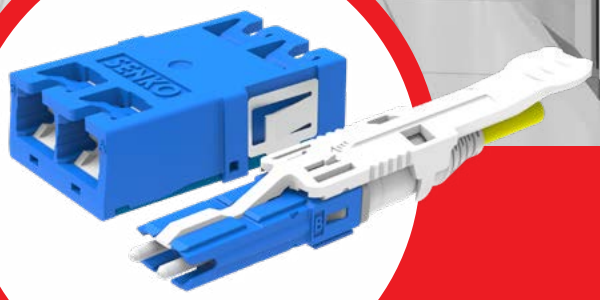
SENKO®
Advanced Components

CS®
CONNECT WITH CONFIDENCE
EDITION 1.0

400G
800G



senko.com

CS® SERIES

SENKO®
Advanced Components

Let go of the past.

Connect with the now.

SENKO®
Advanced Components

Innovative Optical Connectivity Solutions

SENKO Advanced Components design and manufacture precise, user-friendly, and application-focused fiber optic connectors that allow network operators to achieve the performance and reliability necessary to support the world's unquenchable demand for data. As you would expect from a Japanese company, precision is paramount to our offering, and we take pride in providing the global communications market with reliable and repeatable components that guarantee business-critical, error-free transmission.

We understand the challenges that network operators face in building networks that are not just quick and easy to construct, but also easy to manage and maintain over the complete life-cycle of the network. For this reason, SENKO pays special attention in developing connectors that are easy to identify and access even in when placed in the densest and demanding of applications. The world demands high-performance connectivity "*always and everywhere*". Our application-focused approach ensures that connectors are optimized for the environment whether it be inside a controlled data center, or high up on a remote antenna mast.

Resolving Industry Challenges

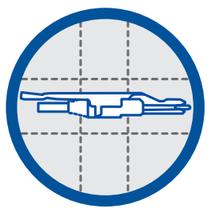
As markets continue to evolve, so do the requirements of fiber optic products. With over 30 years of experience and a highly skilled team of professionals, SENKO can resolve industry challenges quickly and effectively. With SENKO, the typical design and physical first prototyping takes weeks, not months. The majority of products are stocked and ready to be delivered in the same week. SENKO has fully embraced the idea that your success is our success.

Design

Working with our customers, SENKO helps define product application, functionality, and manufacturability

Prototype

SENKO has the capability to create in-house functional prototyping



Refine

SENKO continuously strives to enhance performance, reliability, usability, and cost

Validate

Products verified against established industry standards

Your success is our success

VSFF Pioneer and Technology Leader with 90+ Patents

SENKO connectivity is driving next-generation applications that consume unparalleled amounts of data. Super-computing, AI and Big Data are just a few of the applications that demand data rates as high as 400G, 800G, 1,6TB or beyond. Our VSFF (Very Small Form Factor) connectivity is the first of its kind to deliver twice as many optical channels within the standard footprint of legacy transceivers. Whatever your connector requirements or application, SENKO is here to help you. We value every connection.

VSFF
VERY SMALL FORM FACTOR

Patented Solutions

- SN®, SN®-MT, and CS® connectors are invented by SENKO Advanced Components and standardized in the QSFP-DD MSA and OSFP-MSA specifications. The CS® is currently standardized within TIA under TIA-604-19, and the SN® is in the process of standardization within IEC under IEC 61754-36.
- SENKO is the global leader in VSFF connectivity, and our portfolio represents the broadest range of application-focused connectors and adapters on the market.
- SENKO provides a licensing program to approved partners to manufacture SN®, SN®-MT and CS® connectors and adapters without the risk of direct/indirect patent infringement

590 patents globally

Global Presence

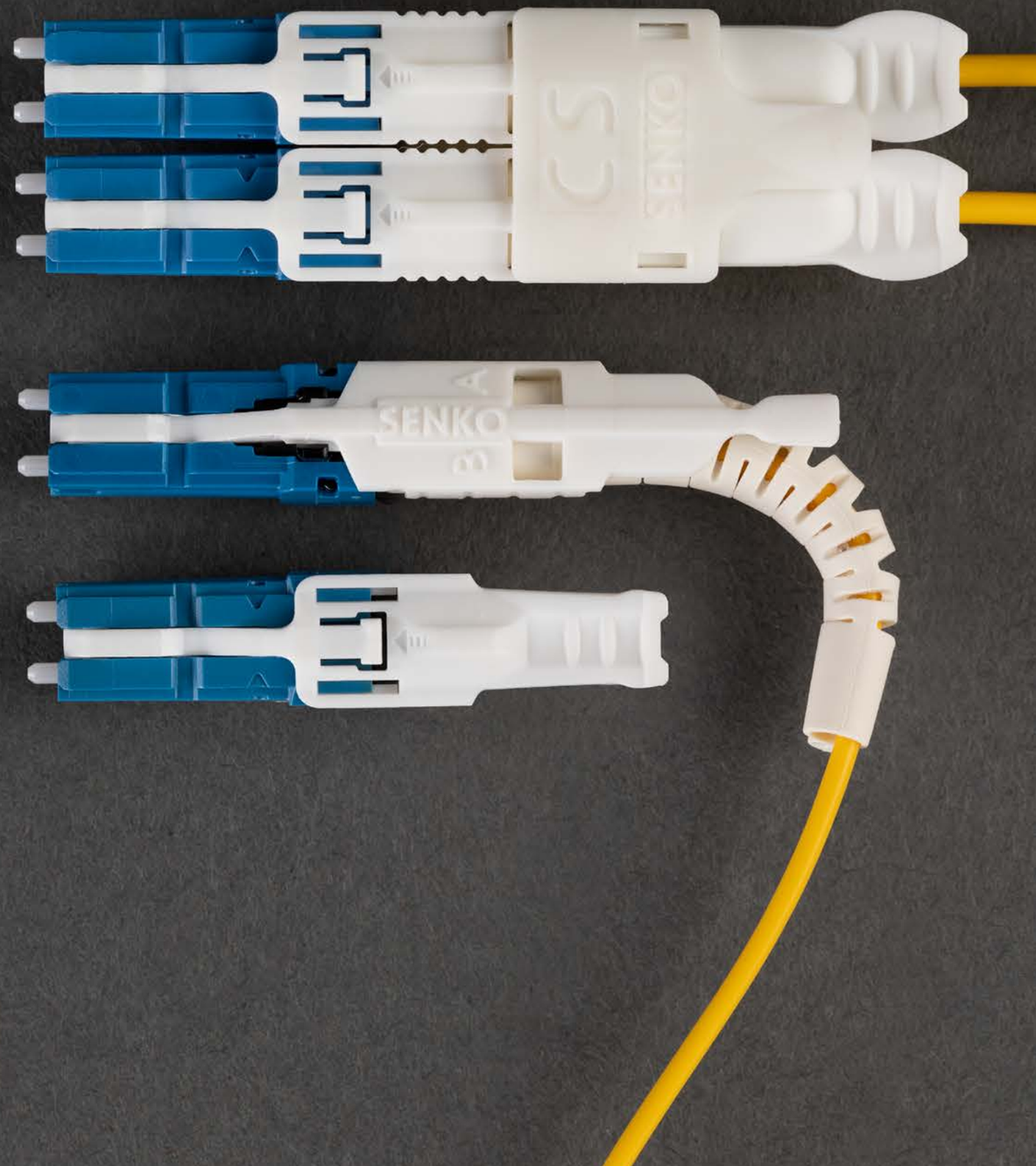
With offices all around the world, SENKO aims to provide local service on a Global footprint.

AVIATION **Data Centers**
TELECOM MEDICAL
WIRELESS INDUSTRIAL **Automotive** SILICON PHOTONICS **Hyperscale**
On-Board Optics SECURITY **FTTx** **and more...**

SENKO®
Advanced Components

Leading the Fiber Optic Revolution

885+ million connectors deployed globally
97+ million connectors sold in 2022
15 new products released in 2020
590 patents granted globally
90+ VSFF patents globally



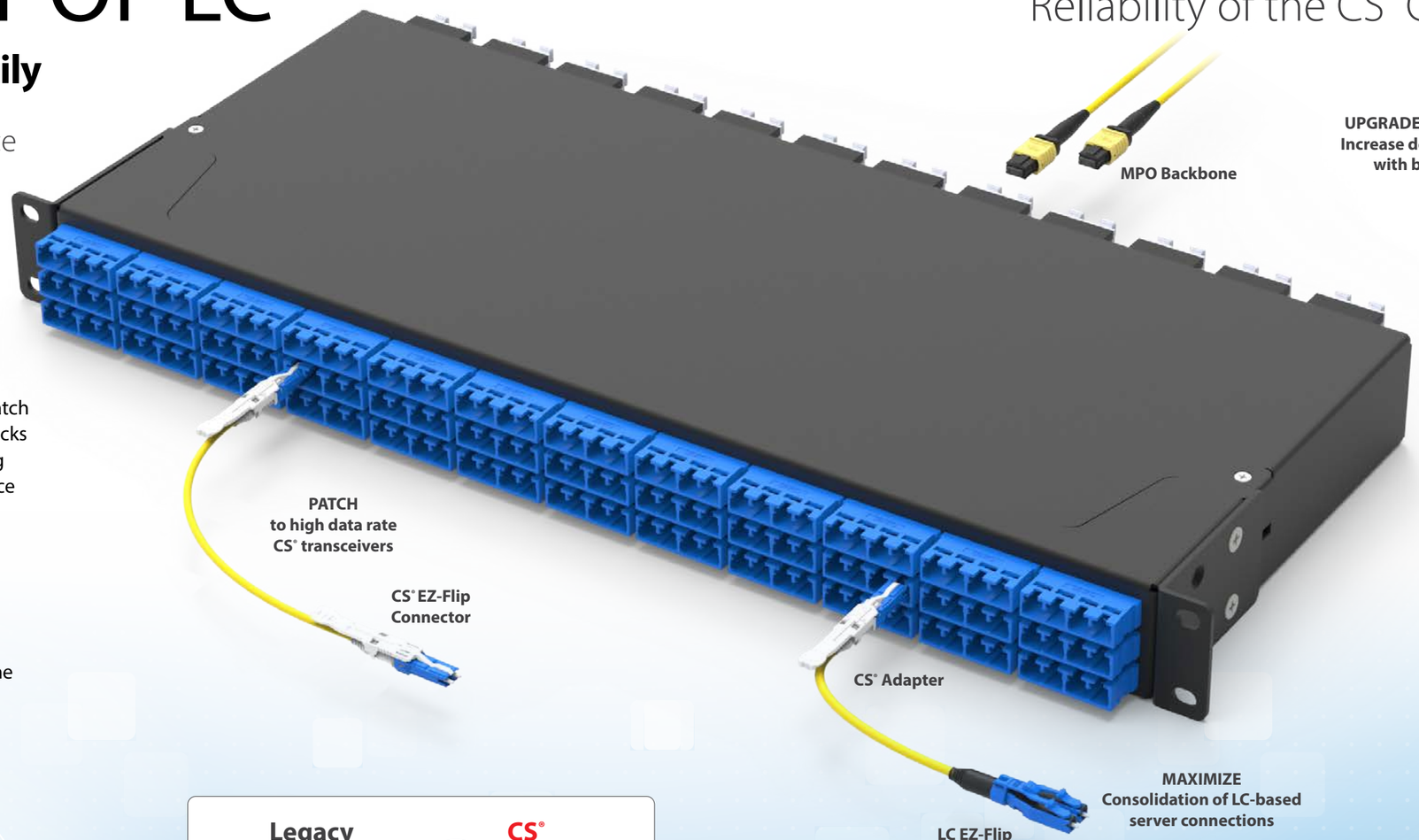
DOUBLING THE DENSITY OF LC

Meet the CS® Family

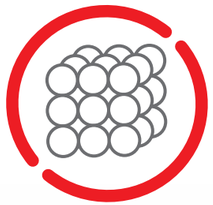
Telco-Grade Performance
in a VSFF Footprint

SENKO®
Advanced Components

Experience the Performance and Reliability of the CS® Connector



UPGRADE EXISTING INFRASTRUCTURE
Increase density and improve reliability with best-in-class performance

