A15
C16	GND	-----	GND	A16
C17	PERp0	<-----	PETp0	A17
C18	PERn0	<-----	PETn0	A18
C19	GND	-----	GND	A19
C20	PERp1	<-----	PETp1	A20
C21	PERn1	<-----	PETn1	A21
C22	GND	-----	GND	A22
C23	PERp2	<-----	PETp2	A23
C24	PERn2	<-----	PETn2	A24
C25	GND	-----	GND	A25
C26	PERp3	<-----	PETp3	A26
C27	PERn3	<-----	PETn3	A27
C28	GND	-----	GND	A28
C29	VCC3p3V	Not Connected	N/C	VCC3p3V
C30	PERST#	----->	PERST#	C30

Wiring Table-Continue

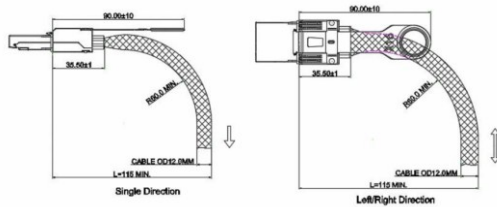
P1		Direction	P2	
Pin	Signal		Signal	Pin
B1	GND	-----	GND	D1
B2	PETp11	----->	PERp11	D2
B3	PETn11	----->	PERn11	D3
B4	GND	-----	GND	D4
B5	PETp10	----->	PERp10	D5
B6	PETn10	----->	PERn10	D6
B7	GND	-----	GND	D7
B8	PETp9	----->	PERp9	D8
B9	PETn9	----->	PERn9	D9
B10	GND	-----	GND	D10
B11	PETp8	----->	PERp8	D11
B12	PETn8	----->	PERn8	D12
B13	GND	-----	GND	D13
B14	FLEXIO3_RC	<----->	FLEXIO3_NRC	D14
B15	FLEXIO4_RC	<----->	FLEXIO4_NRC	D15
B16	GND	-----	GND	D16
B17	PETp7	----->	PERp7	D17
B18	PETn7	----->	PERn7	D18
B19	GND	-----	GND	D19
B20	PETp6	----->	PERp6	D20
B21	PETn6	----->	PERn6	D21
B22	GND	-----	GND	D22
B23	PETp5	----->	PERp5	D23
B24	PETn5	----->	PERn5	D24
B25	GND	-----	GND	D25
B26	PETp4	----->	PERp4	D26
B27	PETn4	----->	PERn4	D27
B28	GND	-----	GND	D28
B29	VCC12V	Not Connected	VCC12V	B29
B30	PRPE	<----->	PRPE	B30

P1		Direction	P2	
Pin	Signal		Signal	Pin
D1	GND	-----	GND	B1
D2	PERp11	<----->	PETp11	B2
D3	PERn11	<----->	PETn11	B3
D4	GND	-----	GND	B4
D5	PERp10	<----->	PETp10	B5
D6	PERn10	<----->	PETn10	B6
D7	GND	-----	GND	B7
D8	PERp9	<----->	PETp9	B8
D9	PERn9	<----->	PETn9	B9
D10	GND	-----	GND	B10
D11	PERp8	<----->	PETp8	B11
D12	PERn8	<----->	PETn8	B12
D13	GND	-----	GND	B13
D14	FLEXIO7_RC	<----->	FLEXIO7_NRC	B14
D15	FLEXIO8_RC	<----->	FLEXIO8_NRC	B15
D16	GND	-----	GND	B16
D17	PERp7	<----->	PETp7	B17
D18	PERn7	<----->	PETn7	B18
D19	GND	-----	GND	B19
D20	PERp6	<----->	PETp6	B20
D21	PERn6	<----->	PETn6	B21
D22	GND	-----	GND	B22
D23	PERp5	<----->	PETp5	B23
D24	PERn5	<----->	PETn5	B24
D25	GND	-----	GND	B25
D26	PERp4	<----->	PETp4	B26
D27	PERn4	<----->	PETn4	B27
D28	GND	-----	GND	B28
D29	SCL	Not Connected	N/C	SCL
D30	SDA	Not Connected	N/C	SDA

Cable Drawing



Minimum Cable Bending Radius



Diameter "OD"	Min. Bend Radius "R"	Min. Bend Space "L"
12.0mm	60.0mm	115mm

Technical Specification

Description	Value
Plug Insertion Force	Max 40N
Plug Extraction Force	Min 30N
Latch Pull Strength	Min 100N
Cable Retention in Cage	Min 90N
Cable Retention in plug	Min 90N
Rated Durability Cycles	25 cycles (plug/unplug)
Flame Retardant Grade	VW-1

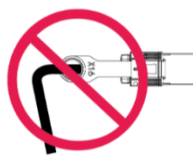
Parameter	Min	Max	Unit
Case Operating Temperature	0	70	°C
Storage temperature	-40	70	°C
Relative Humidity		80	%
Supply Voltage	3.135	3.465	V
Power Supply Current		30	mA
Total Power Consumption		0.1	W

Handling

It is important to avoid exceeding the conditions listed under Absolute Maximum Ratings. Place the product on a stable, level surface. If the product falls or drops, it may cause an injury or malfunction. Avoid bending the cable excessively during installation or use. If you bend the cable beyond its minimum bend radius, it may be damaged. Avoid twisting or pulling cable ends, which can cause a malfunction.



DO NOT
Kink
the
Cable



DO NOT
Over-Bend
the Cable
Behind the
Connector



DO NOT
Twist
the
Connector

Regulatory Marking

The cables hold the following regulatory markings:

