TECHNOLOGIE OPTIC.CA INC.

100 Gigabit QSFP28 to 4×25G SFP28 Passive Breakout Copper Cable

ACC4V761-11100S · 100GBASE-CR4 → 4×25GBASE-CR · 1m · QSFP28-to-4×SFP28 · 30 AWG twinax · Optic.ca Q4X25-CU1M-NT-OC

The Optic.ca ACC4V761-11100S is a 100 Gigabit QSFP28-to-4×25G SFP28 passive breakout direct-attach copper (DAC) cable assembly. A single QSFP28 host interface fans out to four independent SFP28 ends, each carrying a 25.78 Gb/s lane, over a 1-metre, 30 AWG twinaxial cable with 100 Ω differential impedance, built to align with the applicable QSFP28 and SFP28 SFF multi-source agreements and IEEE 802.3bj. As a passive assembly, it contains no active signal-conditioning or optical components, providing the lowest-latency, lowest-power method of breaking a 100G QSFP28 port into four 25G SFP28 links. Each assembly is individually serialized, factory-coded for host-platform compatibility, and validated prior to shipment, and is backed by the Optic.ca lifetime warranty.

Key Features

- QSFP28 host interface with four independent SFP28 breakout ends
- Supports four 25 Gb/s lanes for 100G breakout applications (103.1 Gb/s aggregate)
- Built to align with the QSFP28 (SFF-8665/8679) and SFP28 (SFF-8402/8432) MSAs; supports IEEE 802.3bj
- 1 m, 30 AWG twinaxial copper cable; 100 Ω differential impedance
- AC-coupled passive construction — no active or optical components in the signal path
- All-metal connector housings for superior EMI shielding
- Factory-coded EEPROM for host-platform compatibility
- Commercial operating temperature range: 0 °C to +70 °C
- TAA compliant (Country of Origin: Taiwan); RoHS and REACH compliant
- Certified compatible with NETGEAR® switching platforms

Target Applications

- 100G-to-4×25G top-of-rack breakout
- Switch-to-server fan-out aggregation
- High-density data-center fabrics
- InfiniBand EDR clusters

Ordering Information

Part Number	Description
ACC4V761-11100S	100G QSFP28 to 4×25G SFP28 passive breakout DAC, 1 m, 30 AWG, 100 Ω twinax; NETGEAR® Certified Compatible

Standards Compliance

The ACC4V761-11100S is designed and manufactured to comply with the applicable standards listed below. These statements indicate conformance to the referenced specifications; they do not constitute third-party certification, agency listing, registration, or regulatory approval unless explicitly stated otherwise.

Standard / Program	Detail
Interface & MSA	
QSFP28 SFF-8665	QSFP28 host form factor and interface
QSFP28 SFF-8679	QSFP28 hardware and electrical specification
SFP28 SFF-8402	SFP28 breakout form factor and interface
SFP28 SFF-8432	SFP28 mechanical and connector specification
IEEE 802.3bj	100GBASE-CR4 copper PMD (4×25G breakout)
High-speed electrical	AC-coupled, 100 Ω differential signal paths
Environmental & Trade	
EU RoHS (2011/65/EU, incl. 2015/863)	Compliant
REACH (EC 1907/2006)	Compliant
Trade Agreements Act (TAA)	Compliant — Country of Origin: Taiwan

Note: EMC and product safety for a cable assembly are determined at the host-equipment level. The assembly is designed to conform to the listed limits and requirements when installed in compliant host equipment.

NETGEAR® Certified Compatible — validated for interoperability with NETGEAR switching platforms. NETGEAR® is a registered trademark of NETGEAR, Inc. This Technologie Optic.ca Inc. product is certified compatible under NETGEAR's certification program; it is not a NETGEAR-branded product.

General Specifications

Parameter	Value
Configuration	QSFP28 host → 4 × SFP28 breakout
Number of lanes	4 (Tx and Rx)
Channel data rate	25.78125 Gb/s per lane (103.1 Gb/s aggregate)
Operating case temperature	0 °C to +70 °C
Storage temperature	−40 °C to +85 °C
Supply voltage (management interface)	3.3 V nominal
Host electrical interface	QSFP28 38-pin edge connector; 4 × SFP28 20-pin edge connectors
Management interface	2-wire serial (I²C)

High-Speed Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Units
Differential impedance	Z	90	100	110	Ω

Cable Construction

Parameter	Value
Cable type	Passive twinaxial copper
Conductor gauge	30 AWG
Differential impedance	100 Ω nominal (90–110 Ω)
Cable length	1 m
Connectors	QSFP28 (host) to 4 × SFP28 (breakout)

Parameter	Value
Signal coupling	AC-coupled
Shielding	All-metal connector housings for EMI suppression
Insertion loss	N/A

Pin Assignment — QSFP28 Host 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	+3.3 V receiver power supply
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	+3.3 V transmitter power supply
30	Vcc1	+3.3 V power supply
31	LPMode	Low power mode
32	GND	Ground
33	Tx3p	Transmitter non-inverted data input

PIN	Symbol	Description
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 Assignment — SFP28 Breakout End

PIN	Symbol	Description
1	VeeT	Transmitter ground
2	TX_Fault	Module transmitter fault
3	TX_Disable	Transmitter disable
4	SDA	2-wire serial interface data line
5	SCL	2-wire serial interface clock
6	MOD_ABS	Module absent; grounded within the module
7	RS0	No connection required
8	RX_LOS	Receiver loss-of-signal; logic 0 = normal operation
9	RS1	No connection required
10	VeeR	Receiver ground
11	VeeR	Receiver ground
12	RD−	Receiver inverted data output (AC-coupled)
13	RD+	Receiver non-inverted data output (AC-coupled)
14	VeeR	Receiver ground
15	VccR	Receiver 3.3 V supply
16	VccT	Transmitter 3.3 V supply
17	VeeT	Transmitter ground
18	TD+	Transmitter non-inverted data input (AC-coupled)
19	TD−	Transmitter inverted data input (AC-coupled)
20	VeeT	Transmitter ground

Handling

- Hold the connector by its sides when inserting it into the switch port.
- Do not handle the assembly by the cable.
- Do not over-bend the cable behind the connector.
- Do not twist or kink the cable.
- Do not flex the cable up and down behind the connector.