

Intel® Ethernet SFP+ Twinaxial Cables

SFP+ Direct Attach cables for the Intel® Ethernet Converged Network Adapter X520 Family



Features

- 1 m (3.3 ft.), 3 m (9.8 ft.), and 5 m (16.4 ft.) SFP+ 10 GbE direct attach passive copper cables
- SFP+ Direct Attach cables offer a highly cost-effective way to connect within racks and across adjacent racks
- Fully compatible with the Intel® Ethernet Converged Network Adapter X520 Family
- Zinc die-cast SFF-8431 SFP+ connectors
- Low cross-talk and pair-to-pair skew
- Fully compliant to the latest SFP Plus MSA (multi-source agreement)
- Data rates backward compatible to 1 Gbps
- Reduced power budget and lower port cost compared to optical solutions
- Conforms to environmental standards as described in the *Product Environmental Content Report*¹
- One year warranty

The Intel® Ethernet Converged Network Adapter X520 family with SFP+ connectivity delivers the most flexible and scalable Ethernet adapters for today's demanding data center environments. The escalating deployments of multi-core processor-based servers and demanding applications such as server virtualization, High Performance Computing (HPC), unified storage deployments, and video-on-demand are driving the need for 10 Gigabit connections. Customers require flexible and scalable I/O solutions to meet the rigorous requirements of these deployments.

Powered by Intel's third-generation 10 GbE network controller, the Intel® Ethernet 82599 10 Gigabit Ethernet Controller, the X520 server adapter family addresses the demanding needs of the next-generation data center by providing unmatched features for virtualization, flexibility for LAN and SAN networking, and proven, reliable performance.

Intel® Ethernet SFP+ Twinaxial Cables Product Codes

XDACBL1M (1 meter)

XDACBL3M (3 meter)

XDACBL5M (5 meter)

Compatible Intel® Server Adapters Product Codes

E10G42BTDA—Intel® Converged Network Adapter X520-DA2

E10G41BFSR—Intel® Converged Network Adapter X520-SR1*

E10G42BFSR—Intel® Converged Network Adapter X520-SR2*

E10G41BFLR—Intel® Converged Network Adapter X520-LR1*

* Ships with pluggable optic installed

To ensure maximum flexibility, Intel uniquely supports the ability to mix any combination of SFP+ optical modules, direct attach copper cables, or 1000BASE-T SFP modules on the Intel Ethernet X520 Adapters. For instance, customers can remove the optical modules that come installed on the adapter and replace them with an Intel® Ethernet SFP+ Optic, an Intel® Ethernet SFP+ Twinaxial Cable, or a 1000BASE-T SFP module. Intel® Ethernet SFP+ Twinaxial Cables are ideal for short distances and offer a highly cost-effective way to connect within racks and across adjacent racks. The cables are available in three lengths; 1, 3, and 5 meters, enabling customers to create the configuration that best meets the needs of their data center environment.

Note: Other manufacturers may require specific cables for equipment compatibility. Please check with the manufacturer of your device regarding cable requirements for that device.

Intel® Ethernet SFP+ Optics Product Codes

E10GSFSPR—Intel® Ethernet SFP+ SR Optic

E10GSFPLR—Intel® Ethernet SFP+ LR Optic

Electrical/Cable Characteristics					
Parameter	Symbol	Min	Typ	Max	Unit
Storage Temperature Range	T_S	-40	--	85	°C
Operating Temperature Range	T_A	-40		85	°C
Operating Humidity Range	RH	0		85	%
Supply Voltage	Vcc	2.95	3.3	3.6	V
Supply Current (per cable end)	Icc	--	100	--	μA
Power Consumption		--	0.4	--	mW
Data Rate	DR	--	--	11.3	Gbps
Transmitter					
Differential Input Voltage Swing	V_{DIFF}	300	--		mVp-p
Differential Input Return Loss	SDD11		-10		dB @ 5 GHz
Receiver					
Differential Output Return Loss	SDD22		-10		dB @ 5 GHz
Voltage Modulate Amplitude Loss	L			4.5	dBe
VMA Loss to Crosstalk Ratio	VCR	32.5			dB
Waveform Dispersion Penalty	dWDP			6.8	dBe
Cable					
Cable Differential Impedance			100	105	Ω
Cable Outer Diameter			0.175 ^{30AWG} 0.235 ^{24AWG}		Inches
Cable Bend Radius (Measured at Diecast Endface)			0.7 ^{30AWG} 0.95 ^{24AWG}		Inches
Cable Flex Cycle			200		cycles
Cable Weight			30 ^{30AWG} 50 ^{24AWG}		kg/km

Length and Part Number		
SKU	Length	AWG
XDACBL1M	1000 mm ± 25 mm	30
XDACBL3M	3000 mm ± 75 mm	30
XDACBL5M	5000 ± 125 mm	24

Difference Waveform Dispersion Penalty			
Cable	WDPI	WDPO	dWDP
1 m, 30AWG	2.0965	4.2087	2.1122
3 m, 30AWG	2.0965	6.6828	4.5863
5 m, 24AWG	2.0965	6.2477	4.1512

Note: dWDP=6.8 (max), SFF-8431

Voltage Modulation Amplitude to Crosstalk Ratio (VCR)					
Cable	B' VMA (mV)	C' VMA (mV)	VMA LOSS (dB)	NEXT (rms) (mV)	VCR (dB)
1 m, 30AWG	700	615	1.12	1.73	35.8
3 m, 30AWG	700	503	2.86	1.79	34.4
5 m, 24AWG	700	505	2.84	1.87	34.0

Notes: VMA LOSS (dB)=4.5 (max), SFF-843. VCR=32.5 dB (min), SFF-8431

Customer Support

Intel® Customer Support Services offers a broad selection of programs including phone support and warranty service. For more information, contact us at:

support.intel.com/support/go/network/

(Service and availability varies by country.)

For Product Information

To speak to a customer service representative regarding Intel products, call 1-800-538-3373 (U.S. and Canada) or visit:

support.intel.com/support/go/network/contact.htm

For more information on the Intel® Ethernet SFP+ Twinaxial Cables visit: www.intel.com/go/ethernet

¹ Product Environmental Content Reports are found on Intel Web site at <http://qdms.intel.com>.

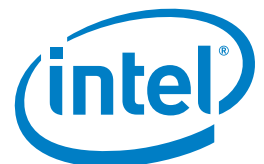
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JONHON

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