



## 4 Channel Single-Mode Fiber Industrial class Junction Box MSU-S4I

### Product Description:

MSU-S4I is an 12-Core MPO to 4 x Double LC PSM4 (Parallel Single Mode 4-channel) Fiber Optical Junction Box. Unit has a 12-Core MPO/MTP Male connector and the unit splits MPO/MTP signal into 4x Double LC ports. Typical use case for MSU-S4I Optical Junction Box is to split 100G/40G PSM4 signal into 4x25G or 4x10G 1310nm signals, for example when using [100G-QSFP28-2](#) or [40G-QSFP-11](#) PSM4 optical modules in the main site and [25G-SFP28-10I](#) or [10G-SFP-10I](#) on the far end site. MSU-S4I unit is for harsh outdoor environments supporting IP65 water, dust resistance, -40 to 85C industrial temperature, telecom pole or wall installation options and comes with ODVA MPO/MTP and Double LC connectors for easy fiber connection. Unit is small in size, light in weight, is simple to install, requires zero configuration or maintenance and is fully passive - no power supply or cooling required. MSU-S4I added Insertion Loss to the connection is  $\leq 0.8$  dB.

Typical use case for MSU-S4I Optical Junction Box is 5G/4G Mobile Fronthaul Network Baseband Unit (BBU) and Remote Radio Head (RRH) inter-connection (CPRI/eCPRI protocol), Enterprise Network 100G/40G to 4x25G/10G Ethernet links or Datacenter Fiber Channel connections.

### Key Highlights:

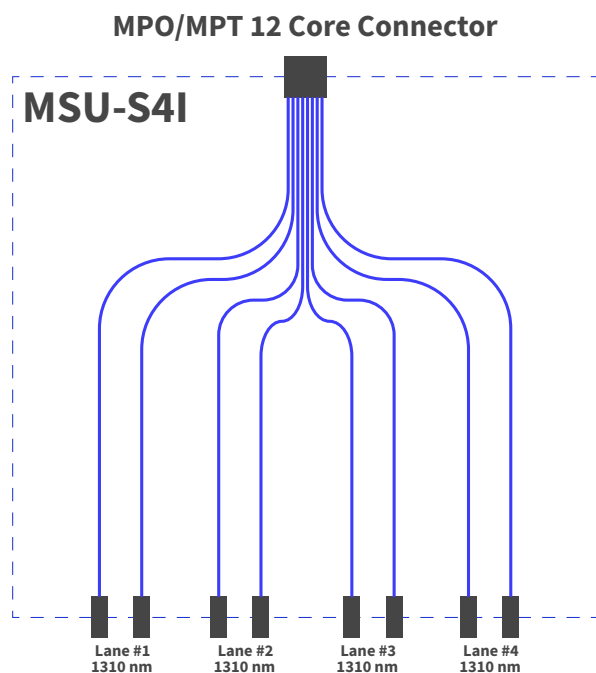
- Split 100G/40G to 4x25G or 4x10G
- Single Multi-Mode Fiber (1310nm)
- Outdoor ODVA MPO/MTP to 4xDual LC connectors
- A side connect to 100G-QSFP28-2 or 40G-QSFP-11
- B side connect to 25G-SFP28-10I or 10G-SFP-10I
- IP65 Water, Dust resistant
- Telecom Pole or Wall installation
- Small size and light weight
- Low Insertion Loss:  $\leq 0.8$  dB
- Industrial Temperature: -45°C – +85°C
- Fully passive (No Power Supply or Cooling)
- Zero configuration or maintenance
- Protocol & Data Rate neutral
- MTBF: 100+ Years
- 5 Year Warranty



