

Overview

Arista optical transceivers and cables offer deployment flexibility and cost optimized network connectivity. Arista transceivers and cables are all hot-swappable pluggable devices, compliant with industry standards, and certified on all Arista platforms unless otherwise stated. This document provides a technical reference guide on compatibility, interoperability, software support, and physical attributes of Arista transceivers and cables.

Arista EOS Support

All Arista products run on Arista EOS software. Tables 1-9 below provide the minimum version of EOS that is required for each of the transceivers and cables. Note that Arista switches have their own minimum EOS release requirement and Tables 1-8 should be read in conjunction with the EOS release notes.

Table 1: Minimum EOS Version for 400G OSFP Transceivers and Cables

Part Number	Description	Minimum EOS Ver#
CAB-O-O-400G-xM	400GBASE-CR8 OSFP to OSFP Twinax Copper Cable (1 to 3 meters)	4.23.0
CAB-O-2Q-400G-xM	400GBASE-CR8 OSFP to 2 x 200GBASE-CR4 QSFP Twinax Copper Cable (1 to 3 meters)	4.23.0
CAB-O-2Q-200G-xM	200GBASE-CR8 OSFP to 2 x 100GBASE-CR4 QSFP Twinax Copper Cable (1 to 3 meters)	4.23.0
CAB-O-4Q-400G-xM	400GBASE-CR8 OSFP to 4 x 100GBASE-CR2 QSFP Twinax Copper Cable (1 to 3 meters)	4.23.0
CAB-O-4Q-200G-xM	200GBASE-CR8 OSFP to 4 x 50GBASE-CR2 QSFP Twinax Copper Cable (1 to 3 meters)	4.23.0
CAB-O-8S-200G-xM	200GBASE-CR8 OSFP to 8 x 25GBASE-CR SFP Twinax Copper Cable (1 to 3 meters)	4.23.0
H-O400-4Q100-xM*	400GBASE-CR8 OSFP to 4x 100GBASE-CR4 QSFP Twinax Active Copper Cable (1 to 5 meters)	4.25.2
AOC-O-O-400G-xM	400GbE OSFP to OSFP Active Optical Cable (1 to 30 meters)	4.23.0
OSFP-400G-SR8	400GBASE-SR8 OSFP Transceiver, up to 100m over parallel OM4 MMF	4.23.0
OSFP-400G-DR4	400GBASE-DR4 OSFP Transceiver, up to 500m over parallel SMF	4.23.2
OSFP-400G-XDR4	4x 100GBASE-FR (or 400G-XDR4) OSFP Transceiver, up to 2km over parallel SMF	4.24.0
OSFP-400G-XDR4-S	4x 100GBASE-FR (or 400G-XDR4) OSFP Transceiver with SN optical connectors, up to 2km over parallel SMF	4.24.0
OSFP-400G-PLR4	4x 100GBASE-LR (or 400G-PLR4) OSFP transceiver, up to 10km over parallel SMF	4.25.2
OSFP-400G-PLR4-S	4x 100GBASE-LR (or 400G-PLR4) OSFP transceiver with SN optical connectors, up to 10km over parallel SMF	4.25.2
OSFP-400G-FR4	400GBASE-FR4 OSFP Transceiver, up to 2km over duplex SMF	4.24.0
OSFP-400G-LR4	400GBASE-LR4 OSFP Transceiver, up to 10km over duplex SMF	4.25.2
OSFP-400G-2FR4	400GBASE-2FR4 OSFP Transceiver, up to 2km over 2 pairs of duplex SMF	4.23.0
OSFP-400G-ZR**	400GBASE-ZR OSFP Digital Coherent Tunable Transceiver, up to 120km over duplex SMF with amplification	4.26.0
OSFP-AMP-ZR	OSFP Optical amplifier line system for coherent ZR	4.26.0

* The Arista 400G OSFP to 4x QSFP100 active copper cables allow a 400G OSFP port (with 8x 50G PAM-4 electrical lanes) to connect to 4x QSFP100 ports (with 4x 25G NRZ electrical lanes per QSFP). A gearbox inside the QSFP end of the cable implements the 2x 50G PAM-4 to 4x 25G NRZ conversion.