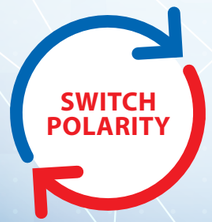


Reduce the number of patch panels and racks by optimizing available space

2X DENSER THAN LC

Fast and easy access with the push-pull tab

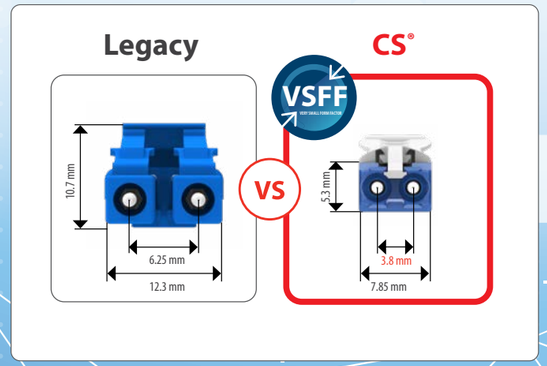
PUSH-PULL TAB



Fast, easy and safe switchable polarity

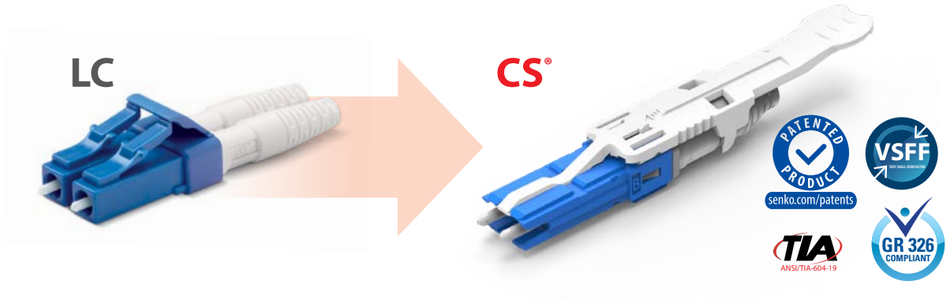
SWITCH POLARITY

EZ-FLIP

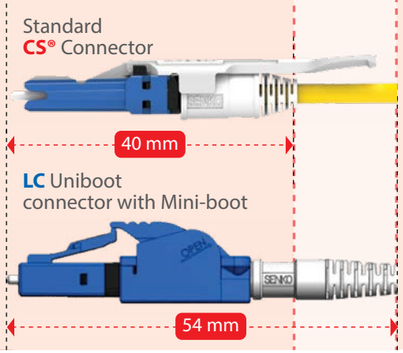


MAXIMIZE
Consolidation of LC-based server connections

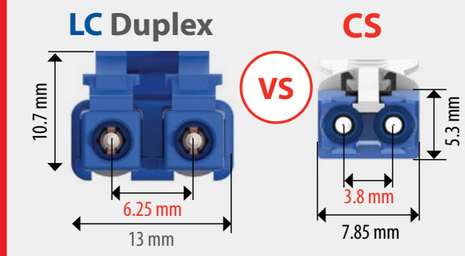
Double the Density with CS®



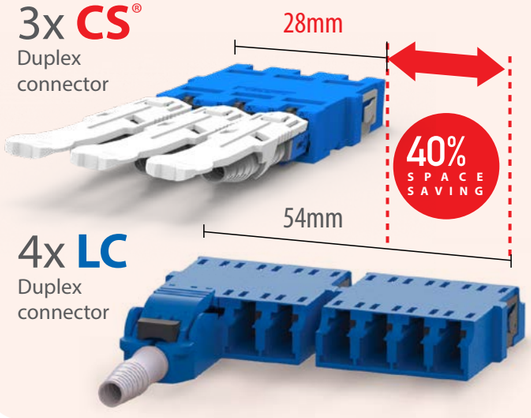
Shorter Uniboot connector compared to LC



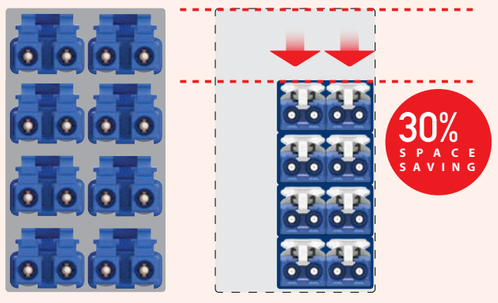
LC Duplex and CS comparison



Increased horizontal and vertical density



- Low profile connector design allows to stack adapter vertically
- 40% reduction in width compared to LC

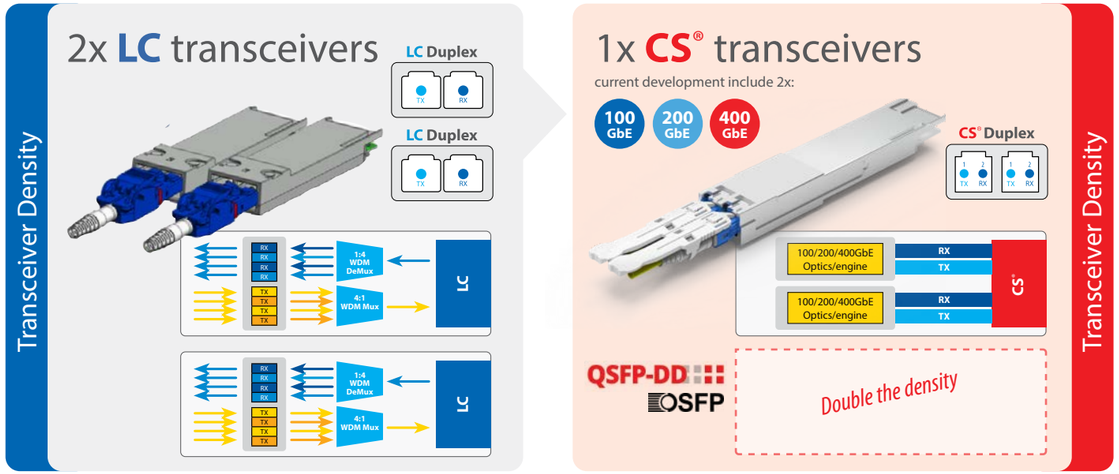


LC Duplex connector CS® Duplex connector

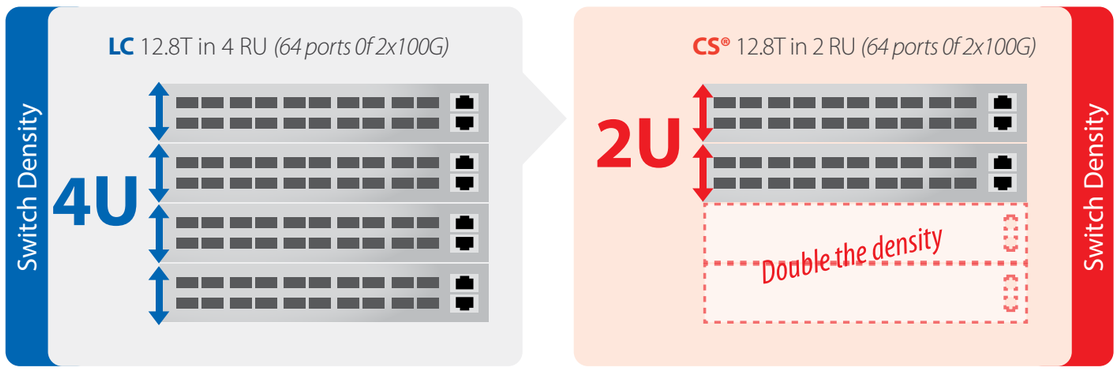
Double the Density from LC

Learn about CS®
Click to Watch Videos

Doubling Transceiver Density/Capacity



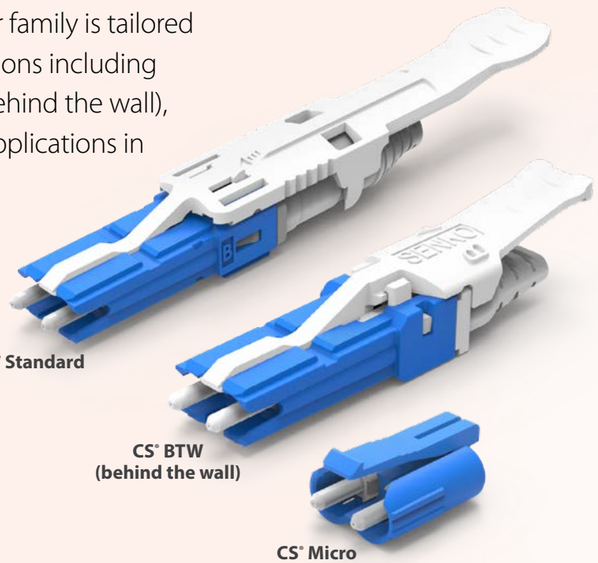
Doubling Switch Density/Capacity

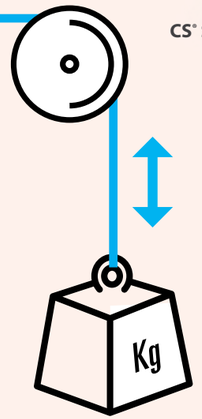


THE ULTIMATE PATCHING CONNECTOR

The CS® is optimized for frequent Moves, Adds, and Changes

The CS® connector family is tailored to suit all applications including patching, BTW (behind the wall), or space saving applications in optoelectronics.



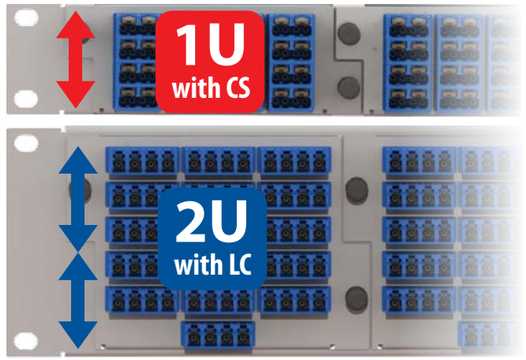


GR 326 COMPLIANT

Meets GR-326 Mechanical Standards for mechanical load objectives

MEGA DENSITY

CS® 128CH/256F Cassette Panel in1RU



LC 128CH/256F Cassette Panel in 2RU

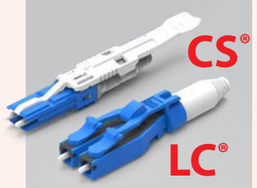
MEGA
<288 fibers

MEGA Density

Double the density of the current offering with LC connectivity. Significantly lower total cost per port.

Improve port identification, connector access and cable management with CS®

ULTRA
<144 fibers



+ Density

ULTRA Density

Industry bench-mark density per 1RU using engineered chassis and cassette systems.

45RU Rack Comparison

Double your density with CS® CONNECTOR

Generic LC

with **LC**

Total Capacity

2048 CH

4096 F

(single sided rack/cabinet)

Total **7RU** Cable Management Space

CS® CONNECTOR

with **CS®**

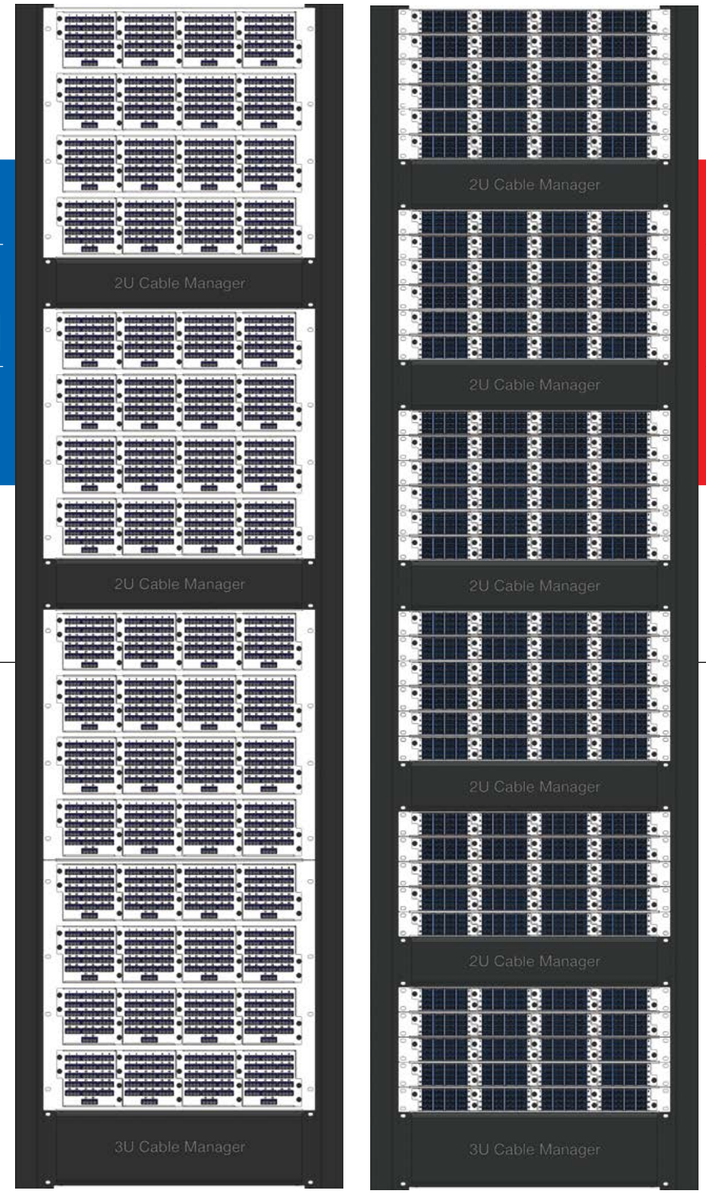
Total Capacity

4352 CH

8704 F

(single sided rack/cabinet)

Total **13RU** Cable Management Space



**Note that the 3 RU wire manager is installed on the bottom rack base plate and the remaining 1 RU space at the bottom of the rack.*

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PANDUIT™

Strong Ecosystem Partnerships

“As the transition to 400Gb backbones occur, standards bodies created the new CS® connector specification which increases the number of duplex optical links by approximately 40% per rack unit (RU) designation.”

