CS & SN Product Overview

July 2021
New Small Form Factor Connectors

LC → CS (SEN) → MPO → SN (SAC)
Connector Senko (CS®)

- Push/Pull Tab
- 2 x LC Ferrule

Adopted by

Standard TIA-604-19 FOCIS 19 Approved (SEN)
Advantages of CS®

Transceiver Density

CS 12.8T in 2RU (64 ports of 2x100G)

LC 12.8T in 4RU (128 ports of 100G)

Transceiver Breakout

200G to 100G x 2

Easier break out

1x CS Transceiver

2x LC Transceiver

Patch Panel Density

CS for 128CH/256F in 1RU

1RU

LC for 128CH/256F in 2RU

2RU

Switch Density

CS 12.8T in 2RU (64 ports of 2x100G)

2RU

LC 12.8T in 4RU (128 ports of 100G)

4RU

- Improve Cooling & Heating
- Easier break out
- No Fan Out required
- No cassette module required
- Improve Cooling & Heating
- Reduce Energy Cost

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CS Eco System

Transceiver
- QSFP-DD
- OSFP

10+ Active licensees have adopted CS platform

Cable Assembly & Patch Panel
- Adopted and supported by multiple solution providers

Testing
- Available by all the major test equipment companies

• Several large data centers & 3 large global Telecoms have adopted the CS platform
• CS consortium founded for further development of platform.
  • http://csconnector.net/
Senko Nano (SN)

Push/Pull Boot

2 x LC Ferrule

Adopted by

QSFP-DD
SFP-DD
OSFP

Standard under development as IEC 61754-36 (Type SAC)
Advantages of SN (SAC)

- Improve Cooling & Heating
- Reduce Energy Cost
- Simplify the structure design
  - Cross-connection
  - Break out
  - Reduced 4 matted pair connection (~3dB loss)

Patch Panel Density

SN (SAC) 216CH/432F in 1RU

CS 128CH/256 Cassette Module Patch in 1RU
18+ Active licensees have adopted SN platform

Adopted and supported by multiple solution providers

* Licensees

Over A Million Connections made with CS and SN Connectors and Adapters!
**SN®-MT Connector**
Up to 16F in one row

**Features**
- Carries a maximum of 16-fiber in a row
- Same connector footprint as SN connector
- Carries many features from SN connector
- The industry’s highest density connector
- Fiber density per 1RU is improved by
  - 2.7x over MPO-16F
  - 1.3x over MPO-32F
- Insertion loss targeted 0.35dB max for SM

**Applications**
- Face plate density improvement
  - Patch panel, cassette
  - Co-Packaged Optics face plate
- Pluggable transceiver interface
- 4x SN-MT fit in QSFP footprint
- Inside box mid-board interconnect
SN-MT Product Line Up

Connectors

SN-MT Connector
SN-MT Bare Ribbon Connector
SN-MT Behind the Wall

Adapters

SN-MT 1CH Adapter With/without shutter
SN-MT 4CH Adapter With/without shutter

Mid-board Interconnect (Micro Board Mount Connector)

SN-MT Stackable MBMC
MBMC SN-MT Clip
SN-MT Density

1024F, 64-port SN-MT: 64x SN-MT 16F=1024F

Well fit within 1RU for 1024F
~30mm height available for ELS

SN-MT potentially reduces the height of CPO 51.2T Switch
Optical Interface for New Transceivers

8-lane base

2F - Dual LC

4F - Dual CS (FOCIS 19)

8F - MPO-12

16F - MPO-24 or MPO-16

2F - Dual LC

4F - MPO-12

SN

2-lane base

References: QSFP-DD MSA Hardware Specification Rev. 5.0
SFP-DD MSA Hardware Specification Rev. 3.0
IEC 868/4263/NP (Proposal for 61754-37)
CS & SN Cleaning Options

**ONE-CLICK DUPLEX SN Cleaner**  P/N: SCK-DC-SN
- Cleans 1000 end faces (500 SN Duplex connectors)
- Faster cleaning times

**ONE-CLICK DUPLEX CS Cleaner**  P/N: SCK-DC-CS
- Cleans 1000 end faces (500 CS Duplex connectors)
- Faster cleaning times

**SMART CLEANER CS-LC**  P/N: SCK-SS-CS
- Cleans 750 end faces and refillable for lowest cost per clean
- Cleans both CS and LC connectors.

**SMART CLEANER CS-LC**  Refills P/N: SCK-SS-CS-R

**1.25m NEOCLEAN Sticks**  P/N: CSK-01
- Micro woven cleaning tip for dry cleaning SN and CS end faces.
- Notched handle for customizing handle length
CS & SN Field Inspection

SMART PROBE 2 WIFI Field Inspection Scope

- WIFI connection for Android and iOS mobile devices
- VUE3 Inspection and Reporting Software measures surface quality to IEC 61300-3-35
- LED light on housing

Inspecting In Adapter SN/UPC Connectors

Inspecting SN/UPC Jumper

Inspection Scope P/N: SCK-VM3000-01
CS/UPC Inspection Tip P/N: SCK-SPT2-CS-UPC-F
SN/UPC Inspection Tip P/N: SCK-SPT2-SN-UPC-F
1.25mm UPC Jumper Inspection Tip: SCK-SPT2-PC125-M
THANK YOU!

Growing Together

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