** Supported on specific platforms defined in Table 3

Table 2: Minimum EOS Version for 400G QSFP-DD Optics and Cables

Part Number	Description	Minimum EOS Ver#
CAB-D-D-400G-xM	400GBASE-CR8 QSFP-DD to QSFP-DD Twinax Copper Cable (1 to 2.5 meters)	4.23.0
CAB-D-2Q-400G-xM	400GBASE-CR8 QSFP-DD to 2 x 200GBASE-CR4 QSFP Twinax Copper Cable (1 to 3 meters)	4.23.0
CAB-D-2Q-200G-xM	200GBASE-CR8 QSFP-DD to 2 x 100GBASE-CR4 QSFP Twinax Copper Cable (1 to 2.5 meters)	4.23.0
CAB-D-4Q-400G-xM	400GBASE-CR8 QSFP-DD to 4 x 100GBASE-CR2 QSFP Twinax Copper Cable (1 to 3 meters)	4.23.0
CAB-D-4Q-200G-xM	200GBASE-CR8 QSFP-DD to 4 x 50GBASE-CR2 QSFP Twinax Copper Cable (1 to 2.5 meters)	4.23.0
CAB-D-8S-200G-xM	200GBASE-CR8 QSFP-DD to 8 x 25GBASE-CR SFP Twinax Copper Cable (1 to 2.5 meters)	4.23.0
H-D400-4Q100-xM*	400GBASE-CR8 QSFP-DD to 4x 100GBASE-CR4 QSFP Twinax Active Copper Cable (1 to 5 meters)	4.25.2
AOC-O-O-400G-xM	400GbE OSFP to OSFP Active Optical Cable (1 to 30 meters)	4.23.0
QDD-400G-SR8	400GBASE-SR8 QSFP-DD Transceiver, up to 100m over parallel OM4 MMF	4.24.0
QDD-400G-DR4	400GBASE-DR4 QSFP-DD Transceiver, up to 500m over parallel SMF	4.24.0
QDD-400G-XDR4	4x 100GBASE-LR (or 400G-XDR4) QSFP-DD transceiver, up to 3km over parallel SMF	4.24.0
QDD-400G-XDR4-S	4x 100GBASE-LR (or 400G-XDR4) QSFP-DD transceiver with SN optical connectors, up to 3km over parallel SMF	4.24.0
QDD-400G-PLR4	4x 100GBASE-LR (or 400G-PLR4) QSFP-DD transceiver, up to 10km over parallel SMF	4.25.2
QDD-400G-PLR4-S	4x 100GBASE-LR (or 400G-PLR4) QSFP-DD transceiver with SN optical connectors, up to 10km over parallel SMF	4.25.2
QDD-400G-FR4	400GBASE-FR4 QSFP-DD Transceiver, up to 2km over duplex SMF	4.24.0
QDD-400G-LR4	400GBASE-LR4 QSFP-DD Transceiver, up to 10km over duplex SMF	4.25.2
QDD-400G-ZR **	400GBASE-ZR QSFP-DD Digital Coherent Tunable Transceiver, up to 120km over duplex SMF with amplification	4.26.0

* The Arista 400G QSFP-DD to 4x QSFP100 active copper cables allow a 400G OSFP port (with 8x 50G PAM-4 electrical lanes) to connect to 4x QSFP100 ports (with 4x 25G NRZ electrical lanes per QSFP). A gearbox inside the QSFP end of the cable implements the 2x 50G PAM-4 to 4x 25G NRZ conversion.

** Supported on specific platforms defined in Table 3

Table 3: Platform Support for 400G-ZR Transceiver Modules

Platform Family	Optical Transceiver SKU	Platform SKU	Comments
7800R3	OSFP-400G-ZR	7800R3-36P-LC	Top row (ports 1, 3, 5, ..., 35)
	QDD-400G-ZR	7800R3(K)-36D(M)-LC	All 36 ports
7500R3	OSFP-400G-ZR	7500R3-24P-LC	All 24 ports, 35C max ambient temperature
7280R3	OSFP-400G-ZR	7280PR3-24	Top row (ports 1, 3, 5, ..., 23), if bottom row (ports 2, 4, 6, ..., 24) populated with modules <= 12W power
		7280R3(M)(K)-32P4(S)	All 4x 400G ports, front to back (-F) airflow only
	QDD-400G-ZR	7280DR3-24	Top row (ports 1, 3, 5, ..., 23), if bottom row (ports 2, 4, 6, ..., 24) populated with modules <= 12W power
		7280R3(M)(K)-32D4(S)	All 4x 400G ports, front to back (-F) airflow only
		7280CR3(K)-36S	2x 400G ports, 35C max ambient temperature
7060X4	OSFP-400G-ZR	7060PX4-32	Top row (Ports 1, 3, 5, ..., 31), 35C max temp
	QDD-400G-ZR	7060DX4-32	
7368	OSFP-400G-ZR	7368-4P	All 4x 400G ports, front to back (-F) airflow only
	QDD-400G-ZR	7368-4D	

Table 4: Minimum EOS Version for 200G QSFP Transceivers and Cables

Part Number	Description	Minimum EOS Ver#
C-Q200-Q200-yM	200GBASE-CR4 QSFP to QSFP Twinax Copper Cable (y = 1 to 3 meters)	4.26.1
C-Q200-2Q100-xM	200GBASE-CR4 QSFP to 2x 100GBASE-CR2 QSFP Twinax Copper Cable (y = 1 to 3 meters)	4.26.1
QSFP-200G-FR4	200GBASE-FR4 QSFP Transceiver, 2km over duplex single-mode fiber, 200G/100G dual rate	4.26.1