Bob Wagner, ***Senior Business Development Manager – Data Center PANDUIT***

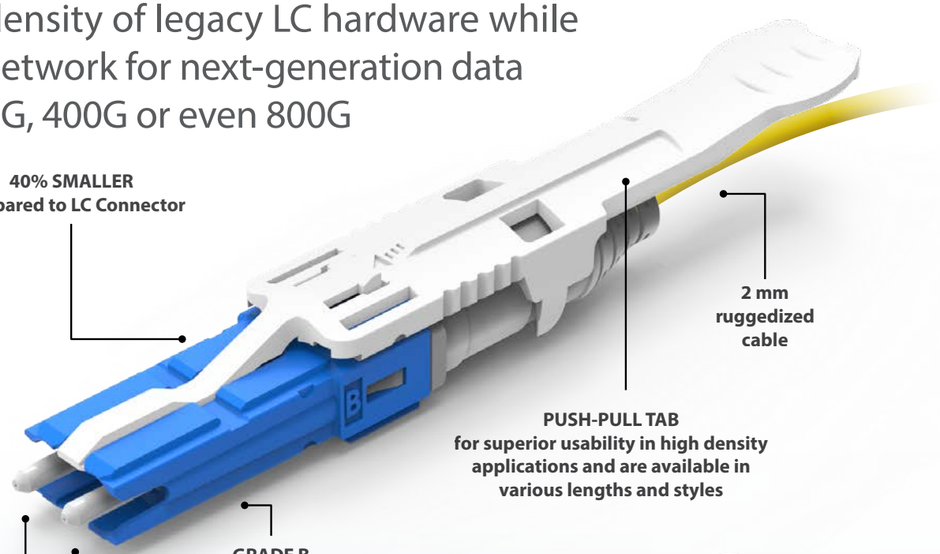
CS® CONNECTOR

PATENTED PRODUCT senko.com/patents

RoHS Reach SVHC UL

SENKO Products are RoHS, Reach SVHC and UL 94 V-0 compliant.

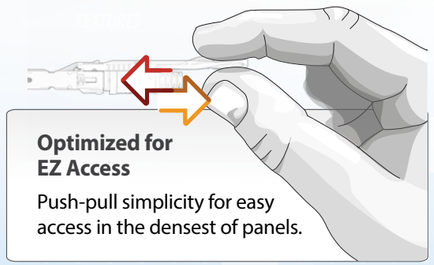
The CS connector is a ceramic-based VSFF connector that offers twice the density of legacy LC hardware while optimizing the network for next-generation data rates such as 200G, 400G or even 800G

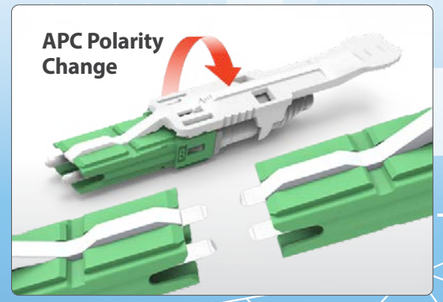


MEETS SC MECHANICAL STANDARDS

GANG CLIP COMPATIBLE

SWITCH POLARITY



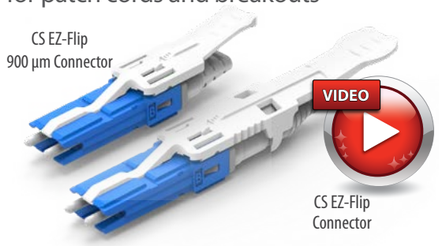


SENKO® Advanced Components

CS® Connectors for Optimized Patching Performance

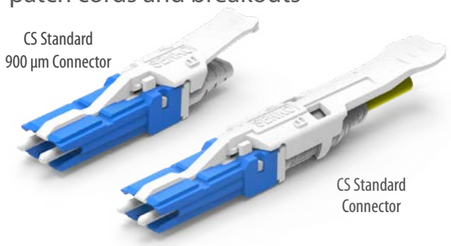
CS® EZ-FLIP CONNECTOR

Polarity switchable duplex CS® assemblies for patch cords and breakouts



CS® CONNECTOR

Standard duplex CS® assemblies for patch cords and breakouts



Micro CS® CONNECTOR

Miniature CS® connectors for maximum space-saving within cassettes and panels

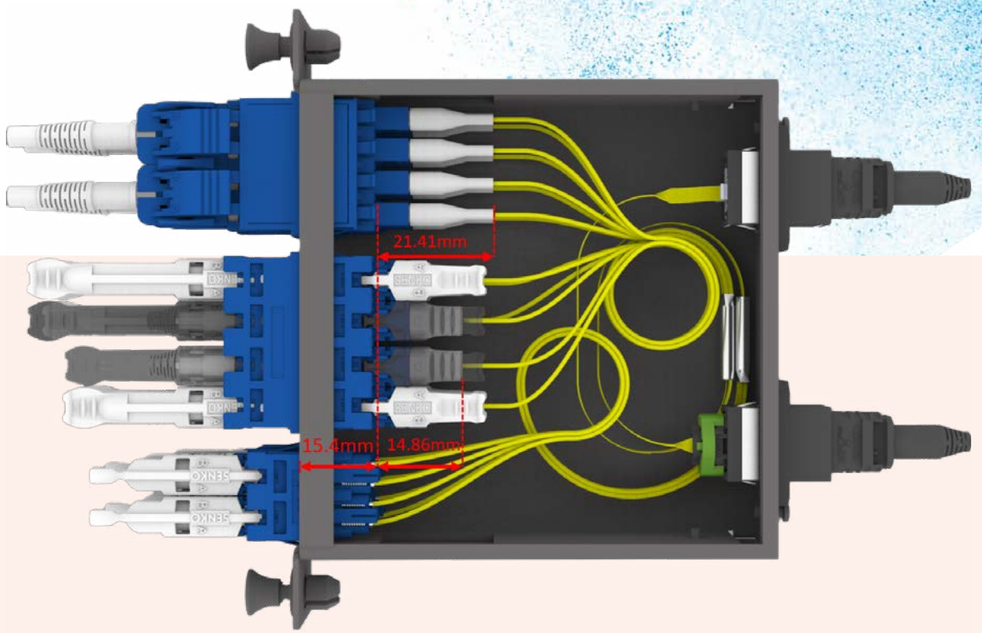
CS® GANG-CLIP

Gang-clips allowing two CS® connectors to be patched simultaneously

E-1.0

COMPACT CASSETTES

CS® is the perfect upgrade from LC because it optimizes fiber management hardware to offer increased speed and agility.

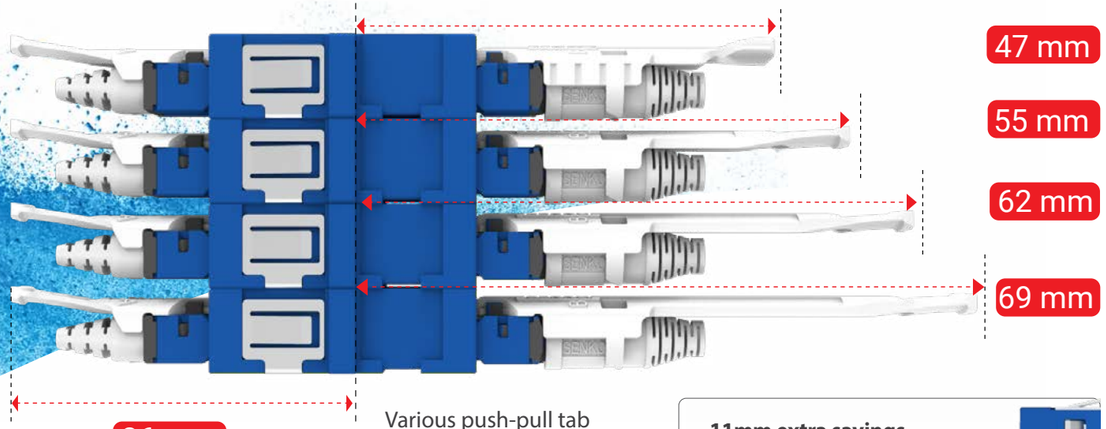


CS® Space Saving

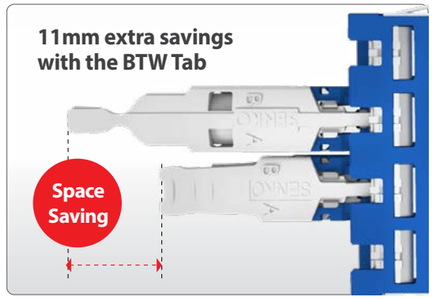
Build smaller and better

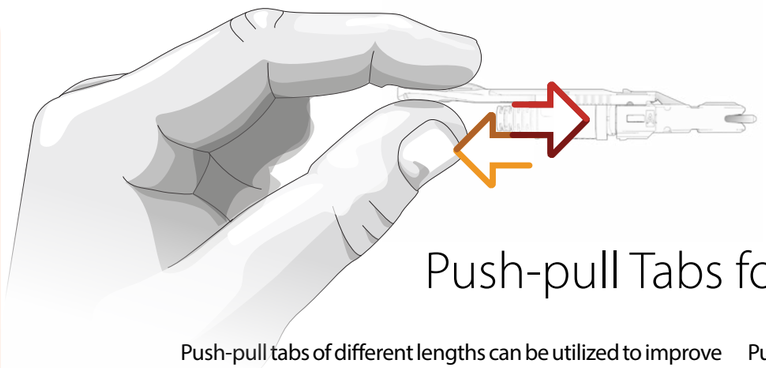
The micro CS® connector family allow cassettes to be manufactured that are extremely compact. This optimizes the space for cable management behind the cassette and improves the access to backbone connectivity from the front of the rack.

CS® Connectors for the Ultimate in Space Savings



Various push-pull tab lengths for staggered dressing or custom applications.





Push-pull Tabs for Easy Access

Push-pull tabs of different lengths can be utilized to improve the accessibility of connectors in different applications and environments.

Push-pull tabs can be staggered if necessary so that the shorter tabs are at the top of the panel and longer ones are at the bottom of the panel. This cascaded approach improves accessibility still further.

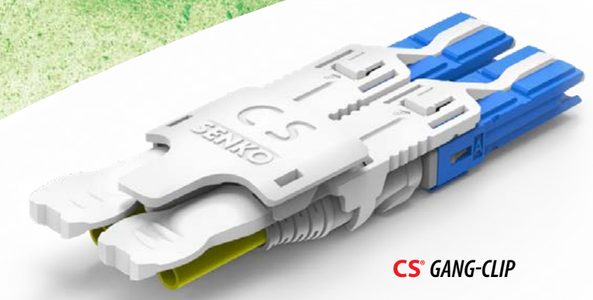
SUSTAINABLE NETWORKS

Driving change through innovation

Turn down the heat

Improve air flow to equipment and reduce energy consumption with CS®

Optimize Network Space and Eliminate Unnecessary Materials



CS® GANG-CLIP

SENKO® SUSTAINABILITY GREEN SEAL

Sustainability has become the primary focus of SENKOs corporate mission. We strive to make our products environmentally friendly and also economically and socially sustainable. This approach includes using eco-friendly materials and reducing waste during production, promoting energy-efficient usage of our products, and recycling them at the end of their life cycle.

Increased efficiency, less waste

67% Reduction in plastic

CS® connectors are less than half the size of an LC duplex connector.

Smaller Footprint

Increased patch panel density reduces the number of racks required to support the network and eliminates the need for additional data centers.

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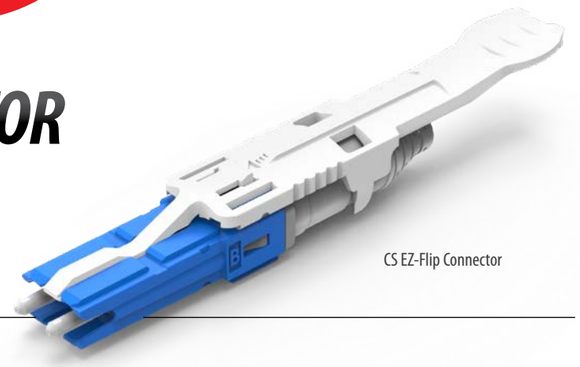
CS® EZ-FLIP CONNECTOR

1-Channel (2F)
2.0 mm and 3.0 mm Cable



CS EZ-Flip Connector

The CS® EZ-Flip connector is an advanced Base-2 connector that offers network operators the ability to increase the packing density of their LC-based infrastructure while optimizing their network for next-generation data rates, including 200G and 400G.

This recent expansion of the CS® family allows technicians to switch polarity in the field without disrupting fibers or repositioning ferrules. With its unique orientation of angled ferrules, the EZ-Flip connector can flip polarity even with APC connectors. Additionally, an integrated push-pull tab simplifies connector insertion and removal, making operating easy even in dense patch panels with limited finger access space.

In addition to its polarity-flipping capability, the EZ-Flip connector offers versatile patching options. Two individual CS® connectors can be joined with a gang clip, enabling simultaneous patching to transceivers that have two ports side by side. This flexibility simplifies the patching proces, and reduces the time required to get the network operational.

