SSE-C3632S/SR-SMCPL100G Quick Connectivity Sheet

Recommended Port Speed Settings		
The 100G ports (Cx interfaces) can operate at 40G or as 2x50G or 4 x 25G or 4 x 10G ports. When each Cx port speed is changed to 25G/10G, it spawns three additional Fx ports. When a 100G port speed is changed to 50G, it spawns one additional Fx port. Use the below commands in interface configuration mode to achieve the desired speed.		
100G	Default speed is 100G with FEC and AN enabled. SMIS(config-if)#speed 100000 auto SMIS(config-if)#speed 100000 fec cl91 SMIS(config-if)#speed 100000 fec off	1. The Cx port is changed to 100G speed with AN enabled and FEC cl91 enabled. 2. The Cx port is changed to 100G speed with AN disabled and FEC cl91 enabled. 3. The Cx port is changed to 100G speed with AN disabled and FEC disabled.
50G	SMIS(config-if)#speed 50000 fec cl74 SMIS(config-if)#speed 50000 fec off The AN is not applicable on this speed.	1. The Cx port is changed to 50G speed with FEC cl74 enabled. 2. The Cx port is changed to 50G speed with FEC disabled.
40G	SMIS(config-if)#speed 40000 The AN is not applicable on this speed. FEC is not applicable on this speed.	1. The Cx port is changed to 40G speed.
25G	SMIS(config-if)#speed 25000 fec cl74 SMIS(config-if)#speed 25000 fec off The AN is not applicable on this speed.	1. The Cx port is changed to 25G speed with FEC cl74 enabled. 2. The Cx port is changed to 25G speed with FEC disabled.
10G	SMIS(config-if)#speed 10000 The AN is not applicable on this speed. FEC is not applicable on this speed.	1. The Cx port is changed to 10G speed.

Interface Configuration example		
The FEC (Forward Error Correction) is required or recommended for 25G/50G/100G link speed. Two interfaces on each end must use the same FEC setting to establish a link. These supported FEC modes depend on different port speeds. 100G (cl91, RS FEC) 25G/50G (cl74, BASE-R FEC) The Cx port can operate at 10G/25G/50G/100G speed. The Fx port can operate at 10G/25G/50G speed. These Fx ports and Cx port must be in shut down mode to change port speed to default. Use the below commands in interface configuration mode to achieve the desired speed.		
100G	SMIS(config)# int cx-ethernet 0/3 SMIS(config-if)# shutdown SMIS(config-if)# speed 100000 auto SMIS(config-if)# no shutdown	1. This setting is recommended for 100G link speed on DAC cable if link partner support AN. 2. The FEC setting cl91 on interface Cx0/3 is enabled when port link up. 3. This setting (AN and FEC) is default setting on all Cx interfaces
	SMIS(config)# int cx-ethernet 0/3 SMIS(config-if)# shutdown SMIS(config-if)# speed 100000 fec cl91 SMIS(config-if)# no shutdown	1. This setting is recommended for 100G link speed if link partner does not support AN. 2. This setting can be applicable on DAC cable and Ethernet optical transceiver. This setting is required for 100G link speed on Ethernet optical transceiver. 3. The FEC setting cl91 on interface Cx0/3 is enabled.
	SMIS(config)# int cx-ethernet 0/3 SMIS(config-if)# shutdown SMIS(config-if)# speed 100000 fec off SMIS(config-if)# no shutdown	1. This setting can be applicable on 100G link speed if link partner does not support AN and FEC. 2. This setting is able to get rid of latency overhead. But this setting may have error packets introduced over the link between two interfaces.
2x50G	SMIS(config)# int cx-ethernet 0/3 SMIS(config-if)# shutdown SMIS(config-if)# speed 50000 fec cl74 SMIS(config-if)# no shutdown SMIS(config-if)#exit SMIS(config)# int fx-ethernet 0/8 SMIS(config-if)# shutdown SMIS(config-if)# speed 50000 fec cl74 SMIS(config-if)# no shutdown SMIS(config-if)# exit	1. This setting can be applicable on 1x2 DAC cable. 2. When interface Cx0/3 speed is changed to 50G, it spawns additional port Fx0/8 with 50G. 3. The FEC setting on interface Fx0/8 can be enabled if required
	SMIS(config)# int cx-ethernet 0/3 SMIS(config-if)# shutdown SMIS(config-if)# speed 50000 fec off SMIS(config-if)# no shutdown	1. This setting can be applicable on 1x2 DAC cable.

