A Managed Fiber Patch Panel with a
Focus on Security & Automation

Introducing Sensus by **Fiber Mountain, an intelligent high-density** managed patching solution for securing & automating fiber connectivity.

Introduction

The Fiber Mountain Sensus is a managed patched panel solution for securing & automating fiber connectivity. When utilized alongside AllPath® Director (APD), it revolutionizes the physical infrastructure of your data center, offering real-time insights and dynamically mapping intricate connections amid a multitude of cables. Sensus LC and MPO ports can detect cable presence and read cable information directly from any cable enabled with Fiber Mountain ICID (Intelligent Connection Identification) technology. A Sensus chassis consists of three modules: a management module with an integrated touchscreen display, and two interchangeable patching modules. Patching modules are available with front-to-rear and front access-only fiber connections for Single Mode (OS2) and Multimode (OM4) fiber with 48, 72, 96, 144, and 192 fiber density configurations.

Regulatory & Certifications
UL 60950
IEC 62368-1
CSA C22.2#62368-1
EN 55022 Class B
CENELAC EN 55032
CENELAC EN 55054
FCC 47 CFR Part 15 Subpart B
FCC Part 15 Subpart C 15.225
CISPR 32
ETSI EN 301 489-1
ETSI EN 301 489-3

Chassis Specifications	
Weight	4.15 lbs
Rack Mounting	Fits 19", 21" and 23" racks
Slots	3 (2 patching modules, 1 management module)
Dimensions (H/W/D)	3.45" x 17.44" x 8.67" (8.67 cm x 44.30 cm x 22.02 cm)

Management Module Specifications	
Weight	3.2 lbs
Dimensions	3.23" x 4.31" x 8.77" (8.20 cm x 10.95 cm x 22.28 cm)

Patching Module Specifications	
Weight	3.6 lbs
Dimensions	3.23" x 6.35" x 8.87" (8.20 cm x 16.13 cm x 22.53 cm)

Technical Specifications	
Voltage	100-240 VAC @ 0.25A, 50/60 Hz
Fuse Rating	1.6A, 250V Time Lag
Power Consumption	<25 Watts

Sensus™ Patching Modules with Front-to-Front Mapping

Catalog No.	Fiber Type	Port Configuration		Fiber Mapping	Color	Example Use Cases
Single Mode		Front A	Front B			
DX-2674-002	SM OS2	36xDuplex LC	3xMPO-24	Type HD-C	White	LC Aggregation to Single Mode 24-Fiber Cable
DX-2672-002	SM OS2	36xDuplex LC	6xMPO-12	Type A	White	LC Aggregation to Single Mode 12-Fiber Cable
DX-2646-002	SM OS2	24xDuplex LC	6xMPO-8	Type A	White	LC Aggregation to Single Mode 8-Fiber Cable
DX-2884-002	SM OS2	12xMPO-08	4xMPO-24	Type HD-A	White	Breakout for MPO-24 to MPO-8
Multimode		Front A	Front B			
DX-2774-002	MM OM4	36xDuplex LC	3xMPO-24	Type HD-C	White	LC Aggregation to Single Mode 24-Fiber Cable
DX-2772-002	MM OM4	36xDuplex LC	6xMPO-12	Type A	White	LC Aggregation to Single Mode 12-Fiber Cable
DX-2746-002	MM OM4	24xDuplex LC	6xMPO-8	Type A	White	LC Aggregation to Single Mode 8-Fiber Cable