FEATURES

- IEC random mating Grade B
- Very Small Form Factor (VSFF) connector, 2 x cabling density versus duplex LC
- Duplex design utilizes a unique push-pull tab for simple installation and removal
- Optimized for 200G data rates with QSFP-DD, OSFP and SFP-DD transceivers
- Up to 2 x CS® connectors per transceiver
- Allows simple transceiver breakout in spine/leaf architectures
- Fast and easy polarity reversal of both UPC and APC connectors in the field
- Combines two 1.25 mm ceramic ferrules
- Pre-assembled design for fast assembly

APPLICATIONS

- Enterprise, telco and data centers
- High-density patch panels
- Server consolidation
- High-density cross connects
- Equipment cords to CS® transceivers
- Harnesses and breakout cable assemblies
- Central office/head-end ODF

MEDIA

Click to Watch Videos

VIDEO

Mechanical Data

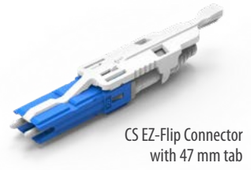
	Value
Durability	500 matings per TIA-568
Fiber Count	Duplex *(2 fibers)*
Cable Suitablity	2.0 mm/3.0 mm jacketed
Ferrule Material	Zirconia
Dust Protection Method	Removable dust plugs that encapsulate the ferrules

Optical Data

	Singlemode				Multimode
	UPC		APC		MM
	SM Premium Low Loss	SM Premium	SM Premium Low Loss	SM Premium	Premium
Typical Insertion Loss (dB)*	0.05	0.08	0.07	0.12	0.05
Max. Insertion Loss (dB)*	0.15	0.20	0.15	0.25	0.15
Typical Return Loss (dB)*	≥55		≥65		≥25
Ferrule (µm)	125.5				127

** Based on master grade jumper to low loss random mating test*

ORDERING

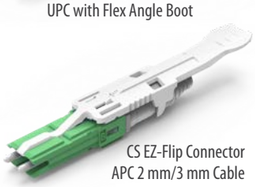


CS EZ-Flip Connector with 47 mm tab

CONNECTOR TYPE	PERFORMANCE	HOUSING COLOR	BOOT TYPE	BOOT COLOR	TAB LENGTH	TAB COLOR
6E4 CS EZ-Flip UPC Connector Pre-assembled for 2 mm/3 mm Cable	151 SM Premium 158 SM Premium Low Loss 251 MM Premium	1 Blue 5 Aqua 6 Heather Violet	2 2.0 mm 3 3.0 mm 4 2.0 mm Flex Boot 5 3.0 mm Flex Boot	1 White	47 47 mm 55 55 mm 62 62 mm 69 69 mm	W White

CS EZ-Flip Connector UPC with Flex Angle Boot

CONNECTOR TYPE	PERFORMANCE	HOUSING COLOR	BOOT TYPE	BOOT COLOR	TAB LENGTH	TAB COLOR
6F4 CS EZ Flip UPC Connector Unassembled Kit for 2 mm/3 mm Cable	151 SM Premium 158 SM Premium Low Loss 251 MM Premium	1 Blue 5 Aqua 6 Heather Violet	2 2.0 mm 4 2.0 mm Flex Boot	1 White	47 47 mm 55 55 mm 62 62 mm 69 69 mm	W White



CS EZ-Flip Connector APC 2 mm/3 mm Cable

CONNECTOR TYPE	PERFORMANCE	HOUSING COLOR	BOOT TYPE	BOOT COLOR	TAB LENGTH	TAB COLOR
6H4 CS EZ-Flip Connector APC Unassembled Kit for 2 mm/3 mm Cable	153 APC Premium 158 SM Premium Low Loss	3 Green (APC)	2 2.0 mm 4 2.0 mm Flex Boot	1 White 6 Green	47 47 mm 55 55 mm 62 62 mm 69 69 mm	W White

Note: Pre-assembled version is currently offered only in UPC configuration.

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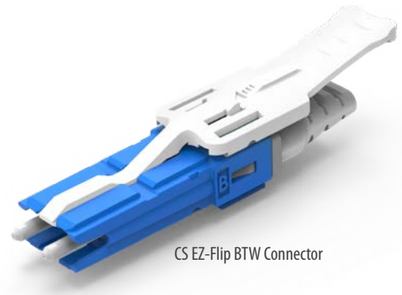
CS® EZ-FLIP BTW CONNECTOR

1-Channel (2F)
BTW (Behind The Wall)


CS EZ-Flip BTW Connector

The CS® EZ Flip connector designed for up to 900 µm cable is the ideal option for modular cassettes or splicing panels requiring a shorter connector length, especially for installations behind the wall (BTW). The benefit of this reduced connector length is that it enables hardware providers to decrease the overall depth of their equipment, thereby creating more space for efficient cable management, splice protectors, and other passive devices. By utilizing the CS® connector, these hardware providers can maximize their use of available space and improve the overall organization and management of cables and other components.

The CS® EZ Flip connector allows technicians to switch polarity in the field without disrupting fibers or repositioning ferrules. With its unique orientation of angled ferrules, the EZ-Flip connector can flip polarity even with APC connectors.

The compact pull tab located at the rear of the connector offers users convenient access to the connector, even in dense patch panels or areas where there is limited finger access space.

FEATURES

- Meets IEC random mating Grade B
- Robust design
- Reduced connector/boot length
- Single boot for 2 x 600/900 µm buffered fibers
- UPC and APC versions available
- Proven LC ferrule technology
- Extra small for space-limited applications
- Integrated pull-tab for improved access

APPLICATIONS

- Pigtail splicing modules and panels
- MPO/CS® transition modules
- Patching modules and patch panels
- High-density cross connects
- High-density zone distribution
- Central office/head-end ODF
- Hydra assemblies

KEY BENEFITS

✔ **Reduced connector length**

Mechanical Data

	Value
Durability	500 matings per TIA-568
Fiber Count	Duplex *(2 fibers)*
Cable Suitablity	2 x 600/900 µm buffered fibers
Ferrule Material	Zirconia
Dust Protection Method	Removable dust plugs that encapsulate the ferrules

Optical Data

	Singlemode				Multimode
	UPC		APC		MM
	SM Premium Low Loss	SM Premium	SM Premium Low Loss	SM Premium	Premium
Typical Insertion Loss (dB)*	0.05	0.08	0.07	0.12	0.05
Max. Insertion Loss (dB)*	0.15	0.20	0.15	0.25	0.15
Typical Return Loss (dB)*	≥55		≥65		≥25
Ferrule (µm)	125.5				127

** Based on master grade jumper to low loss random mating test*

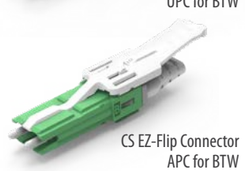
ORDERING


CS EZ-Flip Connector
UPC for BTW

CONNECTOR TYPE	PERFORMANCE	HOUSING COLOR	BOOT TYPE	BOOT COLOR	TAB LENGTH	TAB COLOR
6E4 CS EZ-Flip UPC Connector Pre-assembled for up to 900 µm Cable	151 SM Premium 158 SM Premium Low Loss 251 MM Premium	1 Blue 5 Aqua 6 Heather Violet	1 900 µm BTW	1 White	36 36 mm	W White


CS EZ-Flip Connector
UPC for BTW

CONNECTOR TYPE	PERFORMANCE	HOUSING COLOR	BOOT TYPE	BOOT COLOR	TAB LENGTH	TAB COLOR
6F4 CS EZ Flip UPC Connector Unassembled Kit for up to 900 µm Cable	151 SM Premium 158 SM Premium Low Loss 251 MM Premium	1 Blue 5 Aqua 6 Heather Violet	1 900 µm BTW	1 White	36 36 mm	W White


CS EZ-Flip Connector
APC for BTW

CONNECTOR TYPE	PERFORMANCE	HOUSING COLOR	BOOT TYPE	BOOT COLOR	TAB LENGTH	TAB COLOR
6H4 CS EZ-Flip APC Connector Unassembled Kit for up to 900 µm Cable	153 APC Premium 158 APC Premium Low Loss	3 Green (APC)	1 900 µm BTW	1 White 6 Green	36 36 mm	W White

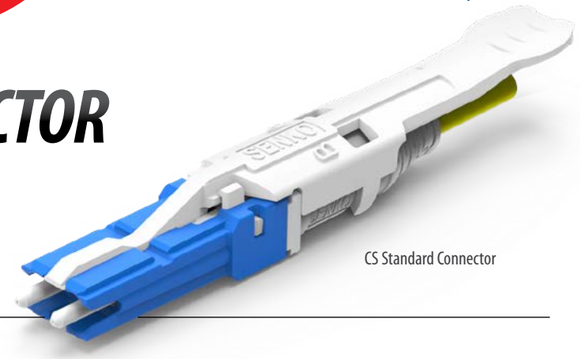
6H4 - 153 - 311 - 36W ORDER CODE example

Note: Pre-assembled version is currently offered only in UPC configuration.

SENKO® Advanced Components

CS® STANDARD CONNECTOR

1-Channel (2F)
2.0 mm and 3.0 mm Cable



CS Standard Connector

The CS® connector is the ultimate Base-2 connector combining 'best-in-class' packing density with carrier-grade performance and reliability. Designed and optimized for next-generation data rates, the CS® connector offers network operators the chance to densify their existing legacy infrastructure whilst at the same time providing an upgrade path to 400G and beyond.

The CS® Standard connector is suitable for termination to either 2.0 mm or 3.0 mm round cable that incorporates a ruggedized jacket and internal strain relief.

The CS® Standard connector has an integrated 'push-pull' boot that simplifies insertion and removal of the connector even in dense patch panels where finger access is limited. A gang-clip can be added to four individual CS® connectors allowing them to be patched simultaneously to either adapters or 4-channel transceivers *(subject to product selection)*.

FEATURES

- IEC random mating Grade B
- Very Small Form Factor (VSFF) connector, 4 times fiber cabling density over duplex LC
- Duplex design utilizes a unique push-pull boot for simple installation and removal
- Optimized for 400G data rates with QSFP-DD, OSFP and SFP-DD transceivers
- Up to 4 x CS® connectors per transceiver
- Allows simple transceiver breakout in spine/leaf architectures
- Combines two 1.25 mm ceramic ferrules
- Pre-assembled design for fast assembly

APPLICATIONS

- High-density patching
- QSFP-DD, OSFP and SFP-DD transceiver links for higher data rates
- Hybrid Base-2 cable assemblies combining CS® and other duplex connector types
- Hyperscale, edge, enterprise and colocation data centers

MEDIA

Click to Watch Videos

VIDEO

Mechanical Data

	Value
Durability	500 matings per TIA-568
Fiber Count	Duplex *(2 fibers)*
Cable Suitablity	2.0 mm/3.0 mm jacketed
Ferrule Material	Zirconia
Dust Protection Method	Removable dust plugs that encapsulate the ferrules

Optical Data

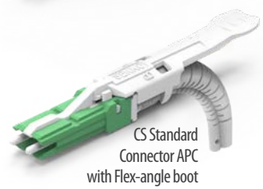
	Singlemode				Multimode
	UPC		APC		MM
	SM Premium Low Loss	SM Premium	SM Premium Low Loss	SM Premium	Premium
Typical Insertion Loss (dB)*	0.05	0.08	0.07	0.12	0.05
Max. Insertion Loss (dB)*	0.15	0.20	0.15	0.25	0.15
Typical Return Loss (dB)*	≥55		≥65		≥25
Ferrule (µm)	125.5				127

** Based on master grade jumper to low loss random mating test*

ORDERING

CS Standard Connector UPC with 47 mm tab

CONNECTOR TYPE	PERFORMANCE	HOUSING COLOR	BOOT TYPE	BOOT COLOR	TAB LENGTH	TAB COLOR
601 CS Connector UPC Unassembled for 2 mm/3 mm Cable	**151** SM Premium	**1** Blue	**2** 2.0 mm	**1** White	**47** 47 mm	**W** White
	158 SM Premium Low Loss	**5** Aqua	**3** 3.0 mm		**55** 55 mm	
	251 MM Premium	**6** Heather violet	**4** 2.0 mm Flex Boot		**62** 62 mm	
					69 69 mm	



CS Standard Connector APC with Flex-angle boot

CONNECTOR TYPE	PERFORMANCE	HOUSING COLOR	BOOT TYPE	BOOT COLOR	TAB LENGTH	TAB COLOR
611 CS Connector APC Unassembled for 2 mm/3 mm Cable	**153** APC Premium	**3** Green (APC)	**2** 2.0 mm	**1** White	**47** 47 mm	**W** White
	158 APC Premium Low Loss		**3** 3.0 mm		**55** 55 mm	
			4 2.0 mm Flex Boot		**62** 62 mm	
					69 69 mm	

611 - **153** - **341** - **47W** ORDER CODE example

Plastic Duplex Gang-Clip

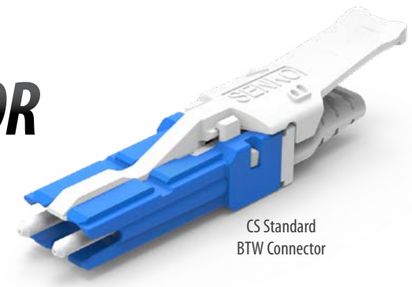
PART NUMBER	
601-CLPP-01-W	Plastic Duplex Gang-clip for CS EZ-Flip Connectors or CS Standard Connectors

601-CLPP-01-W ORDER CODE example

SENKO® Advanced Components

CS® BTW STANDARD CONNECTOR

1-Channel (2F)
BTW (Behind The Wall)



CS Standard BTW Connector

The CS® connector designed for 900 µm cable is the ideal option for modular cassettes or splicing panels requiring a shorter connector length, especially for installations behind the wall (BTW). The benefit of this reduced connector length is that it enables hardware providers to decrease the overall depth of their equipment, thereby creating more space for efficient cable management, splice protectors, and other passive devices. By utilizing the CS® connector, these hardware providers can maximize their use of available space and improve the overall organization and management of cables and other components.