Table 5: Minimum EOS Version for 100G QSFP Transceivers and Cables

Part Number	Description	Minimum EOS Ver#
CAB-Q-Q-100G-yM	100GBASE-CR4 QSFP to QSFP Twinax Copper Cable (y = 1 to 5 meters)	4.15.2
CAB-Q-4S-100G-yM	100GBASE-CR4 QSFP to 4 x 25GBASE-CR SFP Twinax Copper Cable (y = 1 to 5 meters)	4.18.0
CAB-Q-2Q-100G-yM	100GBASE-CR4 QSFP to 2 x 50GBASE-CR2 QSFP Twinax Copper Cable (y = 1 to 5 meters)	4.22.1
AOC-Q-Q-100G-yM	QSFP to QSFP 100GbE Active Optical Cable (y = 3 to 30 meters)	4.15.2
QSFP-100G-SR4	100GBASE-SR4 QSFP transceiver, up to 70m over parallel OM3 or 100m over OM4 MMF	4.15.2
QSFP-100G-XSR4	100GBASE-XSR4 QSFP transceiver, up to 150m over parallel OM3 or 300m over OM4 MMF	4.21.0
QSFP-100G-SWDM4	100GBASE-SWDM4 QSFP transceiver, up to 70m over OM3 or 100m over OM4 duplex MMF	4.20.1
QSFP-100G-SRBD	100GBASE-BIDI QSFP transceiver, up to 70m/100m over OM3/OM4 duplex MMF	4.20.1
QSFP-100G-PSM4	100GBASE-PSM4 QSFP Optics Module, up to 500m over parallel SMF	4.15.3
QSFP-100G-CWDM4	100GBASE-CWDM4 QSFP Optics Module, up to 2km over duplex SMF	4.15.5
QSFP-100G-XCWDM4	100GBASE-XCWDM4 QSFP Optics Module, up to 10km over duplex SMF	4.24.2
QSFP-100G-LRL4	100GBASE-LRL4 QSFP Optics Module, up to 2km over duplex SMF	4.15.2
QSFP-100G-DR	100GBASE-DR QSFP Optics Module, up to 500m over duplex SMF	4.21.3
QSFP-100G-FR	100GBASE-FR QSFP Optics Module, up to 2km over duplex SMF	4.22.1
QSFP-100G-LR	100GBASE-LR QSFP Optics Module, up to 10km over duplex SMF	4.23.1
QSFP-100G-LR4	100GBASE-LR4 QSFP Optics Module, up to 10km over duplex SMF	4.15.2
QSFP-100G-ERL4*	100GBASE-ERL4 QSFP Optics Module, up to 40km over duplex SMF	4.20.1
QSFP-100G-ZR4*	100GBASE-ZR4 QSFP Optics Module, up to 80km over duplex SMF	4.26.2

* Proper optical attenuation is required for shorter links to protect the receiver from permanent damage

Table 5.1: Platform Support for QSFP-100G-ZR4 Transceiver Modules

Platform Family	Platform SKU	Supported Ports & Comments
7020R	7020SR-32C2	Both 100G QSFP ports, front to rear (-F) airflow only
7280R3	7280CR3(M)(K)-32D4(S) and 7280CR3(M)(K)-32P4(S)	Ports 15 - 18, front to rear (-F) airflow only at a max ambient temperature of 35C
	7280SR3(K)-48YC8	All 8 100G QSFP ports, front to rear (-F) airflow only at a max ambient temperature of 35C
	7280CR3-36S	All 100G QSFP ports, front to rear (-F) airflow only
7500R3	7500R3-36CQ	All 100G QSFP ports when using R3 Fabric cards

Table 6: Minimum EOS Version for 40G QSFP+ Transceivers and Cables

Part Number	Description	Minimum EOS Ver#
CAB-Q-S-yM	4 x 10GbE QSFP+ to 4 x SFP+ Twinax Copper Cable (y = 0.5 to 5 meter)	All supported EOS releases
CAB-Q-Q-yM	40GBASE-CR4 QSFP+ to QSFP+ Twinax Copper Cable (y = 0.5 to 5 meters)	All supported EOS releases
AOC-Q-Q-40G-yM	QSFP+ to QSFP+ 40GbE Active Optical Cable (y = 3 to 100 meters)	4.13.0
QSFP-40G-SR4	40GBASE-SR4 QSFP+ Optic, up to 100m over OM3 MMF or 150m over OM4 MMF	All supported EOS releases
QSFP-40G-XSR4	40GBASE-XSR4 QSFP+ Optic, up to 300m over OM3 MMF or 400m over OM4 MMF	4.11.1
QSFP-40G-SRBD	40GBASE-BIDI Bidirectional QSFP+ Optic, up to 100m/150m over duplex OM3/OM4 MMF	4.15.2
QSFP-40G-SRBD-R	40GBASE-BIDI Receiver only QSFP+, up to 100m over duplex OM3 or 150m over duplex OM4 MMF	4.15.2
QSFP-40G-UNIV	40GBASE-UNIV QSFP+ Optic, up to 150m over duplex OM3/OM4 and 500m over duplex SMF	4.14.0
QSFP-40G-LRL4	40GBASE-LRL4 QSFP+ Optic, up to 1km over duplex SMF	4.13.3
QSFP-40G-LR4	40GBASE-LR4 QSFP+ Optic, up to 10km over duplex SMF	All supported EOS releases
QSFP-40G-PLRL4	40GBASE-PLRL4 QSFP+ Optic, up to 1km over parallel SMF (4x10G LR up to 1km)	4.13.0
QSFP-40G-PLR4	40GBASE-PLR4 QSFP+ Optic, up to 10km over parallel SMF (4x10G LR up to 10km)	4.13.0
QSFP-40G-ER4*	40GBASE-ER4 QSFP+ Optic, up to 40km over duplex SMF	4.14.5