Sensus™ Patching Modules with Front-to-Rear Mapping

Catalog No.	Fiber Type	Port Configuration		Fiber Mapping	Color	Example Use Cases
Single Mode		Front	Rear			
DX-2484-002	SM OS2	48xDuplex LC	4xMPO-24	Type HD-C	White	LC Aggregation to Single Mode 24-Fiber Cable
DX-2444-002	SM OS2	24xDuplex LC	2xMPO-24	Type HD-C	White	LC Aggregation to Single Mode 24-Fiber Cable
DX-2482-002	SM OS2	48xDuplex LC	8xMPO-12	Type A	White	LC Aggregation to Single Mode 12-Fiber Cable
DX-2442-002	SM OS2	24xDuplex LC	4xMPO-12	Type A	White	LC Aggregation to Single Mode 12-Fiber Cable
DX-2488-002	SM OS2	48xDuplex LC	12xMPO-8	Type A	White	LC Aggregation to Single Mode 8-Fiber Cable
DX-2446-002	SM OS2	24xDuplex LC	6xMPO-8	Type A	White	LC Aggregation to Single Mode 8-Fiber Cable
DX-2864-002	SM OS2	12xMPO-8	4xMPO-24	Type HD-A	White	Breakout for MPO-24 to MPO-8
DX-2834-002	SM OS2	6xMPO-8	2xMPO-24	Type HD-A	White	Breakout for MPO-24 to MPO-8
DX-2655-002	SM OS2	36xDuplex LC	36xDuplex LC	Type A-A	White	Breakout for LC-to-LC
Multimode		Front	Rear			
DX-2584-002	MM OM4	48xDuplex LC	4xMPO-24	Type HD-C	White	LC Aggregation to Single Mode 24-Fiber Cable
DX-2544-002	MM OM4	24xDuplex LC	2xMPO-24	Type HD-C	White	LC Aggregation to Single Mode 24-Fiber Cable
DX-2582-003	MM OM4	48xDuplex LC	8xMPO-12	Type C	White	LC Aggregation to Single Mode 12-Fiber Cable
DX-2542-002	MM OM4	24xDuplex LC	4xMPO-12	Type A	White	LC Aggregation to Single Mode 12-Fiber Cable
DX-2588-002	MM OM4	48xDuplex LC	12xMPO-8	Type A	White	LC Aggregation to Single Mode 8-Fiber Cable
DX-2546-002	MM OM4	24xDuplex LC	6xMPO-8	Type A	White	LC Aggregation to Single Mode 8-Fiber Cable
DX-2964-002	MM OM4	12xMPO-8	4xMPO-24	Type HD-A	White	Breakout for AP-4240, MPO-24 to MPO-8
DX-2934-002	MM OM4	6xMPO-8	2xMPO-24	Type HD-A	White	Breakout for AP-4240, MPO-24 to MPO-8
DX-2755-002	MM OM4	36xDuplex LC	36xDuplex LC	Type A-A	White	Breakout for LC-to-LC

Sensus™ Chassis & Management Module

Catalog No.	Description
DX-2000-002	Sesnsus Chassis, White*
DX-2100-002	Management Module with Display, White*

*Both a Chassis and a Management Module are needed for a complete intelligent solution.

Management Module

The Sensus management module contains

• Near-Field Communications (NFC) technology to read ICID-enabled cables

• Four-inch (4") LCD touchscreen

• Built-in AC input power redundancy to protect Sensus from a power failure

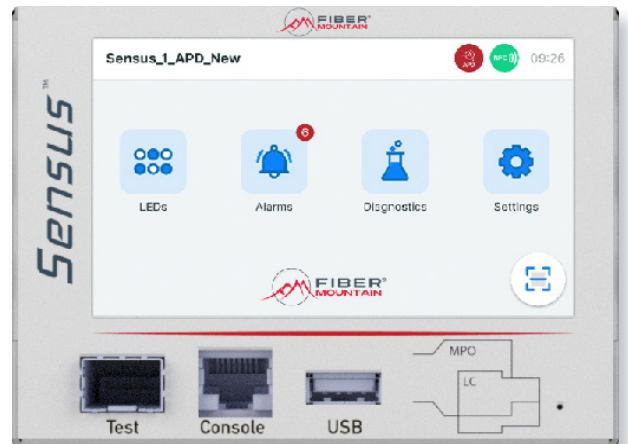• PoE+ (Power Over Ethernet, Plus) an alternate power source

Figure 1: Sensus™ Management Module

Patching Modules

• Hot-swappable break out or aggregate fiber patch panels

• LC Duplex to LC Duplex

• MPO8 to 4xLC Duplex

• MPO12 to 6xLC Duplex

• MPO24 to 12x LC Duplex

• MPO24 to 3xMPO

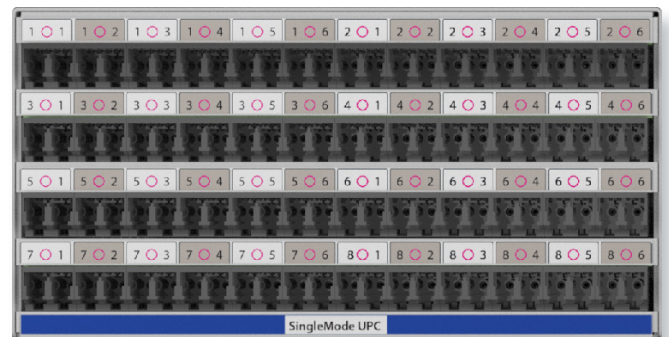• Single Mode OS2 fiber or Multimode OM4 fiber options