The compact pull tab located at the rear of the connector offers users convenient access to the connector, even in dense patch panels or areas where there is limited finger access space.

FEATURES

- Meets IEC random mating Grade B
- Robust design
- Reduced connector/boot length
- Single boot for 2 x 600/900 µm buffered fibers
- UPC and APC versions available
- Proven LC ferrule technology
- Extra small for space-limited applications
- Integrated pull-tab for improved access

APPLICATIONS

- Pigtail splicing modules and panels
- MPO/CS transition modules
- Patching modules and patch panels
- High-density cross connects
- High-density zone distribution
- Central office/head-end ODF
- Hydra assemblies

KEY BENEFITS

✔ **Reduced connector length**

Mechanical Data

	Value
Durability	500 matings per TIA-568
Fiber Count	Duplex *(2 fibers)*
Cable Suitablity	2 x 600/900 µm buffered fibers
Ferrule Material	Zirconia
Dust Protection Method	Removable dust plugs that encapsulate the ferrules

Optical Data

	Singlemode				Multimode
	UPC		APC		MM
	SM Premium Low Loss	SM Premium	SM Premium Low Loss	SM Premium	Premium
Typical Insertion Loss (dB)*	0.05	0.08	0.07	0.12	0.05
Max. Insertion Loss (dB)*	0.15	0.20	0.15	0.25	0.15
Typical Return Loss (dB)*	≥55		≥65		≥25
Ferrule (µm)	125.5				127

** Based on master grade jumper to low loss random mating test*

ORDERING

CS Standard Connector UPC for BTW

CONNECTOR TYPE		PERFORMANCE		HOUSING COLOR		BOOT TYPE		BOOT COLOR		TAB LENGTH		TAB COLOR	
601	CS Connector UPC Unassembled for up to 900 µm Cable	**151**	SM Premium	**1**	Blue	**1**	900 µm BTW	**1**	White	**36**	36 mm	**W**	White
		158	SM Premium Low Loss	**5**	Aqua								
		251	MM Premium	**6**	Heather violet								

CS Standard Connector APC for BTW

CONNECTOR TYPE		PERFORMANCE		HOUSING COLOR		BOOT TYPE		BOOT COLOR		TAB LENGTH		TAB COLOR	
611	CS Connector APC Unassembled for up to 900 µm Cable	**153**	APC Premium	**3**	Green (APC)	**1**	900 µm BTW	**1**	White	**36**	36 mm	**W**	White
		158	APC Premium Low Loss										

611 - **153** - **311** - **36W** ORDER CODE example

Plastic Duplex Gang-Clip

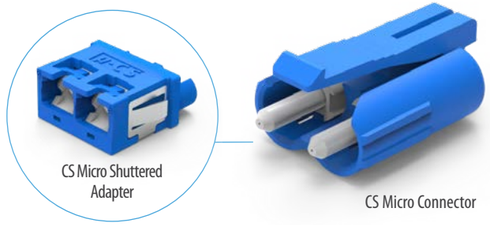
PART NUMBER	
601-CLPP-01-W	Plastic Duplex Gang-clip for CS EZ-Flip Connectors or CS Standard Connectors

601-CLPP-01-W ORDER CODE example

SENKO® Advanced Components

Micro CS® CONNECTOR

1-Channel (2F)
BTW (Behind The Wall)



The Micro CS® connector is the most compact option within the CS® connector family, delivering an optimal solution for space-saving requirements, particularly in BTW (Behind The Wall) applications. When used with Micro CS® adapters, it enables significant space reduction of up to 22.5 mm compared to standard adapters and connectors. This makes it an ideal choice for optoelectronic applications where sharing BTW space with fiber optic connectivity is crucial, allowing circuit boards and other essential components to coexist efficiently.

The Micro CS® connector follows a duplex design that combines two spring-loaded 1.25 mm ceramic ferrules within a single miniature structure. The upper face of the connector features a latch-locking mechanism, ensuring secure engagement with the adapter. Moreover, users benefit from an audible click, providing reassurance of a properly secured connection.

FEATURES

- Meets IEC random mating Grade B
- Robust design
- Reduced connector/boot length
- Single boot for 2 x 600/900 µm buffered fibers
- Proven LC ferrule technology
- Extra small for space-limited applications
- Integrated pull-tab for improved access

APPLICATIONS

- Pigtail splicing modules and panels
- MPO/CS® transition modules
- Patching modules and patch panels
- High-density cross connects
- High-density zone distribution
- Central office/head-end ODF
- Hydra assemblies

KEY BENEFITS

✔ **Reduced connector length**

Mechanical Data

	Value
Durability	500 matings per TIA-568
Fiber Count	Duplex *(2 fibers)*
Cable Suitablity	2 x 600/900 µm buffered fibers
Ferrule Material	Zirconia
Dust Protection Method	Removable dust plugs that encapsulate the ferrules

Optical Data

	Singlemode		Multimode
	UPC		MM
	SM Premium Low Loss	SM Premium	Premium
Typical Insertion Loss (dB)*	0.05	0.08	0.05
Max. Insertion Loss (dB)*	0.15	0.20	0.15
Typical Return Loss (dB)*	≥55	≥65	≥25
Ferrule (µm)	125.5		127

** Based on master grade jumper to low loss random mating test*

Environmental Data

	Value
Operating Temperature	-40°C to +75°C
RoHS Compliance	2015/863 RoHS
REACH Compliance	Yes
Free of Halogen	Yes
Humidity Resistance	95%

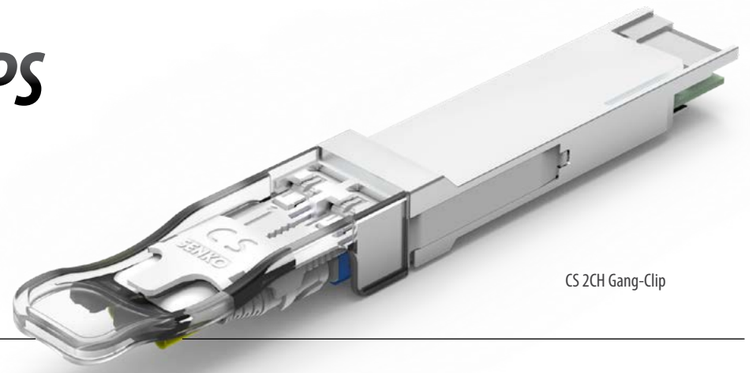
ORDERING

CONNECTOR TYPE		PERFORMANCE		HOUSING COLOR	
60B	Micro CS 1-Channel (2F) UPC Connector	**151**	SM Premium	**1**	Blue
		158	SM Premium Low Loss	**5**	Aqua
		251	MM Premium	**6**	Heather Violet

SENKO®
Advanced Components

CS® GANG-CLIPS

Duplex Design for QSFP-DD Transceivers



CS 2CH Gang-Clip

SENKO's CS® Gang-clips are designed to hold two individual CS® connectors side by side so they can be plugged into either 2-channel QSFP-DD transceivers simultaneously. This speeds up the patching time and simplifies the process of patching mulitple connectors - it also allows the two duplex connectors to act as a single Base-4 or Base-8 connector.

The Gang-clip is generally deployed in transceiver breakout applications where, for example, a single 400G transceiver is broken out to 2 x 200G transceivers within spine-leaf architectures. The Quad Gang-clip is also compatible with non-shuttered CS® adapters that share the same footprint as QSFP-DD and OSFP transceivers.

FEATURES

- Allows multiple CS® connectors to be patched simultaneously
- The compact design prevents interference with transceiver pull-tab
- Suitable for QSFP-DD transceivers
- Compatible with CS® EZ-Flip and CS® Standard Connectors
- Compatible with all CS® tab lengths and variants

APPLICATIONS

- Transceiver breakout applications
- Spine-leaf architectures
- Enterprise data centers
- Patching to standard CS® non-shuttered adapters

KEY BENEFITS

Patch 2 x CS® simultaneously to QSFP-DD

ORDERING

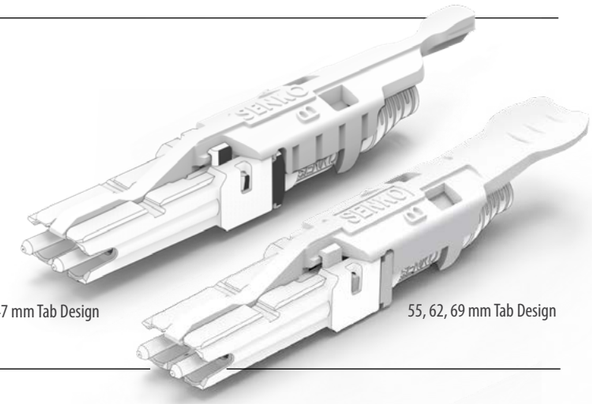
Plastic Duplex Gang-Clip

PART NUMBER	
601-CLPP-01-W	Plastic Duplex Gang-clip for CS EZ-Flip Connectors or CS Standard Connectors

601-CLPP-01-W ORDER CODE example

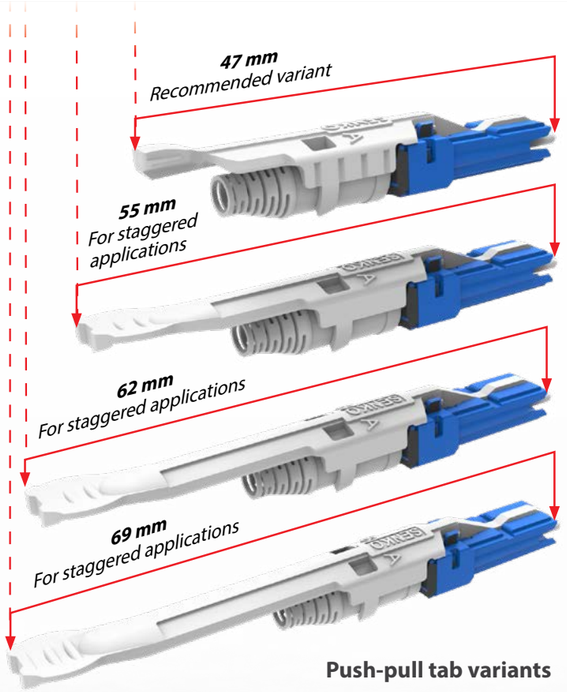
CS® PULL TABS

Pull Tabs Uniquely Optimized for Boot Length and Accessibility



47 mm Tab Design

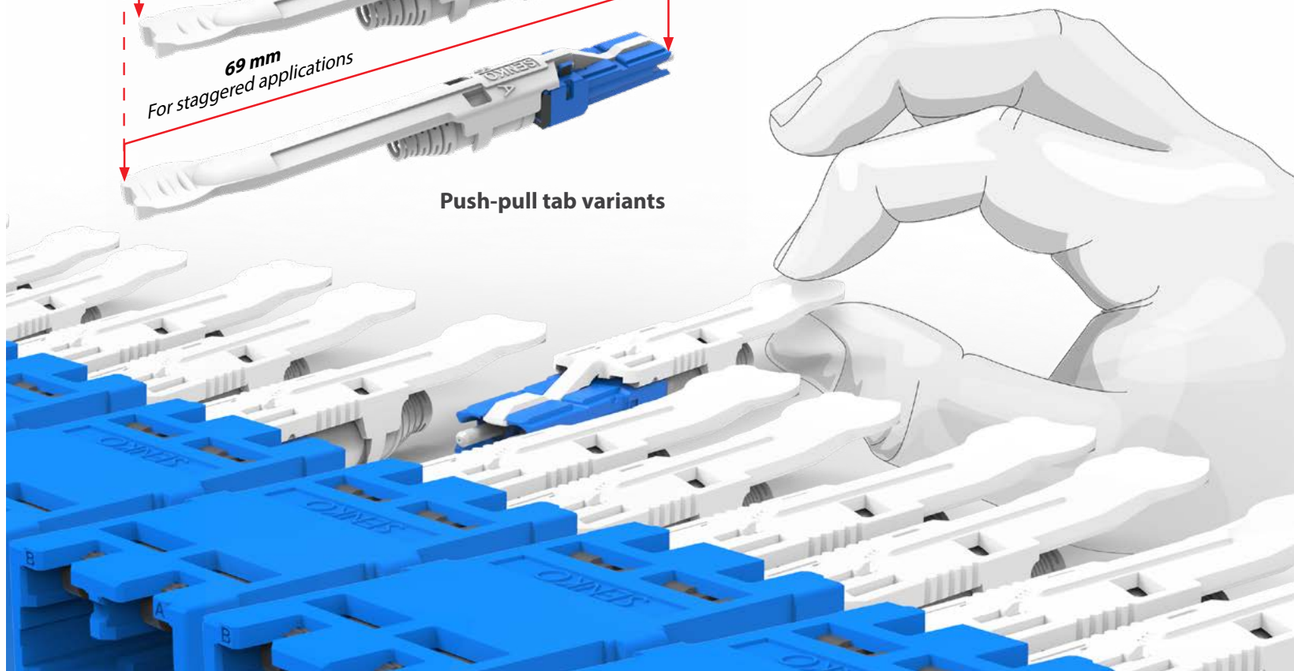
55, 62, 69 mm Tab Design



Push-pull tab variants

Push pull tabs can be ordered to suit the particular application and environment. The 47 mm tab is a standard length that suits most applications, however the loner tabs offer the ability to cascade tabs (shorter to longer) if necessary.