		2. When interface Cx0/3 speed is changed to 50G, it spawns additional port Fx0/8 with 50G. 3. The FEC setting is off on interface Cx0/3 and Fx0/8 by the default
40G	SMIS(config)# int cx-ethernet 0/3 SMIS(config-if)# shutdown SMIS(config-if)# speed 40000 SMIS(config-if)# no shutdown	1. This setting can be applicable on DAC cable and optical transceiver. 2. No FEC option available for 40G
4x25G	SMIS(config)# int cx-ethernet 0/3 SMIS(config-if)# shutdown SMIS(config-if)# speed 25000 fec cl74 SMIS(config-if)# no shutdown SMIS(config-if)#exit SMIS(config)# int fx-ethernet 0/7-8 SMIS(config-if)# shutdown SMIS(config-if)# speed 25000 fec cl74 SMIS(config-if)# no shutdown	1. This setting can be applicable on 1x4 split DAC cable. 2. When interface Cx0/3 speed is changed to 25G, it spawns three additional ports Fx0/7, Fx0/8 and Fx0/9. 3. The default FEC setting on interface Fx0/7, Fx08 and Fx0/9 is off. The FEC setting on these interfaces can be enabled if required.
	SMIS(config)# int cx-ethernet 0/3 SMIS(config-if)# shutdown SMIS(config-if)# speed 25000 fec off SMIS(config-if)# no shutdown	1. This setting can be applicable on 1x4 split DAC cable. 2. When interface Cx0/3 speed is changed to 25G, it spawns three additional ports Fx0/7, FX0/8 and Fx0/9. 3. The FEC setting is off on Cx0/3 and these Fx ports. This is the default setting for 25G interfaces
4x10G	SMIS(config)# int cx-ethernet 0/3 SMIS(config-if)# shutdown SMIS(config-if)# speed 10000 SMIS(config-if)# no shutdown	1. This setting can be applicable on 1x4 split DAC cable. 2. When interface Cx0/3 speed is changed to 10G, it spawns three additional Fx ports Fx0/7, FX0/8 and Fx0/9. 3. No FEC option available for 10G
100G/40G to default speed	SMIS(config)# int cx-ethernet 0/3 SMIS(config-if)# shutdown SMIS(config-if)# no speed SMIS(config-if)# no shutdown	1. This configuration is to change interface Cx0/3 from 40G to default port speed, 100G with AN and FEC enabled 2. To change interface Cx0/3 from 50G/25G/10G to 100G, please refer to next example.
10G/25G to default speed	SMIS(config)# int range fx-ethernet 0/7-9 SMIS(config-if-range)# shutdown SMIS(config-if-range)#exit SMIS(config)# int cx-ethernet 0/3 SMIS(config-if)# shutdown SMIS(config-if)# no speed SMIS(config-if)# no shutdown	1. This configuration is to change interface Cx0/3 to default port speed, 100G with AN and FEC enabled. 2. The interfaces Fx0/7, Fx0/8 and Fx0/9 spawned from Cx0/3 must be in shut down mode in order to change interface Cx0/3 from 25G/10G to default port speed, 100G with AN and FEC enabled.

50G to default speed	SMIS(config)# int fx-ethernet 0/8 SMIS(config-if)# shutdown SMIS(config-if)# exit SMIS(config)# int cx-ethernet 0/3 SMIS(config-if)# shutdown SMIS(config-if)# no speed SMIS(config-if)# no shutdown	1. This configuration is to change interface Cx0/3 speed from 50G to default port speed, 100G with AN and FEC enabled. 2. The interface Fx0/8 spawned from Cx0/3 must be in shut down mode in order to change interface Cx0/3 to default speed, 100G with AN and FEC enabled.

Note 1		
For old CLI "negotiation" and "no negotiation" compatibility, **t**hey are only applicable Cx port at 100G link speed on this planform(C3632S/SR)		
100G/default	speed is at 100G with FEC on and AN enabled . SMIS(config)# int cx-ethernet 0/3 SMIS(config)# shutdown SMIS(config-if)#no negotiation SMIS(config-if)# no shutdown	1. The Cx port is changed to 100G speed with AN disabled and FEC disabled.
	speed is at 100G with FEC off and AN disabled. SMIS(config)# int cx-ethernet 0/3 SMIS(config)# shutdown SMIS(config-if)#negotiation SMIS(config-if)# no shutdown	1. The Cx port is changed to 100G speed with AN enabled and FEC cl91 enabled.