Figure 2: Sensus™ Patching Module

Sensus Accessories

Mounting Ears

Mounting ears are used to mount a Sensus on to a rack for easy data center deployment and equipment access.

- **Compatibility:** Sensus can be easily mounted on a standard 19" and 23" rack, providing flexibility for various installation setups

- **Configuration Options:** Available in 2RU and 4RU configurations
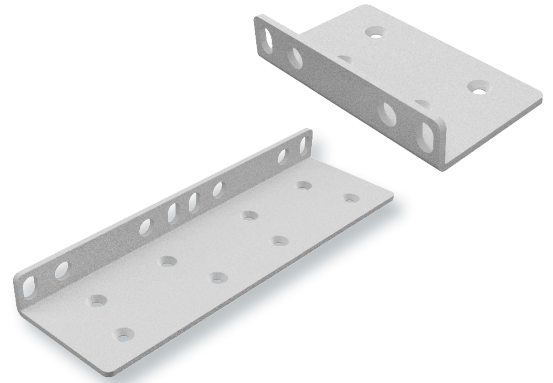

Figure 3: Mounting Ear

Sensus™ Front Cover

- **Cable Management:** Designed with cable management in mind, helping to keep your installation tidy and organized

- **Transparent Front Lid:** Featuring a transparent front lid, which allows you to easily view and access deployed connections

- **Configuration Options:** Available in 2RU and 4RU configurations, catering to different installation needs
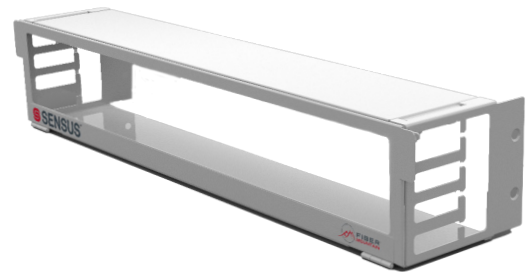

Figure 4: Sensus Front Cover

Sensus™ Rear Fiber Management

- **Cable Management:** Provides cable management ability at the rear to keep connections organized

- **Multiple Configurations:** Available in four different configurations to accommodate your preferences and requirements:

  - 2RU
  - 2RU Compact
  - 4RU
  - 4RU Compact

- **Fiber Optic Cable Splicing:** Suitable for splicing fiber optic cables, ensuring reliable connectivity and data transmission
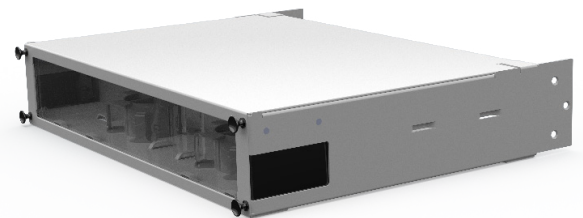