Tabs vary in design depending on length. The 47 mm tab has a slightly different grip design in order to optimise finger access in dense deployments.



SENKO®
Advanced Components

Sustainability

The density of CS® connectors allows operators to reduce the number of transceivers, switches, power-consumption, and racks needed to operate their data centers or telecom exchanges.

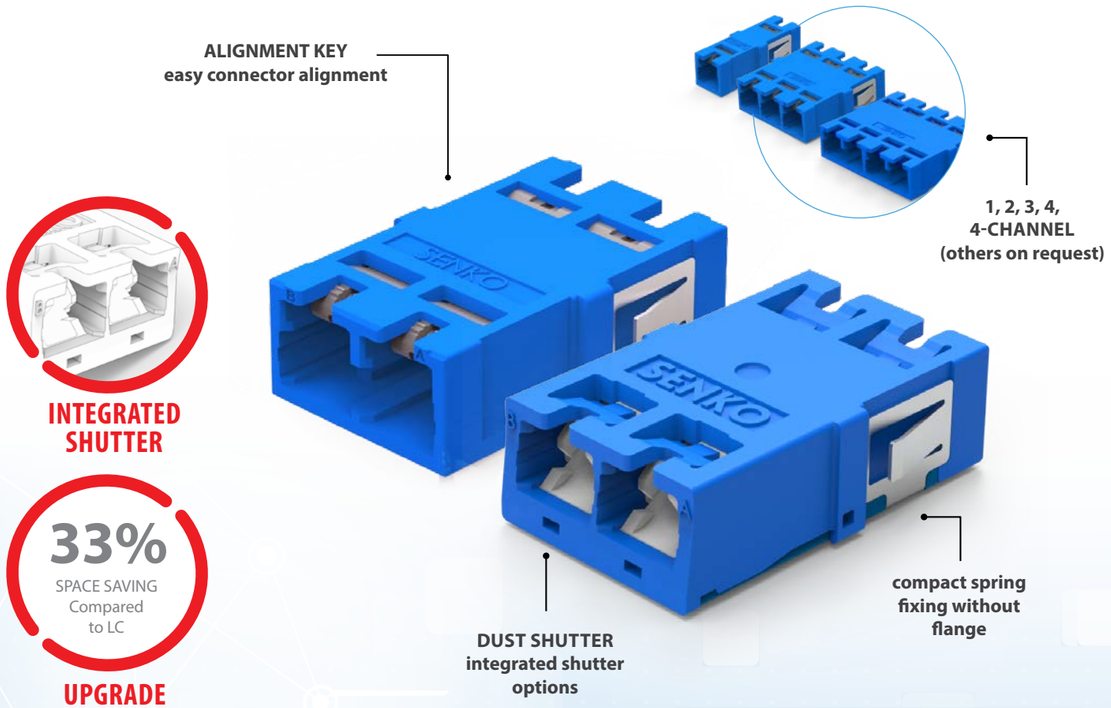
CS® ADAPTER

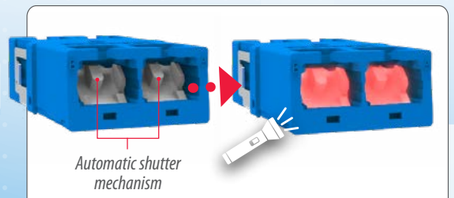
PATENTED PRODUCT senko.com/patents

RoHS Reach SVHC UL

SENKO Products are RoHS, Reach SVHC and UL 94 V-0 compliant.

Compact and modular adapters in a wide range of footprints to deliver maximum patch panel density across the network





CS AdapterTraceability

When trying to trace the adapter using a visible light source, you can see the red light glowing through the adapter sleeve.

SENKO®
Advanced Components

CS® for Density Upgrade of Legacy Networks

CS® ADAPTER Standard

1CH, 2CH and 4CH adapters for patch panel and module integration

- Standard Non-Shuttered pg. 44

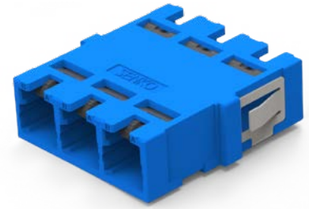
CS® ADAPTER Shuttered

2CH shuttered adapters for patch panel and module integration

- Standard Internal Shutters pg. 48

CS® ADAPTER SC/LC Footprint

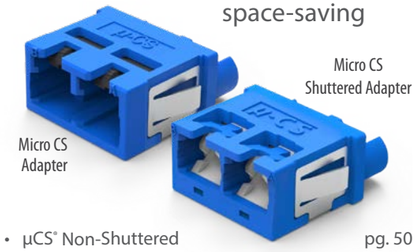
SC/LC footprint adapters for easy upgrades of legacy systems



- SC/LC Footprint Non-Shuttered pg.46

µCS® ADAPTER Non-Shuttered & Shuttered

2CH Micro adapters for maximum BTW space-saving



- µCS® Non-Shuttered pg. 50
- µCS® Shuttered pg. 52

E-1.0

CS® Application Guide

CS® Application Guide - V-Panel and Flat Panel

Total Capacity

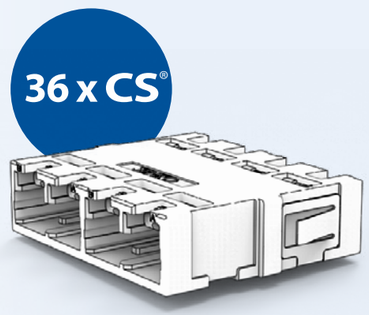
144 CH

288 F

(1RU single sided rack/ cabinet)

Effortlessly double the density of 144f UHD LC patch panels by opting for CS. Whether you align the 4-port adapter vertically or horizontally, you'll gain the advantage of distributing 8f blocks with gaps between each adapter, resulting in an impressive 288f per 1RU configuration.

HORIZONTAL Alignment ↔ **VERTICAL Alignment** ↕



8-port Non-shuttered Adapter

V-Panel

Panel Type: V-Panel 1RU
Total Density: 288 fibers
Qty of Adapters: 36 x 4-PORT

Flat Panel

Panel Type: Flat-Panel 1RU
Total Density: 288 fibers
Qty of Adapters: 36 x 4-PORT

Total Capacity

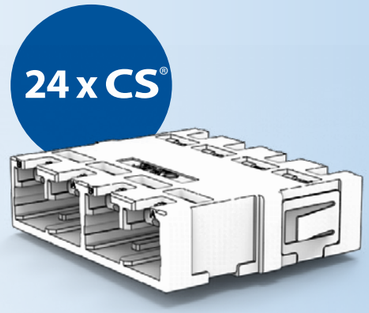
96 CH

192 F

(1RU single sided rack/ cabinet)

Enhance panel density by up to 33% compared to traditional systems, while achieving exceptional port identification and ensuring convenient access to connectors. Achieve an impressive panel density of 192f, which can be evenly divided into building blocks of 8, 12, 26, or 24f.

HORIZONTAL Alignment ↔ **VERTICAL Alignment** ↕

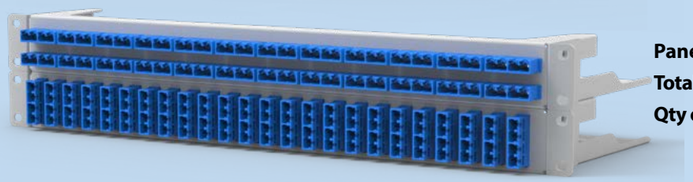


8-port Non-shuttered Adapter

V-Panel

Panel Type: V-Panel 1RU
Total Density: 192 fibers
Qty of Adapters: 24 x 4-PORT

Flat Panel



Panel Type: Flat-Panel 1RU
Total Density: 192 fibers
Qty of Adapters: 24 x 4-PORT

Total Capacity

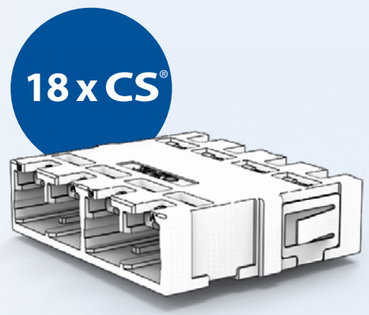
72 CH

144 F

(1RU single sided rack/ cabinet)

Switching from LC to CS not only maintains a density of 144f per 1RU, but also enhances port identification, traceability, and connector accessibility. This change facilitates the use of more straightforward and cost-effective hardware, and introduces the possibility of creating front-access systems, where MPO backbone adapters coexists on the same side as the CS adapters.

HORIZONTAL Alignment ↔ **VERTICAL Alignment** ↕



8-port Non-shuttered Adapter

V-Panel

Panel Type: V-Panel 1RU
Total Density: 144 fibers
Qty of Adapters: 18 x 4-PORT

Flat Panel

Panel Type: Flat-Panel 1RU
Total Density: 144 fibers
Qty of Adapters: 18 x 4-PORT

CS® Application Guide

CS® Application Guide - LGX Module

Total Capacity

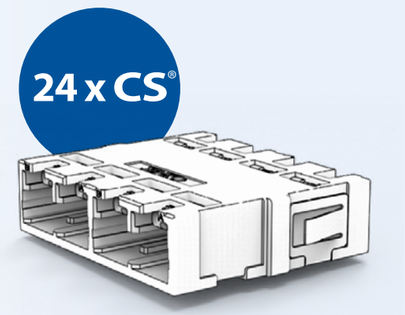
96 CH

192 F

(1RU single sided rack/ cabinet)

Enhance panel density by up to 33% compared to traditional systems, whilst achieving the flexibility and scalability offered by 'plug & play' LGX modules. A maximum of 4 x 48f modules can be integrated in a 1RU panel giving a total density of 196f overall. Adapters can be orientated vertically or horizontally subject to preference.

HORIZONTAL Alignment ↔ **VERTICAL Alignment** ↕



8-port Non-shuttered Adapter

LGX Module

Panel Type: LGX Modulel 1RU
Total Density: 192 fibers
Qty of Adapters: 24 x 4-PORT

Total Capacity

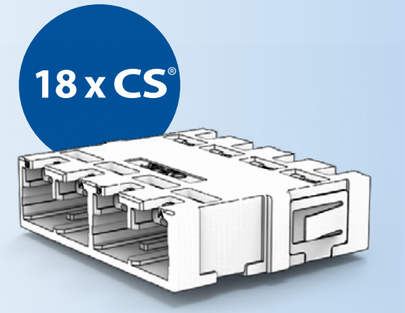
72 CH

144 F

(1RU single sided rack/ cabinet)

Match the 144f density of leading LC-based patch panels but optimize port identification and connector accessibility. LGX modules are more cost-effective to manufacture than injection-molded plastic cassettes and they offer a higher degree of customization. A maximum of 3 x 48f CS modules can be integrated with a horizontal adapter alignment.

HORIZONTAL Alignment ↔



8-port Non-shuttered Adapter

LGX Module

Panel Type: LGX Modulel 1RU
Total Density: 192 fibers
Qty of Adapters: 24 x 4-PORT

Total Capacity

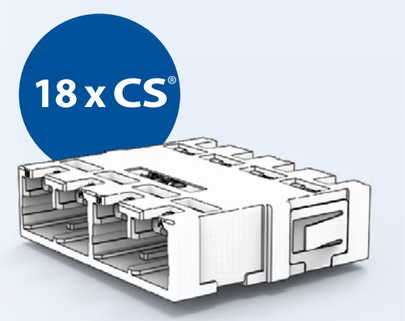
72 CH

144 F

(1RU single sided rack/ cabinet)

Increase scalability and granularity by integrating up to 6 x 24f CS modules into a 1RU panel. The vertical orientation of the adapters allows this modularity and still delivers the 144f bench-mark that operators have come to expect. Some degree of port identification can still be achieved with this configuration but numbering directly adjacent to the every port will not be possible.

VERTICAL Alignment ↕



8-port Non-shuttered Adapter

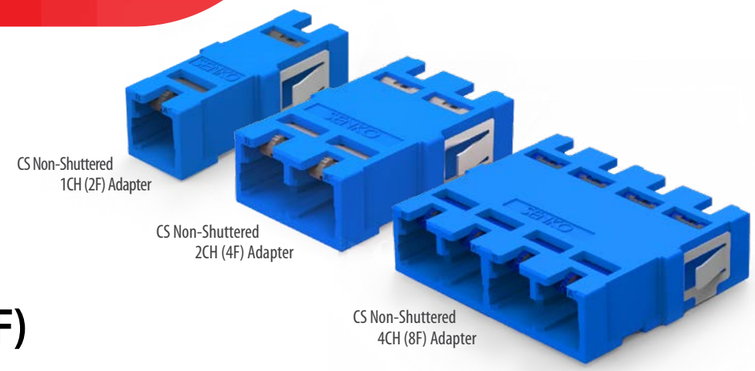
LGX Module

Panel Type: LGX Modulel 1RU
Total Density: 144 fibers
Qty of Adapters: 18 x 4-PORT

SENKO®
Advanced Components

CS® ADAPTER

Non-Shuttered 1 (2F), 2 (4F), and 4-Channel (8F)



SENKO's CS® adapters offer a range of non-shuttered options to cater to various fiber channel requirements. These adapters are available in three configurations: 1-channel (accommodating 2 fibers), 2-channel (accommodating 4 fibers), and 4-channel (accommodating 8 fibers).

