



smartoptics

Expanding your network horizons

QSFP28 update

Complete QSFP28 transceiver portfolio



SO-QSFP28-SR4

QSFP28, 100GBase, 850nm,
MM, DDM, 100m@OM4, MPO

New



SO-QSFP28-SWDM4

QSFP28, 100GBase, SWDM4,
MM, 100m@OM4, MPO



SO-QSFP28-LR4

QSFP28, 100GBase, 1310nm,
SM, DDM, 10km, LC

New



SO-QSFP28-LR4-10L

QSFP28, 100GBase, 1310nm, SM,
DDM, 10km, LC, DML Type

New



SO-QSFP28-LR4-2L

QSFP28, 100GBase, 1310nm, SM,
DDM, 2km, LC, DML Type



SO-QSFP28-CWDM4

QSFP28, 100GBase, CWDM4,
SM, 8dB, 2km, LC

New



SO-QSFP28-ER4

QSFP28, 100GBase, 1310nm,
SM, DDM, 25km, LC



SO-QSFP28-PSM4

QSFP28, 100GBase, 1310nm,
SM, DDM, 2km, MPO



Complete QSFP28 transceiver portfolio

Smartoptics

Multimode transceivers

SO-QSFP28-SR4	QSFP28, 100GBase, 850nm, MM, DDM, 100m@OM4, MPO
SO-QSFP28-SWDM4	Coming soon

Singlemode transceivers

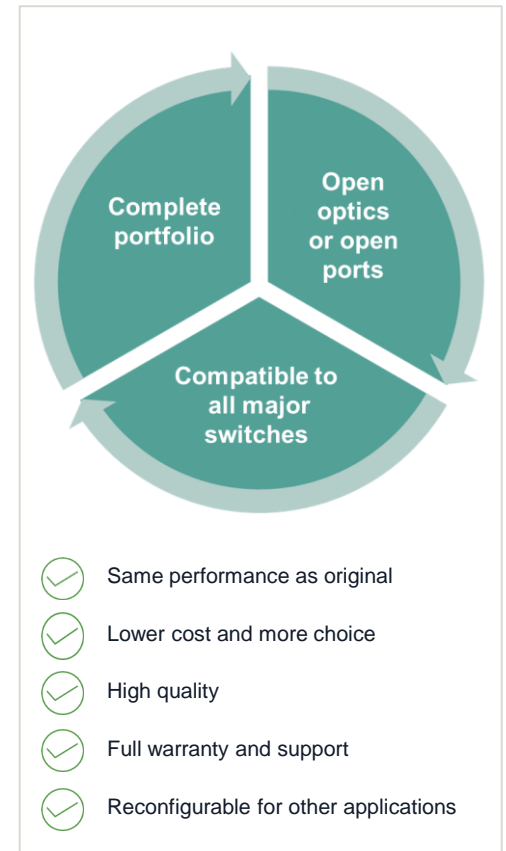
SO-QSFP28-LR4	QSFP28, 100GBase, 1310nm, SM, DDM, 10km, LC
SO-QSFP28-LR4-10L	QSFP28, 100GBase, 1310nm, SM, DDM, 10km, LC, DML Type
SO-QSFP28-LR4-2L	QSFP28, 100GBase, 1310nm, SM, DDM, 2km, LC, DML Type
SO-QSFP28-CWDM4	QSFP28, 100GBase, CWDM4, SM, DDM, 2km, LC
SO-QSFP28-LR4-PSM4	QSFP28, 100GBase, 1310nm, SM, DDM, 2km, MPO
SO-QSFP28-ER4	QSFP28, 100GBase, 1310nm, SM, DDM, 25km, LC

AOC Cable assemblies

SO-QSFP28-AOCxm	QSFP28, 100GBase, AOC, xm
SO-QSFP28-4XSFP28-AOCxm	QSFP28 to 4xSFP28, 100G, AOC, xm