* Proper optical attenuation is required for shorter links to protect the receiver from permanent damage

Table 7: Minimum EOS Version for 25G SFP Transceivers

Part Number	Description	Minimum EOS Ver#
CAB-S-S-25G-yM	25GBASE-CR SFP Cable (y = 1 to 5 meters)	4.18.0
AOC-S-S-25G-yM	SFP to SFP 25GbE Active Optical Cable (y = 3 to 30 meters)	4.18.0
SFP-25G-SR	25GBASE-SR SFP Optics Module, up to 70m over OM3 MMF or 100m over OM4 MMF	4.18.0
SFP-25G-MR-SR	Dual rate (25G/10G)BASE-SR, up to 70m/100m over OM3/OM4 MMF at 25G and 300m/400m over OM3/OM4 MMF at 10G. Optical interop with 10G-SR when operated at 10G.	4.24.2
SFP-25G-MR-XSR	Dual rate 10/25GBASE-XSR Extended Reach SFP Optics Module, up to 200m over OM3 or 300m over OM4 MMF	4.24.2
SFP-25G-LR	25GBASE-LR SFP Optics Module, up to 10km over duplex SMF	4.18.0
SFP-25G-MR-LR	Dual rate 10/25GBASE-MR-LR SFP Optics Module, up to 10km over duplex SMF	4.24.2

Table 8: Minimum EOS Version for 10G SFP+ and 1G SFP Transceivers and Cables

Part Number	Description	Minimum EOS Ver#
CAB-SFP-SFP-yM	10GBASE-CR SFP+ Cable (y = 0.5 to 5 meters)	All supported EOS releases
AOC-S-S-10G-yM	SFP+ to SFP+ 10GbE Active Optical Cable (y = 3 to 30 meters)	4.14.0
SFP-10G-T *	10GBASE-T Copper (RJ45) Transceiver, up to 30m over Cat6a cable	4.23.2
SFP-10G-SRL	10GBASE-SRL SFP+ Transceiver, up to 100m over OM3 MMF or 150m over OM4 MMF	All supported EOS releases
SFP-10G-SR	10GBASE-SR SFP+ Transceiver, up to 300m over OM3 MMF or 400m over OM4 MMF	All supported EOS releases
SFP-10G-LRL	10GBASE-LRL SFP+ Transceiver, up to 1km over duplex SMF	All supported EOS releases
SFP-10G-LR	10GBASE-LR SFP+ Transceiver, up to 10km over duplex SMF	All supported EOS releases
SFP-10G-ELRBD-U/D	10GBASE-ERLBD SFP+ Transceiver, uplink / downlink, up to 30km over single fiber SMF	4.21.3
SFP-10G-ERBD-U/D**	10GBASE-ERBD SFP+ Transceiver, uplink / downlink, up to 40km over single fiber SMF	4.21.3
SFP-10G-ER**	10GBASE-ER SFP+ Transceiver, up to 40km over duplex SMF	All supported EOS releases
SFP-10G-ZR**	10GBASE-ZR SFP+ Transceiver, up to 80km over duplex SMF	All supported EOS releases
SFP-10G-DZ-T**	10GBASE-DWDM Tunable SFP+ Optics Module, up to 80km over duplex SMF	4.15.2
SFP-1G-SX	1000BASE-SX SFP Transceiver	All supported EOS releases
SFP-1G-LX	1000BASE-LX SFP Transceiver	All supported EOS releases
SFP-1G-T	100/1000BASE-T SFP Copper (RJ45) Transceiver	All supported EOS releases

* SFP-10G-T supported on specific platforms listed in table 9. Additional platform support will be added over time.

** Proper optical attenuation is required for shorter links to protect the receiver from permanent damage.

Table 9: Platform Support for SFP-10G-T Transceiver

Platform Family	Platform(s)	Comments
720XP Series	720XP-24ZY4	Supported on all SFP25 ports
	720XP-24Y6	
	720XP-48Y6	
	720XP-48ZC2	
	720XP-96ZC2	
7050X Series	7050SX3-48YC8 & 7050SX3-48C8	Supported on all SFP25 ports and SFP+ ports
	7050SX3-96YC8	Supported on SFP25 ports 1-48 (top two rows), 50-106 (bottom row), with remaining SFP25 boards populated with 2W max non BASE-T modules. Supported on front-to-rear airflow (-F) models only.
7060X Series	7060SX2-48YC6	Supported on all SFP25 ports, front-to-rear airflow (-F) only
	7060CX2-32S	Supported on all SFP+ ports
7010 Series	7010TX-48	Supported on all 4 SFP25 ports
7280R Series	7280SR2A-48YC6 & 7280SR2-48YC6	Supported on all SFP25 ports
	7280SR2K-48C6	24x SFP25 ports and front-to-rear airflow (-F) only
	7280SR3-48YC8	Supported on all SFP25 ports
7300 Series	7300X3-48YC4	Supported on all SFP25 ports
7500R Series	7500R2AK-48YCQ	Supported on all SFP+ ports
	7500R3-48Y4D	All 48 SFP25 ports

Connector and Cable type

Tables 10-13 provides the physical attributes of Arista transceivers and cables for easy product identification and lists the correct cable and connector type for termination*.