The 1-channel adapter is specifically designed for applications that necessitate the segregation of individual optical channels, such as coherent optics or wave-splitting. On the other hand, the 2-channel and 4-channel variants prioritize maximizing patch panel density. The 4-channel adapter is particularly compatible with Base-8 applications, which are commonly deployed in data centers. These CS® adapters can be mounted horizontally or vertically, allowing for flexible configurations and density levels per 1RU (rack unit). This versatility enables the achievement of various density levels, ranging from 144 fibers per 1RU to an impressive 288 fibers per 1RU. This density is twice that of traditional LC-based patch panels.

It's important to note that these CS adapters are not retro-fittable to standard SC/LC cut-outs. Instead, they require a special aperture for installation. A metal spring clip securely holds the adapter in place, while large apertures in the upper face of the adapter clearly indicate the correct key alignment for connector insertion.

FEATURES

- Premium one-piece body design
- Up to 360 fibers per 1RU
- Accepts CS® standard and junior connectors
- Supports 200G/400G VSFF connectivity
- Color-coded for rapid identification of fiber-type
- Telcordia, ANSI, TIA and IEC compliant
- Identification aperture for fast and simple connector alignment

APPLICATIONS

- High-density patch panels
- LGX patching modules
- MPO-CS® transition modules and panels
- Opto-electronic equipment
- WDM equipment
- MUX and DEMUX equipment
- Mass server consolidation EoR, MoR

Mechanical Data

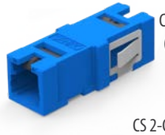
Mechanical Data	Value
Durability	500 matings per TIA-568
Fixing Method	Snap-fit *(adapter without flange)* or screw and nut *(adapter with flange)*
Housing Material Type	Plastic
Fixing Spring Material Type	Metal stainless steel
Sleeve Material	Zirconia
Dust Protection Method	Removable dust plugs

Optical Data

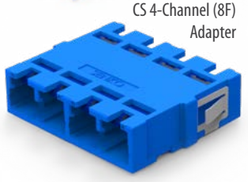
Optical Data	Value
Typical Insertion Loss (dB)*	0.10
Max. Insertion Loss (dB)*	0.20

* *Based on master grade jumper to low loss random mating test*

ORDERING


CS 1-Channel (2F) Adapter


CS 2-Channel (4F) Adapter


CS 4-Channel (8F) Adapter

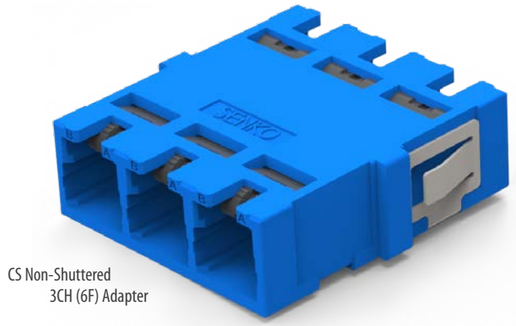
ADAPTER TYPE		FLANGE		HOUSING COLOR	
681	CS 1-Channel (2F) Adapter	1	With Flange	1	Blue
682	CS 2-Channel (4F) Adapter	2	Without Flange	3	Green
684	CS 4-Channel (8F) Adapter			7	Heather Violet
				9	Aqua

682 - 11 ORDER CODE example

Note: Adapter supplied with protective dust-cap on both sides

SENKO®
Advanced Components

CS® ADAPTER
Non-Shuttered SC/LC-Footprint 3-Channel (6F)



CS Non-Shuttered
3CH (6F) Adapter

SENKO's 3-channel (6f) SC/LC-footprint adapter is designed to offer backward compatibility with patch panels or modules incorporating SC duplex or LC Quad-sized cut-outs. This retro-fittable adapter is an excellent choice for cabling providers or equipment manufacturers seeking to upgrade their existing systems to CS® without redesigning new panels or hardware.

By incorporating this adapter, the density of LC-based hardware can be increased by an impressive 33%. This means that an LC Quad adapter supporting four LC connectors can be upgraded to an adapter capable of delivering six CS® connections.

In response to the increasing demand for enhanced patch panel density and reduced total cost per port, network operators are actively seeking fresh solutions. Upgrading from LC to CS® presents an ideal opportunity to achieve these goals while freeing up valuable rack space for other critical applications.

The non-shuttered SC/LC-footprint adapters can be conveniently stacked side-by-side within extended multi-adapter panel cut-outs without consuming additional space beyond the SC/LC footprint size. For instance, it is possible to place 6 adapters in one elongated slot if required, maximizing the utilization of available space.

FEATURES

- Retro-fittable to standard SC/LC panel cut-outs
- 33% more density than LC
- Accepts CS® standard and junior connectors
- Supports 200G/400G VSFF connectivity
- Color-coded for rapid identification of fiber-type
- Telcordia, ANSI, TIA and IEC compliant

APPLICATIONS

- Upgrading existing fiber management hardware from SC/LC to CS®
- Improved rack-space utilization in Brownfield data centers
- High-density patch panels
- LGX patching modules
- MPO-CS® transition modules and panels

KEY BENEFITS

✔ **Retro-fittable to SC/LC cut-outs**

Mechanical Data

Mechanical Data	Value
Durability	500 matings per TIA-568
Fixing Method	Snap-fit *(adapter without flange)* or screw and nut *(adapter with flange)*
Housing Material Type	Plastic
Fixing Spring Material Type	Metal stainless steel
Sleeve Material	Zirconia
Dust Protection Method	Removable dust plugs

Optical Data

Optical Data	Value
Typical Insertion Loss (dB)*	0.10
Max. Insertion Loss (dB)*	0.20

** Based on master grade jumper to low loss random mating test*

Environmental Data

Environmental Data	Value
Operating Temperature	-40°C to +75°C
RoHS Compliance	2015/863 RoHS
REACH Compliance	Yes
Free of Halogen	Yes
Humidity Resistance	95%

ORDERING


CS 3-Channel (3F)
Adapter

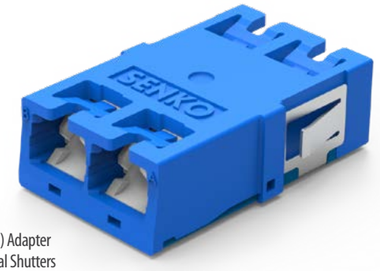
ADAPTER TYPE		FLANGE		HOUSING COLOR	
683	CS 3-Channel (6F) Adapter	**1**	With Flange	**1**	Blue
		2	Without Flange	**3**	Green
				7	Heather Violet
				9	Aqua

683 - 11 ORDER CODE example

Note: Adapter supplied with protective dust-cap on both sides

SENKO®
Advanced Components

CS® ADAPTER
Standard
Internal Shutters
2-Channel (4F)



CS 2CH (4F) Adapter
with Internal Shutters

SENKO's 2-Channel (4f) shuttered adapter is specifically designed to enhance ingress protection and laser safety during regular Moves, Adds, and Changes (MACs) in network operations. The adapter incorporates an internal shutter that only opens when the outer body of the CS® connector makes contact during insertion. This automatic operation streamlines the patching process and eliminates the need for individual dust plugs that are often misplaced or lost.

The shutter material is crafted from a special translucent substance, enabling technicians to trace the adapter port using a visible light source from the other end of the link. Additionally, this material possesses a low refractive index, effectively reducing the amount of harmful light that may emanate from the adapter during operation.

Offering exceptional flexibility, the 2-channel adapter can be mounted horizontally or vertically, allowing for a multitude of patch panel configurations. This versatility facilitates different density levels, ranging from an impressive 144 fibers per 1RU to an even more remarkable 288 fibers per 1RU. This density is twice that of traditional LC-based patch panels.

FEATURES

- Premium one-piece body design
- Up to 360 fibers per 1RU
- Integrated shutter reduces impact of dust and dirt ingress
- Accepts CS® standard and junior connectors
- Supports 200G/400G VSFF connectivity
- Color-coded for rapid identification of fiber-type
- Telcordia, ANSI, TIA and IEC compliant
- Identification aperture for fast and simple connector alignment

APPLICATIONS

- High-density patch panels
- LGX patching modules
- MPO-CS® transition modules and panels
- Opto-electronic equipment
- WDM equipment
- MUX and DEMUX equipment
- Mass server consolidation EoR, MoR

KEY BENEFITS

✔ **Integrated shutter**

Mechanical Data

Mechanical Data	Value
Durability	500 matings per TIA-568
Fixing Method	Snap-fit *(adapter without flange)* or screw and nut *(adapter with flange)*
Housing Material Type	Plastic
Fixing Spring Material Type	Metal stainless steel
Sleeve Material	Zirconia
Dust Protection Method	Integrated shutter mechanism *(operated by connector insertion)*

Optical Data

Optical Data	Value
Typical Insertion Loss (dB)*	0.10
Max. Insertion Loss (dB)*	0.20

* *Based on master grade jumper to low loss random mating test*

Environmental Data

Environmental Data	Value
Operating Temperature	-40°C to +75°C
RoHS Compliance	2015/863 RoHS
REACH Compliance	Yes
Free of Halogen	Yes
Humidity Resistance	95%

ORDERING

CS Adapter with
Internal Shutters

ADAPTER TYPE		FLANGE		HOUSING COLOR	
682S	CS 2-Channel (4F) Shuttered Adapter	**1**	With Flange	**1**	Blue
		2	Without Flange	**3**	Green
				7	Heather Violet OM4
				9	Aqua OM3

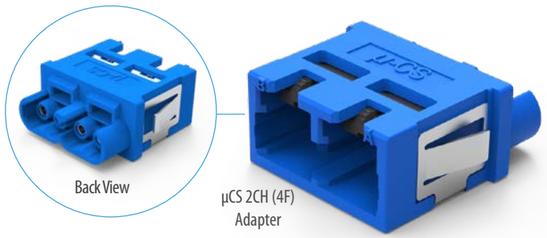
682S - 11 ORDER CODE example

Note: Adapter supplied with protective dust-cap on both sides
Contact sales@senko.com for other channel configurations

Contact SENKO

SENKO®
Advanced Components

Micro CS® ADAPTER
Non-Shuttered
2-Channel (4F)



SENKO's 2-Channel (4f), non-shuttered, Micro CS® adapter is designed to provide maximum packing density at the front of patch panels while significantly reducing the space consumption at the rear of the panel for BTW (Behind The Wall) connectivity. Combined with Micro CS® connectors, as much as 20 mm can be saved compared with standard adapters and connectors, making it the ideal solution for optoelectronic applications requiring circuit boards or other vital components to share the same space as fiber optic connectivity.

Offering exceptional flexibility, the 2-channel adapter can be mounted horizontally or vertically, allowing for many patch panel configurations. This versatility facilitates different density levels, ranging from an impressive 144 fibers per 1RU to an even more remarkable 288 fibers per 1RU. This density is twice that of traditional LC-based patch panels.

It's worth noting that this CS® adapter cannot be retro-fitted into standard SC/LC cut-outs. Instead, it requires a special aperture for installation. To secure the adapter in place, a metal spring clip is utilized, while large apertures on the upper face of the adapter indicate the correct key alignment for connector insertion.

FEATURES

- Premium one-piece body design
- Up to 360 fibers per 1RU
- Integrated shutter reduces impact of dust and dirt ingress
- Accepts CS® standard and junior connectors
- Supports 200G/400G VSFF connectivity
- Color-coded for rapid identification of fiber-type
- Telcordia, ANSI, TIA and IEC compliant
- Identification aperture for fast and simple connector alignment

APPLICATIONS

- High-density patch panels
- LGX patching modules
- MPO-CS® transition modules and panels
- Opto-electronic equipment
- WDM equipment
- MUX and DEMUX equipment
- Mass server consolidation EoR, MoR

KEY BENEFITS

Maximum BTW space-saving

Mechanical Data

Mechanical Data	Value
Durability	500 matings per TIA-568
Fixing Method	Snap-fit *(adapter without flange)* or screw and nut *(adapter with flange)*
Housing Material Type	Plastic
Fixing Spring Material Type	Metal stainless steel
Sleeve Material	Zirconia
Dust Protection Method	Removable dust plugs

Optical Data

Optical Data	Value
Typical Insertion Loss (dB)*	0.10
Max. Insertion Loss (dB)*	0.20

* *Based on master grade jumper to low loss random mating test*

Environmental Data

Environmental Data	Value
Operating Temperature	-40°C to +75°C
RoHS Compliance	2015/863 RoHS
REACH Compliance	Yes
Free of Halogen	Yes
Humidity Resistance	95%

ORDERING

Micro CS (4F)
2-Channel Adapter

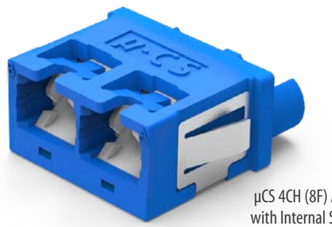
ADAPTER TYPE		FLANGE		HOUSING COLOR	
682U	µCS 2-Channel (4F) Adapter	**1**	With Flange	**1**	Blue
		2	Without Flange	**7**	Heather Violet
				9	Aqua

682U - **11** ORDER CODE example

Note: Adapter supplied with protective dust-cap on both sides

SENKO Advanced Components

Micro CS® ADAPTER
Internal Shutters 2-Channel (4F)



µCS 4CH (8F) Adapter with Internal Shutuers

SENKO's 2-Channel (4f), shuttered, Micro CS® adapter is designed to provide maximum packing density at the front of patch panels while significantly reducing the space consumption at the rear of the panel for BTW (Behind The Wall) connectivity. Combined with Micro CS® connectors, as much as 20 mm can be saved compared with standard adapters and connectors, making it the ideal solution for optoelectronic applications requiring circuit boards or other vital components to share the same space as fiber optic connectivity.