DAC Cable assemblies

SO-QSFP28-ACUxm-2C	QSFP28, 100GBase, DAC, AWGxx, xm, active (2CDRs)
SO-QSFP28-PCUxm	QSFP28, 100GBase, DAC, AWGxx, xm, passive
SO-QSFP28-4SFP28-ACUxm	QSFP28 to SFP28, 100G, DAC, AWGxx, xm, active
SO-QSFP28-4SFP28-PCUxm	QSFP28 to SFP28, 100G, DAC, AWGxx, xm, passive



CFP / CFP2 to QSFP28

Converter solutions

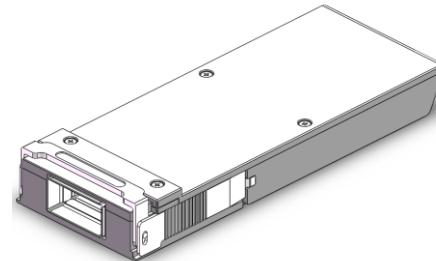
SO-CFP-QSFP28

CFP to QSFP28 converter
QSFP28 transceiver and converter instead of CFP
Full QSFP28 portfolio can be used
Lower cost and transceivers can be reused if CFP blades replaced



SO-CFP2-QSFP28

CFP2 to QSFP28 converter
QSFP transceiver can be used instead of CFP2





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Smartboard

User friendly transceiver verification tool

A convenient small and robust handheld module, ideal for SFP, SFP+, XFP and QSFP transceiver verification.

This simple USB-only powered solution, makes it the perfect tool for field, service and test engineers. Applications include part number and serial number (PID) readouts and tuning Tunable T-XFP & T-SFP+ transceivers.

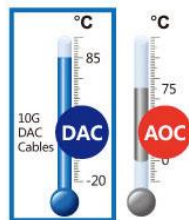
Application guide

DAC Passive	DAC Active	AOC MM	MM Transceivers	LC Transceivers
Cable assembly no optical transceiver	Cable assembly	Cable assembly optical transceiver	Discrete transceivers & cables MPO and ribbon cables Structured cabling	Discrete transceivers & cables LC and SM fiber Structured LC cabling & connectors
Lowest cost Lowest distance inside rack	Low cost Better performance (CDR) inside rack and rack to rack	Higher cost than DAC Longer distance than DAC Rack to rack	Rack to rack	Most expensive transceivers Best performance DC to DC
0-3m	0-15m	0-70m	0-100m	0-10km

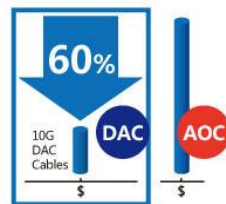
DAC



Lower Power
Consumption

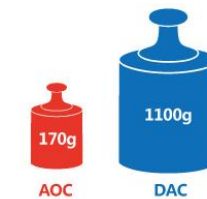


Wider Temperature
Range

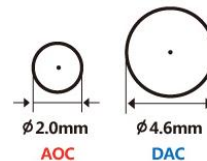


Lower Cost
DAC cables have less components,
So the cost is lower.