Table 10: Physical attributes of 1/10/25G SFP Transceivers

Part Number	Bail Latch or Pull Tab	Termination/Connector Type	Fiber Type to be used
SFP-1G-SX	Bail Latch	Duplex LC	MMF
SFP-1G-LX	Bail Latch	Duplex LC	MMF and SMF
SFP-1G-T	Bail Latch	RJ-45	Twisted pair, Category 5
CAB-SFP-SFP-xM	Pull Tab	Pre-terminated. Assembly includes both ends of transceivers and cable fused together	
AOC-S-S-10G-xM	Pull Tab		
SFP-10G-T	Bail Latch	RJ-45	Twisted pair, Category 6a
SFP-10G-SR / SRL	Bail Latch	Duplex LC	MMF
SFP-10G-ZR / ER / LR / LRL	Bail Latch	Duplex LC	SMF
SFP-10G-ELRBD-U SFP-10G-ELRBD-D	Bail Latch	Simplex LC	SMF
SFP-10G-ERBD-U SFP-10G-ERBD-D	Bail Latch	Simplex LC	SMF
SFP-10G-DZ-T	Bail Latch	Duplex LC	SMF
CAB-S-S-25G-yM	Pull Tab	Pre-terminated. Assembly includes both ends of transceivers and cable fused together	
AOC-S-S-25G-yM	Pull Tab		
SFP-25G-SR / MR-SR / MR-XSR	Bail Latch	Duplex LC	MMF
SFP-25G-LR / MR-LR	Bail Latch	Duplex LC	SMF

Table 11: Physical attributes of 40G QSFP+ Transceivers and Cables

Part Number	Bail Latch or Pull Tab	Termination/Connector Type	Fiber Type to be used
CAB-Q-S-xM	Pull Tab	N/A	N/A
CAB-Q-Q-xM	Pull Tab	N/A	N/A
AOC-Q-Q-40G-xM	Pull Tab	N/A	N/A
QSFP-40G-SR4	Pull Tab	MPO-12	MMF
QSFP-40G-XSR4	Pull Tab	MPO-12	MMF
QSFP-40G-SRBD	Pull Tab	Duplex LC	MMF
QSFP-40G-LRL4	Pull Tab	Duplex LC	SMF
QSFP-40G-LR4	Pull Tab	Duplex LC	SMF
QSFP-40G-PLRL4	Pull Tab	MPO-12	SMF
QSFP-40G-PLR4	Pull Tab	MPO-12	SMF
QSFP-40G-UNIV	Pull Tab	Duplex LC	MMF and SMF
QSFP-40G-ER4	Pull Tab	Duplex LC	SMF

*Please refer to the Arista Transceivers datasheet for additional information on reach for each fiber/cable type (<http://www.arista.com/assets/data/pdf/Datasheets/Transceiver-Data-Sheet.pdf>)

Table 12.0: Physical attributes of 100G QSFP Transceivers

Part Number	Bail Latch or Pull Tab	Termination/Connector Type	Fiber Type to be used
CAB-Q-Q-100G-yM	Pull Tab	N/A	N/A
AOC-Q-Q-100G-xM	Pull Tab	N/A	N/A
QSFP-100G-SR4	Pull Tab	MPO-12	MMF
QSFP-100G-XSR4	Pull Tab	MPO-12	MMF
QSFP-100G-SWDM4	Pull Tab	Duplex LC	MMF
QSFP-100G-SRBD	Pull Tab	Duplex LC	MMF
QSFP-100G-PSM4	Pull Tab	MPO-12	SMF
QSFP-100G-CWDM4	Pull Tab	Duplex LC	SMF
QSFP-100G-XCWDM4	Pull Tab	Duplex LC	SMF
QSFP-100G-LRL4	Pull Tab	Duplex LC	SMF
QSFP-100G-DR	Pull Tab	Duplex LC	SMF
QSFP-100G-FR	Pull Tab	Duplex LC	SMF
QSFP-100G-LR	Pull Tab	Duplex LC	SMF
QSFP-100G-LR4	Pull Tab	Duplex LC	SMF
QSFP-100G-ERL4	Pull Tab	Duplex LC	SMF
QSFP-100G-ZR4	Pull Tab	Duplex LC	SMF
QSFP-100G-DZ2-xx	Pull Tab	Duplex LC	SMF

Table 12.1: Physical attributes of 100G QSFP Transceivers

Part Number	Bail Latch or Pull Tab	Termination/Connector Type	Fiber Type to be used
C-Q200-Q200-yM	Pull Tab	N/A	N/A
C-Q200-2Q100-xM	Pull Tab	N/A	N/A
QSFP-200G-FR4	Pull Tab	Duplex LC	SMF
QSFP-200G-SR4	Pull Tab	MPO-12 (UPC)	MMF