This shuttered adapter enhances ingress protection and laser safety during regular Moves, Adds, and Changes (MACs) in network operations. The adapter incorporates an internal shutter that only opens when the outer body of the CS® connector makes contact during insertion. This automatic operation streamlines the patching process and eliminates the need for individual dust plugs that are often misplaced or lost. The shutter material is crafted from a special translucent substance, enabling technicians to trace the adapter port using a visible light source from the other end of the link. Additionally, this material possesses a low refractive index, effectively reducing the harmful light that may emanate from the adapter during operation.

FEATURES

- Premium one-piece body design
- Up to 360 fibers per 1RU
- Integrated shutter reduces impact of dust and dirt ingress
- Accepts CS® standard and junior connectors
- Supports 200G/400G VSFF connectivity
- Color-coded for rapid identification of fiber-type
- Telcordia, ANSI, TIA and IEC compliant
- Identification aperture for fast and simple connector alignment

APPLICATIONS

- High-density patch panels
- LGX patching modules
- MPO-CS® transition modules and panels
- Opto-electronic equipment
- WDM equipment
- MUX and DEMUX equipment
- Mass server consolidation EoR, MoR

KEY BENEFITS

- **Maximum BTW space-saving**
- **Integrated shutters**

Mechanical Data

Mechanical Data	Value
Durability	500 matings per TIA-568
Fixing Method	Snap-fit *(adapter without flange)* or screw and nut *(adapter with flange)*
Housing Material Type	Plastic
Fixing Spring Material Type	Metal stainless steel
Sleeve Material	Zirconia
Dust Protection Method	Integrated shutter mechanism *(operated by connector insertion)*

Optical Data

Optical Data	Value
Typical Insertion Loss (dB)*	0.10
Max. Insertion Loss (dB)*	0.20

* *Based on master grade jumper to low loss random mating test*

Environmental Data

Environmental Data	Value
Operating Temperature	-40°C to +75°C
RoHS Compliance	2015/863 RoHS
REACH Compliance	Yes
Free of Halogen	Yes
Humidity Resistance	95%

ORDERING

Micro 2-Channel (4F) Shuttered Adapter

ADAPTER TYPE		FLANGE		HOUSING COLOR	
682US	Micro CS 2-Channel (4F) Shuttered Adapter	**1**	With Flange	**1**	Blue
		2	Without Flange	**3**	Green
				7	Heather Violet
				9	Aqua

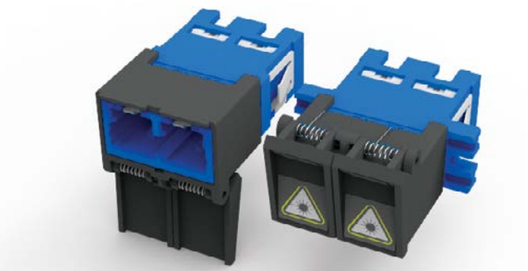
682US - 11 ORDER CODE example

Note: Adapter supplied with protective dust-cap on both sides

SENKO® Advanced Components

Complimentary Products in the CS® Family

CS® ADAPTER
External Shutters 2-Channel (4F)



Upgrade your 2-Channel CS adapters with these retrofittable external dust shutters to ensure optimal performance, cleanliness, and laser safety. Experience enhanced protection and preserve the integrity of your optical connections with this valuable accessory.

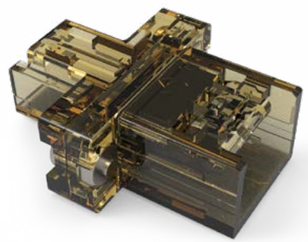
ORDERING

PART NUMBER	
682-XX-E22	CS Adapter with External Shutters

682-XX-E22 ORDER CODE example

Note: Adapter supplied with protective dust-cap on both sides

CS®-LC
HYBRID TESTING ADAPTER
1-Channel LC (2F)



The Hybrid Testing Adapter is a versatile solution that allows operators to seamlessly connect a simplex LC test cord to a CS duplex assembly. This adapter offers flexibility by allowing the LC connector to be repositioned based on the specific CS ferrule being tested.

ORDERING

PART NUMBER	
680-0	CS-LC Hybrid Testing Adapter - Single LC Channel

680-0 ORDER CODE example

Note: Adapter supplied with protective dust-cap on both sides

Complimentary Products in the CS® Family

CS® LOOPBACK

The CS Loopback allows network operators, technicians, and equipment manufacturers to validate the functionality and performance of CS interfaces. By creating a loop within the connector itself, the CS Loopback facilitates the transmission of signals back to the source without requiring an external loopback cable or additional equipment.

ORDERING

PART NUMBER	
LBP-CS-XXX-XX	CS Loopback

LBP-CS-XXX-XX ORDER CODE example

SENKO®
Advanced Components

CS® Maintenance

SENKO provides a comprehensive portfolio of 'factory-based' and 'field-based' tools and accessories to support the assembly, deployment and maintenance of CS® connectivity.

SENKO®
Advanced Components

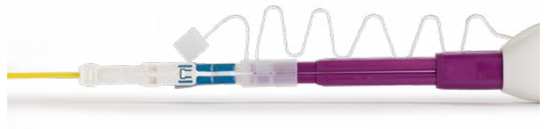
CS® Click Cleaners for In-Adapter and Mated

One Click
Duplex CS

The ONE-CLICK DUPLEX CS CLEANER is effective for wiping away residues and dust contamination from CS/UPC and CS/APC end faces. The dual cleaning tips clean both end-faces with each engagement. This makes this cleaner ideal for high density applications including hyperscale data centers and central offices.

ORDERING

SN CLEANING	
SCK-DC-CS	ONE-CLICK DUPLEX CS 1000 end faces *(500 cleanings)*



Smart Cleaner™
Mini 1.25mm

The SMART CLEANER MINI 1.25MM tool effectively cleans residue and dust-based contamination from fiber optic end-faces. Its small form factor allows for cleaning in tight spaces while still allowing up to 400 connectors to be cleaned.

ORDERING

ORDERING	
SCK-SS-M-C125	SMART CLEANER MINI 1.25MM *(400 cleanings)*

CS® Click and Stick Cleaners

Smart Cleaner™
CS-LC

SENKO SMART CLEANER CS-LC is an effective option for cleaning residues and dust from the end faces. The key feature on the cleaning tip enables the cleaner to clean in adapter and unmated CS and LC connectors. This cleaner opens the internal shutter LC adapters.

ORDERING

ORDERING	
SCK-SS-CS	SMART CLEANER CS-LC *(750 cleanings)*
SCK-SS-CS-R	Refill for750 cleanings

NEOCLEAN Stick
1.25 MM

The 1.25MM NEOCLEAN sticks are an effectively option for wiping away residue and dust contamination from the CS end-faces of in adapter assemblies and transceiver ports. The fabric cleaning tip enables cleaning without the need for solvents. The hexagon shaped handle with notches prevent accidental roll aways and shortening the handle for use in confined spaces.

ORDERING

ORDERING	
CSK-01	1.25 MM NEOCLEAN Stick

Note: Sticks are sold individually in increments of 10

SENKO®
Advanced Components

Cassette for Unmated CS®

Smart Cleaner™ Cassette

The SMART CLEANER CASSETTE is an economical cleaning device that utilizes a micro-woven fabric cleaning ribbon for wiping away residue and dust-based contamination from fiber optic end faces. A manual advance of the cleaning ribbon allows operators to maximize the efficiency of the product in operation.

ORDERING

ORDERING	
SCK-CC-100	SMART CLEANER CASSETTE *Cleans Unpinned MT and Single Fiber*

Optipop R Cassette

The OPTIPOP R cassette effectively wipes residue, and dust-based contamination from ferrule end faces. The cassettes feature an ergonomic trigger for advancing a fresh section of the micro woven cleaning ribbon with engagement. Using replacement cleaning spools will lower your overall cleaning costs.

ORDERING

ORDERING	
CRE-01	OPTIPOP R Single Slot *Cleans Unpinned MT and Single Fiber*
CRC-RS-01	Refill for 800 Duplex Connector End Faces

Cleaning Consumables

OPTRES Gel Cleaner

The OPTRES Gel Cleaning Pad by Tomoegawa uses optical-grade cleaning gel. The cleaning process is as simple as pulling back the cover and touching the end face of the connector onto the gel. The OPTRES Gel Cleaning Pad's compact size makes it ideal for use with test equipment and network installation cleaning kits. The gel material is non-toxic and non-flammable. Compatible with SN, SN-MT, CS and MPO connectors.

ORDERING

SN CLEANING	
SCK-PT-MPO-01	OPTRES GEL Cleaning Pad

Optical Grade Wipes

SENKO'S Optical Grade Wipes are ideal for cleaning your network's connectors end faces and bare fibers including ribbons for splicing. The wipes are lint free, soft and highly absorbent. There are 100 4X4 wipes in the resealable bag.

ORDERING

SN CLEANING	
AFT-G-NW	OPTICAL GRADE Wipes

Note: Wipes are sold in packs of 100

SENKO®
Advanced Components

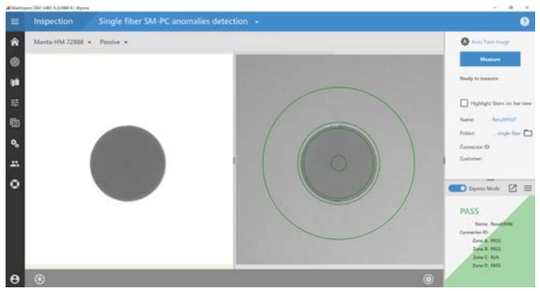
End Face Metrology & Polarity Management

SUMIX Manta Inspection Scope

The MANTA inspection scope is designed for high-performance inspection of all types of single fiber and multi-fiber optical connectors, patch cords and bulkheads. The MANTA inspection scope is used to detect scratches, contamination and other surface defects as small as 0.75µm on the end face of the connector.

FEATURES

- Extremely fast inspection taking 2 seconds to check a standard MPO connector (12 or 16 fibers)
- Detailed high-resolution picture with 1.8 µm resolution and 0.75 µm defect size detection capability
- Large field of view (4.1 × 3.0 mm) and able to see beyond the guide pins and guide pin holes



The MAXINSPECT inspection software has an autofocus feature and will perform highly accurate and repeatable measurements of the ferrule end face. The software default is set to IEC 61300-3-35 and offers the user the ability to customize the pass-fail measurements for customized reports.

ORDERING

ORDERING	
SMX-Manta-W+	SUMIX Manta Benchtop Inspection Scope
SMX-Manta-HM	SUMIX Manta-HM Benchtop Inspection Scope

ACCESSORIES	
MNT-CS-LC-PC-F-A	Inspection of in adapter CS/UPC and QSFP transceivers
MNT-W-CS-PC-F	Inspection of CS/UPC duplex connectors in adapters with 2 ferrules visible at once
SMX-T-1.25/PC-M	Inspection of unmated CS/UPC assemblies
SMX-T-1.25/APC-M	Inspection of unmated CS/APC assemblies
MNT-ADP	Adapter for use with the SMX inspection tips
MNT-W-STAND	Benchtop stand for MANTA W+ and HM scopes

End Face Metrology & Polarity Management

SUMIX MAX Quantum Interferometer

The MANTA inspection scope is designed for high-performance inspection of all types of single fiber and multi-fiber optical connectors, patch cords and bulkheads. The MANTA inspection scope is used to detect scratches, contamination and other surface defects as small as 0.75 µm on the end face of ferrule.

ORDERING

ACCESSORIES	
MAX-F-1.25/PC-CS	Fixture for measuring CS/UPC
MAX-F-1.25/APC-CS-S	Fixture for CS/APC angles same direction
MAX-F-1.25/APC-CS-O	Fixture for CS/APC angles opposite direction

Smart Checker™ Visual Fault Locator (VFL)

The Visual Fault Locator (VFL) is an effective tool for verifying continuity and polarity. The VFL has a range of >5KM with continuous wave or pulse mode.

ORDERING

ACCESSORIES	
AFT-G-FC	Smart Checker VFL
AFT-G-CAC	1.25 mm Adapter

APC Ferrule Alignment Tool

The APC ferrule alignment tool allows technicians to align the APC ferrules after the connector polishing process.

ORDERING

SN CLEANING	
TL-611-APC-1 APC	APC Ferrule Alignment Tool

SENKO®
Advanced Components

sales@senko.com
1-858-623-3300

senko.com/contact