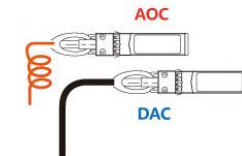
AOC



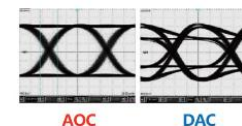
Lighter
Weight



Smaller
Size

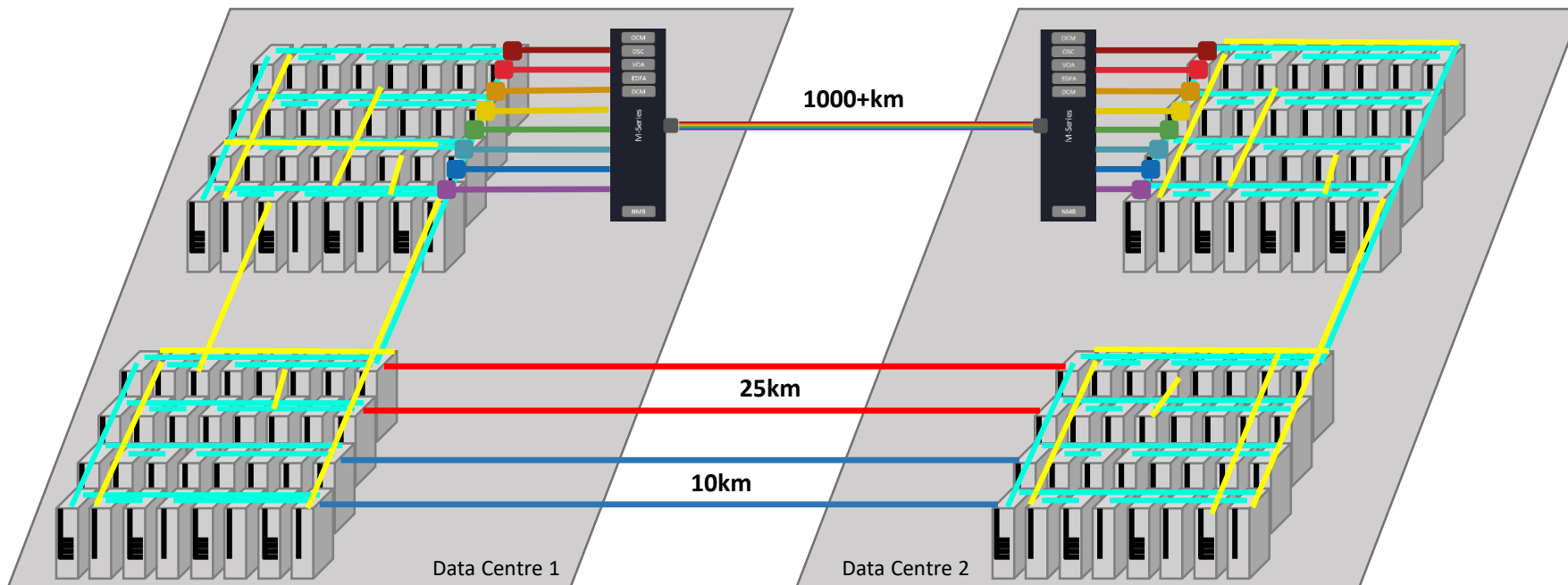


Smaller
Bend
Radius



Better
Performance





Intra rack



DAC - Direct Attached Copper

Low cost cable assembly server to top of rack
Removes dirty connector problems
0-3m in the rack



AOC - Active Optical Cable

Cable assembly
Same performance as using MM transceiver
0-100m



Multimode transceivers

Lowest cost transceivers
MPO connectors, special Ribbon cables
0-100m

Inter rack



AOC - Active Optical Cable

Cable assembly
Same as using MM trx
0-100m



Multimode transceivers

Lowest cost transceivers
MPO connectors, special Ribbon cables
SR4 100m, PSM4 2km



Singlemode transceivers

Structured cabling
LR4 2&10km, CWDM4 2km

Data Center Interconnect (DCI)



Single channel

Single service per fiber
LR4, 2&10km



Single channel

Single service per fiber
ER4, 25km



DWDM Open Line System

1U DWDM Mux/Demux
monitoring and distance extension
Any SAN and WAN traffic
Zero touch provisioning



Want to know more?

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Smartoptics offers optical transmission solutions making networks more powerful. Expanding bandwidth without the upfront investment or hassle of traditional WDM. Our products allow corporate data centers, governments, hosting solution providers and ISPs to build simple, straightforward and cost effective solutions to fulfill their ongoing and future network capacity needs. Headquartered in Oslo, Norway, Smartoptics is an international provider with thousands of installations all around the world. Our award winning approach has helped companies from every industry sector stay ahead of expanding network demands.