Table 13: Physical attributes of 400G OSFP and QSFP-DD Transceivers and Cables

Part Number	Bail Latch or Pull Tab	Termination/Connector Type	Fiber Type to be used
CAB-O-O-400G-xM	Pull Tab	N/A	N/A
CAB-O-2Q-400G-xM	Pull Tab	N/A	N/A
CAB-O-2Q-200G-xM	Pull Tab	N/A	N/A
CAB-O-4Q-400G-xM	Pull Tab	N/A	N/A
CAB-O-4Q-200G-xM	Pull Tab	N/A	N/A
CAB-O-8S-200G-xM	Pull Tab	N/A	N/A
H-O400-4Q100-xM	Pull Tab	N/A	N/A
AOC-O-O-400G-xM	Pull Tab	N/A	N/A
OSFP-400G-SR8	Pull Tab	MPO-16 (APC)	MMF
OSFP-400G-DR4	Pull Tab	MPO-12	SMF
OSFP-400G-XDR4	Pull Tab	MPO-12	SMF
OSFP-400G-XDR4-S	Pull Tab	4x duplex SN connectors (individually pluggable)	SMF
OSFP-400G-PLR4	Pull Tab	MPO-12	SMF
OSFP-400G-PLR4-S	Pull Tab	4x duplex SN connectors (individually pluggable)	SMF
OSFP-400G-FR4	Pull Tab	Duplex LC	SMF
OSFP-400G-PLR4	Pull Tab	Duplex LC	SMF
OSFP-400G-2FR4	Pull Tab	2x Duplex CS	SMF
OSFP-400G-ZR	Pull Tab	Duplex LC	SMF
OSFP-AMP-ZR	Pull Tab	Duplex LC and Duplex CS	SMF
CAB-D-D-400G-xM	Pull Tab	N/A	N/A
CAB-D-2Q-400G-xM	Pull Tab	N/A	N/A
CAB-D-2Q-200G-xM	Pull Tab	N/A	N/A
CAB-D-4Q-400G-xM	Pull Tab	N/A	N/A
CAB-D-4Q-200G-xM	Pull Tab	N/A	N/A
CAB-D-8S-200G-xM	Pull Tab	N/A	N/A
H-D400-4Q100-xM	Pull Tab	N/A	N/A
QDD-400G-SR8	Pull Tab	MPO-16 (APC)	MMF
QDD-400G-DR4	Pull Tab	MPO-12	SMF
QDD-400G-XDR4	Pull Tab	MPO-12	SMF
QDD-400G-XDR4-S	Pull Tab	4x duplex SN connectors (individually pluggable)	SMF
QDD-400G-PLR4	Pull Tab	MPO-12	SMF
QDD-400G-PLR4-S	Pull Tab	4x duplex SN connectors (individually pluggable)	SMF
QDD-400G-FR4	Pull Tab	Duplex LC	SMF
QDD-400G-LR4	Pull Tab	Duplex LC	SMF
OSFP-400G-ZR	Pull Tab	Duplex LC	SMF

Direct attach copper cables

Twinax copper Direct attach cables (also known as DACs) offer the most cost effective connectivity solution for short distance intra-rack (server to switch) and inter-rack (switch to switch across adjacent racks) links. Tables 14-15 provides a summary of Arista's DAC cables and their attributes

Table 14: Attributes of copper direct attach cables

	10G SFP+ to SFP+	25G SFP to SFP	40G QSFP+ to QSFP+	100G QSFP to QSFP
Arista Part Number	CAB-SFP-SFP-yM	CAB-S-S-25G-yM	CAB-Q-Q-yM	CAB-Q-Q-100G-yM
Cable Type	Twinax	Twinax	Twinax	Twinax
Supported Standards	10GBASE-CR	25GBASE-CR	40GBASE-CR4	100GBASE-CR4
Available lengths (meters)	0.5, 1, 1.5, 2, 2.5, 3, 5	1, 2, 3, 5	0.5, 1, 2, 3, 5	0.5, 1, 1.5, 2, 2.4, 3, 5
Cable characteristic impedance	100 Ohm Differential	100 Ohm Differential	100 Ohm Differential	100 Ohm Differential
Bend Radius	0.5 to 3 meter: 25mm 5 meter: 30mm	1, 2, 3, 5 meter: 30mm	1, 2, 3 meter: 35mm 5 meter: 50mm	1, 2, 3 meter: 45mm 5 meter: 60mm

Table 15: Attributes of copper direct attach breakout cables

	40G QSFP+ to 4x10G SFP+ break-out cable	100G QSFP to 4x25G SFP break-out cable
Arista Part Number	CAB-Q-S-yM	CAB-Q-4S-100G-yM
Cable Type	Twinax	Twinax
Supported Standards	40GBASE-CR4, 10GBASE-CR	100GBASE-CR4, 25GBASE-CR
Available lengths (meters)	0.5, 1, 2, 3, 5	1, 2, 3, 5
Cable characteristic impedance	100 Ohm Differential	100 Ohm Differential
Bend Radius	40G QSFP+ Side 0.5, 1, 2, 3 meter: 35mm 5 meter: 50mm 10G SFP+ Side 0.5, 1, 2, 3 meter: 25mm 5 meter: 30mm	100G QSFP Side 1, 2 meter: 45 mm 3, 5 meter: 60mm 25G SFP Side 1, 2, 3, 5 meter: 30mm