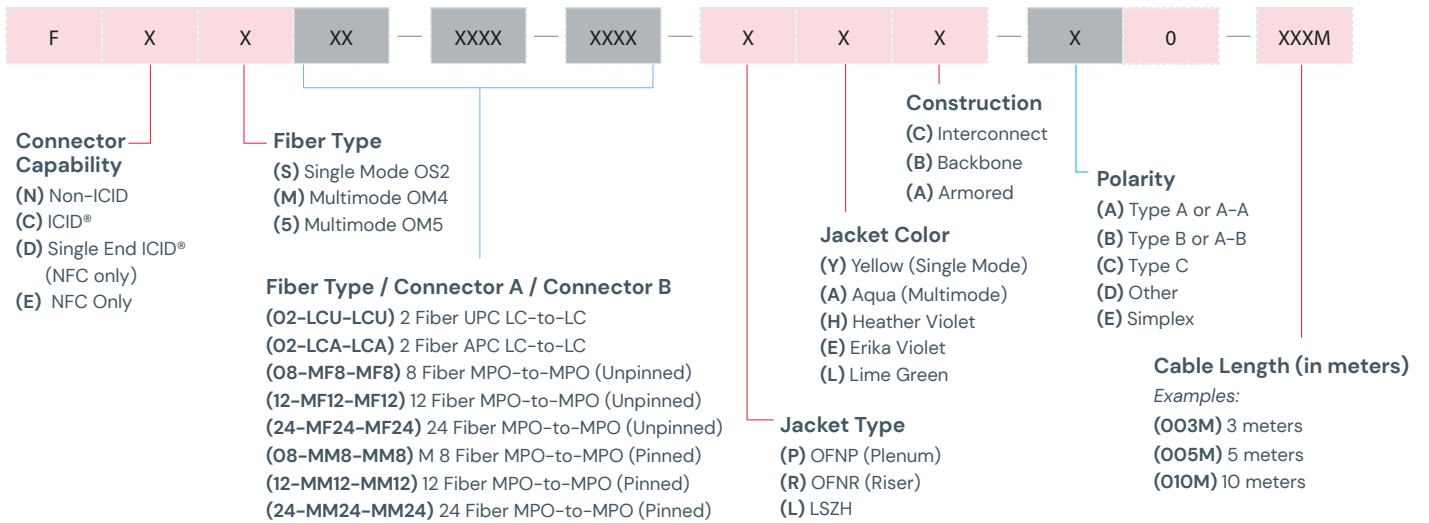Figure 5: Sensus Rear Fiber Management Tray

ICID-Enabled Cables with NFC

- Couple with Fiber Mountain products to provide a managed physical layer

- Capable of handling high-speed 10G, 25G, 40G, or 100G applications

- High quality bend-insensitive cables

- Robust LC Duplex and MPO connectors to minimize insertion and return loss

- Single Mode or Multimode with either A, B, or C polarity

- UL-rated Plenum, Riser, or LSZH jackets

Figure 6: ICID Enabled Cables

Fiber Cable Catalog Number Configuration

| F | X | X | XX | XXXX | XXXX | - | X | X | X | - | X | 0 | - | XXXM |

Connector Capability
(N) Non-ICID
(C) ICID®
(D) Single End ICID® (NFC only)
(E) NFC Only

Fiber Type
(S) Single Mode OS2
(M) Multimode OM4
(5) Multimode OM5

Fiber Type / Connector A / Connector B
(02-LCU-LCU) 2 Fiber UPC LC-to-LC
(02-LCA-LCA) 2 Fiber APC LC-to-LC
(08-MF8-MF8) 8 Fiber MPO-to-MPO (Unpinned)
(12-MF12-MF12) 12 Fiber MPO-to-MPO (Unpinned)
(24-MF24-MF24) 24 Fiber MPO-to-MPO (Unpinned)
(08-MM8-MM8) M 8 Fiber MPO-to-MPO (Pinned)
(12-MM12-MM12) 12 Fiber MPO-to-MPO (Pinned)
(24-MM24-MM24) 24 Fiber MPO-to-MPO (Pinned)

Construction
(C) Interconnect
(B) Backbone
(A) Armored

Jacket Color
(Y) Yellow (Single Mode)
(A) Aqua (Multimode)
(H) Heather Violet
(E) Erika Violet
(L) Lime Green

Jacket Type
(P) OFNP (Plenum)
(R) OFNR (Riser)
(L) LSZH

Polarity
(A) Type A or A-A
(B) Type B or A-B
(C) Type C
(D) Other
(E) Simplex

Cable Length (in meters)
Examples:
(003M) 3 meters
(005M) 5 meters
(010M) 10 meters

	Characteristic	MPO – APC	LC – UPC
Single Mode Internal fiber is Single Mode OS2. Both MPO and LC Adapters are black.	Insertion Loss (single fiber max.)	0.35 dB	0.30 dB
	Insertion Loss (all fibers type.)	0.10 dB	0.10 dB
	Return Loss (min.)	> 55 dB	> 50 dB
Multimode Internal fiber is Multimode OM4. Both MPO and LC Adapters are black.	Insertion Loss (single fiber max.)	0.35 dB	0.30 dB
	Insertion Loss (all fibers type.)	0.10 dB	0.10 dB
	Return Loss (min.)	> 20 dB	> 20 dB