Recommended 100G Interface Settings				
The **SSE-C3632S/SR-SMCPL100G** uses the default settings of AN: ON and FEC: ON.				
Uplink Partner	**Default**		**Configuration required on SSE-C3632S/SR**	**Configuration required on Uplink partner**
	AN	**FEC**		
Cisco	ON	ON / Auto	No configuration change required	No configuration change required
Arista	OFF	RS	SMIS(config-if)# speed 100000 fec cl91	No configuration change required
Other Supermicro Switches **SSE-F3548S/SR**	ON	RS	No configuration change required	No configuration change required
BMB-25G-100	ON	RS	No configuration change required	No configuration change required
SSE-C3632S/SR SMCPl100	ON	RS	No configuration change required	No configuration change required
SSE-C3632S/SR (or other 3rd-party switches with Cumulus Linux OS)	OFF	None	No configuration change required	Cumulus FW: cumulus-linux-4.2.0-bcm-amd64.bin Turn on AN: net add interface swp31 link autoneg on net pending net commit

The **SSE-C3632S/SR-SMCPL100G** Supports 3rd-party cables and transceivers from reliable vendors that comply with the relevant IEEE standards.

Part Number	Description
CBL-NTWK-0932-Q4S2M	100GbE/QSFP28 to 4x 25GbE/SFP28,PASSIVE,2M,30AWG
CBL-NTWK-0988-QS28C30M-2	100GbE/QSFP28 to 4x 25GbE/SFP28,PASSIVE,3M,25AWG
CBL-NTWK-0719	40GbE/QSFP+ to 4x 10GbE/SFP+,PASSIVE,1M,30AWG
CBL-NTWK-0720	40GbE/QSFP+ to 4x 10GbE/SFP+,PASSIVE,3M,30AWG
CBL-NTWK-0721	40GbE/QSFP+ to 4x 10GbE/SFP+,PASSIVE,5M,25AWG
CBL-NTWK-0942-MQ28C05M	Passive Copper cable, 100GbE, 100Gb/s, QSFP, LSZH, 0.5m
CBL-NTWK-0942-MQ28C10M	Passive Copper cable, 100GbE, 100Gb/s, QSFP, LSZH, 1m
CBL-NTWK-0942-MQ28C15M	Passive Copper cable, 100GbE, 100Gb/s, QSFP, LSZH, 1.5m
CBL-NTWK-0942-MQ28C20M	Passive Copper cable, 100GbE, 100Gb/s, QSFP, LSZH, 2m
CBL-NTWK-0942-MQ28C25M	Passive Copper cable, 100GbE, 100Gb/s, QSFP, LSZH, 2.5m
CBL-NTWK-0942-MQ28C30M	Passive Copper cable, 100GbE, 100Gb/s, QSFP, LSZH, 3m
AOM-TQSFP-79EQDZ-AVG	QSFP+ Transceiver for use with 40GE fiber cable connections
AOM-MMA1B00-C100D-MLN	Supermicro Ethernet Optical Transceiver 100GbE QSFP28 MPO 850nm SR4 up to 100m DDMI

Note 2:

For the switch with firmware version earlier than 2.2.0.25, the following settings are recommended for different link partner vendors

Recommended 100G Interface Settings				
The **SSE-C3632S/SR-SMCPL100G** uses the default settings of AN: OFF and FEC: OFF.				
Uplink Partner	Default		Configuration required on SSE-C3632S/SR	Configuration required on Uplink partner
	AN	FEC		
Cisco	ON	ON / Auto	SMIS(config-if)# speed 100000 auto	No configuration change required
Arista	OFF	RS	SMIS(config-if)# speed 100000 fec cl91	No configuration change required
Other Supermicro Switches	ON	RS	SMIS(config-if)# speed 100000 auto	No configuration change required

SSE-F3548S/SR				
BMB-25G-100	**ON**	**RS**	SMIS(config-if)# speed 100000 auto	No configuration change required
SSE-C3632S/SR SMCPl100	**OFF**	**None**	No configuration change required	No configuration change required
SSE-C3632S/SR (or other 3rd-party switches with Cumulus Linux OS)	**OFF**	**None**	No configuration change required	No configuration change required