Digital Optical Monitoring (DOM)

Arista EOS provides enhanced monitoring capabilities for continuous performance monitoring and troubleshooting of optical transceivers. Some of the key monitor parameters are Temperature Monitor, Voltage Monitor, Transmitter and Receive power and Transmitter Bias current. Unless otherwise stated, DOM capabilities are supported on all Arista AOCs and optical transceivers. The Arista 40G AOC cables, AOC-Q-Q-40G-xM, support all regular DOM features except for Tx optical power.

Interoperability

Arista transceivers and cables are based on industry standards and/or Multi-Source Agreements (MSA) and therefore interoperable with the relevant standards and MSA transceivers. Guidance on the interoperability of the Arista transceivers is detailed in Tables 16 - 21.

Table 16: 10G/40G Transceiver interoperability for multi-mode fiber

	SFP-10G-SRL	SFP-10G-SR	SFP-25G-MR-SR @10G	SFP-25G-MR-XSR @10G	QSFP-40G-SR4	QSFP-40G-XSR4	QSFP-40G-SRBD	QSFP-40G-UNIV	
SFP-10G-SRL	100m (OM3) 150m (OM4)	100m (OM3) 150m (OM4)	100m (OM3) 150m (OM4)	100m (OM3)* 150m (OM4)*	100m (OM3) 150m (OM4)	100m (OM3)* 150m (OM4)*	N/A	N/A	
SFP-10G-SR		300m (OM3) 400m (OM4)	300m (OM3) 400m (OM4)	300m (OM3)* 400m (OM4)*	100m (OM3) 150m (OM4)	300m (OM3)* 400m (OM4)*			
SFP-25G-MR-SR @ 10G			300m (OM3) 400m (OM4)	300m (OM3) 400m (OM4)	100m (OM3) 150m (OM4)	300m (OM3) 400m (OM4)			
SFP-25G-MR-XSR @10G				300m (OM3) 400m (OM4)	100m (OM3) 150m (OM4)	300m (OM3) 400m (OM4)			
QSFP-40G-SR4					100m (OM3) 150m (OM4)	100m (OM3) 150m (OM4)			
QSFP-40G-XSR4						300m (OM3) 400m (OM4)			
QSFP-40G-SRBD							100m (OM3) 150m (OM4)		
QSFP+ UNIV	N/A								150m (OM3) 150m (OM4)

Table 17: 10G/40G Transceiver interoperability for single-mode fiber

	SFP-10G-LRL	SFP-10G-LR	SFP-25-MR-LR @10G	QSFP-40G-PLRL4	QSFP-40G-PLR4	QSFP-40G-UNIV	QSFP-40G-LRL4	QSFP-40G-LR4
SFP-10G-LRL	1km	1km	1km*	1km	1km	N/A		
SFP-10G-LR		10km	10km*	1km	10km			
SFP-25-MR-LR @10G			10km*	1km*	10km*			
QSFP-40G-PLRL4				1km	1km			
QSFP-40G-PLR4					10km			
QSFP-40G-UNIV							500m	N/A
QSFP-40G-LRL4	N/A						1km	1km
QSFP-40G-LR4								10km

* Optical attenuation may be required for short links. Refer to Optics Modules and Cables datasheet for optical specifications.

Table 18: 25G/100G Transceiver interoperability for multi-mode fiber

	SFP-25-SR	SFP-25G-MR-SR	SFP-25G-MR-XSR	QSFP-100G-SR4	QSFP-100G-XSR4	QSFP-100G-SWDM4	QSFP-100G-SRBD
SFP-25-SR	70m (OM3) 100m (OM4)	70m (OM3) 100m (OM4)	70m (OM3) 100m (OM4)	70m (OM3) 100m (OM4)	70m (OM3) 100m (OM4)	N/A	N/A
SFP-25G-MR-SR		70m (OM3) 100m (OM4)	70m (OM3) 100m (OM4)	70m (OM3) 100m (OM4)	70m (OM3) 100m (OM4)		
SFP-25G-MR-XSR			200m (OM3) 300m (OM4)	70m (OM3) 100m (OM4)	150m (OM3) 300m (OM4)		
QSFP-100G-SR4				70m (OM3) 100m (OM4)	70m (OM3) 100m (OM4)		
QSFP-100G-XSR4					150m (OM3) 300m (OM4)		
QSFP-100G-SWDM4						70m (OM3) 100m (OM4)	
QSFP-100G-SRBD							70m (OM3) 100m (OM4)

Table 19: 25G/100G Transceiver interoperability for single-mode fiber

	SFP-25G-LR	SFP-25G-MR-LR	QSFP-100G-PSM4	QSFP-100G-CWDM4	QSFP-100G-XCWDM4	QSFP-100G-DR	QSFP-100G-FR	QSFP-100G-LR	QSFP-100G-LRL4	QSFP-100G-LR4
SFP-25G-LR	10km	10km	500m					N/A		
SFP-25G-MR-LR		10km	500m					N/A		
QSFP-100G-PSM4			500m					N/A		
QSFP-100G-CWDM4				2km	2km			N/A		
QSFP-100G-XCWDM4					10km			N/A		
QSFP-100G-DR						500m	500m	500m	N/A	
QSFP-100G-FR							2km	2km	N/A	
QSFP-100G-LR								10km	N/A	
QSFP-100G-LRL4									2km	2km
QSFP-100G-LR4										10km

* Optical attenuation may be required for short links. Refer to Optics Modules and Cables datasheet for optical specifications.

