

General Description

PDR Direct Attach Cable (DAC) assemblies are passive twinax copper solutions available across four industry-standard form factors — SFP+ (10G), SFP28 (25G), QSFP+ (40G) and QSFP28 (100G) — for short-reach data centre, enterprise and HPC interconnects. As fully passive assemblies with no active electronic components, PDR DAC cables require zero host power, generate no heat, and offer maximum reliability for rack-to-rack and top-of-rack switching. Available in lengths from 1 m to 7 m, all variants are hot-swappable, MSA-compliant, 100% factory-tested, and RoHS/REACH certified for global deployment — providing the most cost-effective short-reach interconnect solution across all supported data rates.



Key Features

- Available in SFP+ (10G), SFP28 (25G), QSFP+ (40G) and QSFP28 (100G) form factors for all data rate needs
- Passive twinax copper design — zero power consumption, no active components, no heat generation
- Available in 1 m, 2 m, 3 m and 5 m lengths (10G SFP+ also available in 7 m)
- Hot-swappable connectors on both ends, compliant with respective MSA specifications
- Broad compatibility with switches, servers, and storage from all major vendors
- Low-profile, flexible cable construction for high-density installations and improved airflow
- 100% factory-tested for insertion loss, return loss, and signal integrity before shipment
- RoHS and REACH compliant — suitable for global deployment in regulated facilities
- Cost-effective alternative to optical transceivers for short-reach interconnects
- Operating temperature 0°C to 70°C for reliable performance in standard data centre environments

Standards Compliance

- SFP+ / SFP28 / QSFP+ / QSFP28 MSA (Multi-Source Agreement)
- IEEE 802.3ae (10G) / 802.3by (25G) / 802.3ba (40G) / 802.3bj (100G)
- 10G / 25G / 40G / 100G InfiniBand
- 10G / 25G FCoE (Fibre Channel over Ethernet)
- RoHS / REACH compliant
- TÜV / UL certified

PDR VIDEOTRONICS (INDIA) PRIVATE LIMITED

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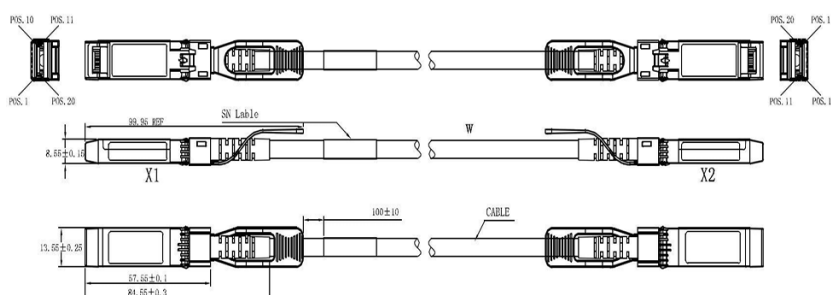
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Technical Specifications

Parameter	10G SFP+	25G SFP28	40G QSFP+	100G QSFP28
Form Factor	SFP+ to SFP+	SFP28 to SFP28	QSFP+ to QSFP+	QSFP28 to QSFP28
Nominal Data Rate	10.3125 Gbps	25.78125 Gbps	4 × 10.3125 Gbps	4 × 25.78 Gbps
Channels	1 (full-duplex)	1 (full-duplex)	4 (full-duplex)	4 (full-duplex)
Cable Type	Passive Twinax Copper	Passive Twinax Copper	Passive Twinax Copper	Passive Twinax Copper
Cable OD	3.0 – 3.5 mm	3.0 – 3.5 mm	3.5 – 4.0 mm	3.5 – 4.0 mm
Max Passive Reach	7 m	5 m	5 m	5 m
Available Lengths	1, 2, 3, 5, 7 m	1, 2, 3, 5 m	1, 2, 3, 5 m	1, 2, 3, 5 m
Power Consumption	Passive — zero	Passive — zero	Passive — zero	Passive — zero
Supply Voltage	3.3 V nominal	3.3 V nominal	3.3 V nominal	3.3 V nominal
Impedance	100 Ω differential	100 Ω differential	100 Ω differential	100 Ω differential
Insertion Loss	≤ 2.0 dB @ 5 GHz (3 m cable)	≤ 3.0 dB @ 12.5 GHz	≤ 3.5 dB @ 5 GHz	≤ 4.0 dB @ 12.5 GHz
Return Loss	≥ 10 dB @ 5 GHz	≥ 10 dB	≥ 10 dB	≥ 10 dB
ESD Protection	Yes (IEC 61340-5-1)	Yes	Yes	Yes
DDM / DOM	N/A (passive)	N/A (passive)	N/A (passive)	N/A (passive)
Case Temp (Operating)	0°C to 70°C	0°C to 70°C	0°C to 70°C	0°C to 70°C
Storage Temp	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C
Rel. Humidity	0 – 85% (storage & operating)	0 – 85%	0 – 85%	0 – 85%

Overall Dimensions

Connector mechanical drawing — all dimensions in mm. Tolerance ± 0.3 mm unless otherwise stated.



Applications

- Data centre interconnects — top-of-rack, rack-to-rack and end-of-row high-density switching at 10G, 25G, 40G and 100G
- High-performance computing (HPC) clusters, blade server backplanes, and storage area networks
- Ethernet infrastructure deployment and server-to-switch links across all supported data rates
- InfiniBand and FCoE fabric interconnects in enterprise and cloud environments
- Telecommunications equipment rooms and central office short-reach interconnects
- Field restoration and temporary high-speed links requiring cost-effective passive cabling

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Ordering Information

Standard Package Contents

Item	Quantity
Direct Attach Cable (DAC)	1
Dust Caps (per connector)	2
Product Label / Documentation	1

Ordering Codes

Order Code	Form Factor	Data Rate	Available Lengths
PDR-DAC-SFP-XXM	SFP+ to SFP+	10G	1, 2, 3, 5, 7 m
PDR-DAC-SFP28-XXM	SFP28 to SFP28	25G	1, 2, 3, 5 m
PDR-DAC-QSFP-XXM	QSFP+ to QSFP+	40G	1, 2, 3, 5 m
PDR-DAC-QSFP28-XXM	QSFP28 to QSFP28	100G	1, 2, 3, 5 m

* Replace XX with the required cable length in metres (e.g. PDR-DAC-QSFP28-3M = 100G, 3 m cable).

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