Table 20: 40G/100G/400G Transceiver interoperability for multi-mode fiber

	QSFP-40G-SR4	QSFP-40G-XSR4	QSFP-100G-SR4	QSFP-100G-XSR4	OSFP & QDD 400G-SR8
QSFP-40G-SR4	100m (OM3) 150m (OM4)	100m (OM3) 150m (OM4)	N/A	N/A	70m (OM3)* 100m (OM4)*
QSFP-40G-XSR4		400m (OM4)	N/A	N/A	70m (OM3)* 100m (OM4)*
QSFP-100G-SR4			100m (OM4)	100m (OM4)	70m (OM3)* 100m (OM4)*
QSFP-100G-XSR4				300m (OM4)	70m (OM3)* 100m (OM4)*
OSFP & QDD 400G-SR8					70m (OM3)* 100m (OM4)*

Table 21: 100G/400G Transceiver interoperability for Single-mode fiber

	100G-DR	100G-FR	100G-LR	100G-CWDM4	100G-XCWDM4	400G-DR4	400G-XDR4	400G-PLR4	400G-FR4	400G-LR4	400G-2FR4
100G-DR	500m	500m	500m	N/A	N/A	500m	500m	500m	N/A	N/A	N/A
100G-FR		2km	2km	N/A	N/A	500m	2km	2km	N/A	N/A	N/A
100G-LR			10km	N/A	N/A	500m	2km	10km	N/A	N/A	N/A
100G-CWDM4				2km	2km	N/A	N/A	N/A	N/A	N/A	2km*
100G-XCWDM4					10km	N/A	N/A	N/A	N/A	N/A	2km*
400G-DR4						500m	500m	500m	N/A	N/A	N/A
400G-XDR4							2km	2km	N/A	N/A	N/A
400G-PLR4								10km	N/A	N/A	N/A
400G-FR4									2km	2km*	N/A
400G-LR4										10km	N/A
400G-2FR4											2km

* Optical attenuation may be required for short links. Refer to Optics Modules and Cables datasheet for optical specifications.

Laser Eye Safety

Arista optical transceivers are classified as CLASS 1 laser eye safety compliant per IEC 60825-1: 2007. Class 1 laser products emit invisible laser radiation; it is strongly recommended not to stare into beams or view directly with optical instruments.

Fiber Cleaning

Contaminated fiber optic connectors often lead to degraded performance and costly, but preventable, failures. Industry studies show that the number one cause of link failure is a contaminated or dirty connector or fiber. To ensure proper performance and reliability care must be taken with the installation and maintenance of removable fiber connectors. For recommendations and best practices on fiber connection cleaning, please refer to the Arista Application Note at <https://www.arista.com/assets/data/pdf/Fiber-Cleaning-App-Note.pdf>

Installing and Removing Transceivers and Cables

This section describes how to install and remove optical transceivers and cables. An ESD-preventive wrist or ankle strap should be used before installing or removing transceivers and cables to protect the device from damage.

Installation procedure for Transceivers with Bail Latch

- Step 1: Close the bail latch before inserting the transceiver
- Step 2: Line-up the transceiver with the switch port and slide it into the port
- Step 3: Firmly push the transceiver to ensure it is completely seated and secured in the receptacle on the switch
- Step 4: Connect clean fiber cables to the transceiver. Alternatively cover the optical port with clean dust covers

Removal procedure for Transceivers with Bail Latch

- Step 1: Disconnect all interface cables from the transceiver
- Step 2: Open the bail latch on the transceiver with index finger
- Step 3: Grasp the transceiver between thumb and index finger and carefully remove it from the switch port

Installation procedure for Transceivers with Pull-tab

- Step 1: Line-up the transceiver with the switch port and slide it into the port
- Step 2: Firmly push the transceiver to ensure it is completely seated and secured in the receptacle on the switch
- Step 3: Connect clean fiber cables to the transceiver. Alternatively cover the optical port with clean dust covers

Removal procedure for Transceivers with Pull-tab

- Step 1: Disconnect all interface cables from the transceiver
- Step 2: Grasp the Pull-tab with thumb and index finger and gently pull to remove the transceiver

Warranty

The Arista pluggables and cables include a one-year limited hardware warranty, which covers parts, repair, or replacement with a 10 business day turn-around after the unit is received.

Service and Support

Support services including next business day and 4-hour advance hardware replacement are available. For service depot locations, please see: <http://www.arista.com/en/service>

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