## Product Specification:

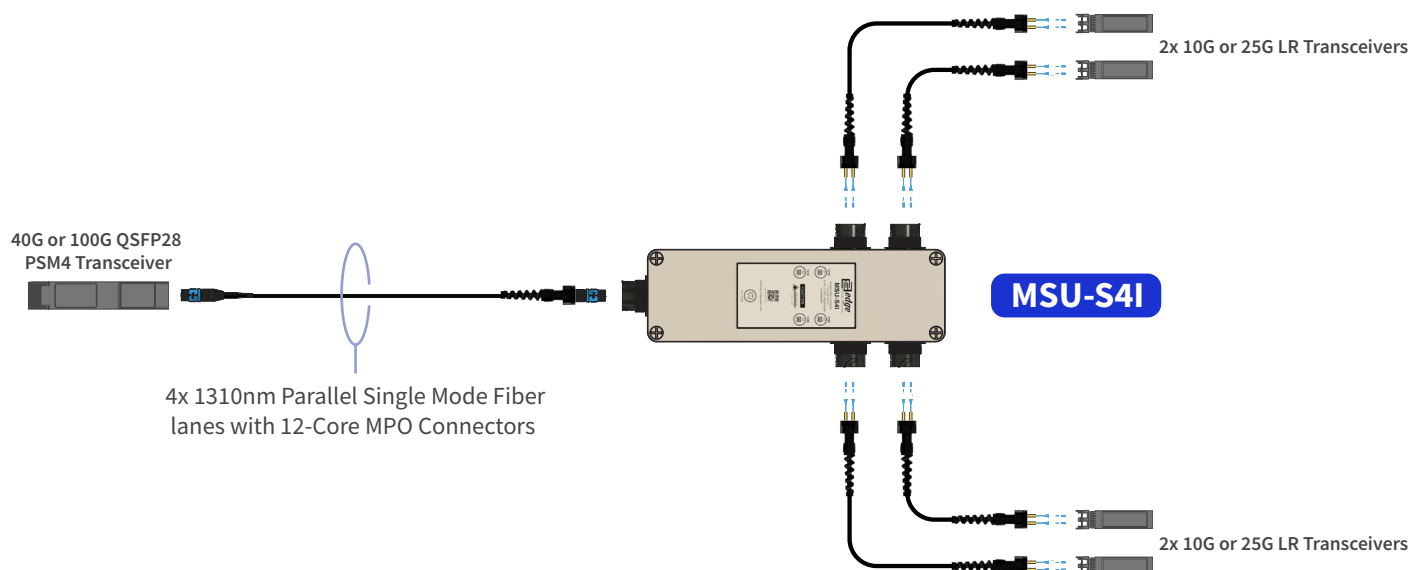
| Parameter                               |        | Unit | Value  |
|---|--------|------|--|
| Product Type:                           |        |      | Single-Mode Fiber Junction Box   |
| Number of Data Channels:                |        |      | 4  |
| Transport Media:                        |        |      | Double Fiber Single Mode Fiber (SMF)   |
| Operating Wavelength:                   | center | nm   | 1310 nm  |
| Insertion Loss <small>Passband:</small> | Max    | dB   | ≤ 0.8 dB   |
| Connectors:                             |        |      | 4 x ODVA Connectors with LC Adapters for use with ODVA Connectors and TIA/EIA 604-10 compliant LC UPC Connectors and ODVA Connector with MPO/MTP-12 Male |
| Operating Temperature:                  |        | (°C) | -40~+85 (°C)   |
| Storage Temperature:                    |        | (°C) | -40~+85 (°C)   |
| Dimensions (W x H x D):                 |        | mm   | 77 x 250 x 72  |
| Protection Class:                       |        | %    | IP65 - Water, Dust resistant   |
| Compliance:                             |        |      | ITU-T G.694.2, CE, RoHS, IP65  |

## Functional Diagram:

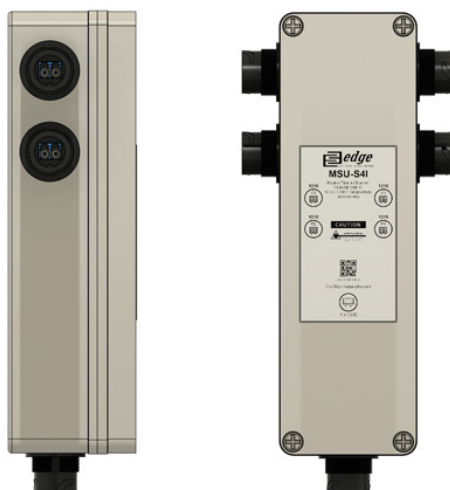


## Network Diagram:

MSU-S4I is part of our Passive xWDM filter product line, which is designed with primary focus on wireless fronthaul applications - optimized to carry 25G services, however it is compatible with legacy 10G services as well. In order to create 4 x 25G services capacity over 12-core Single-Mode MTP/MPO cable, it's possible to use 100G or 40G 1310 nm (PSM4) transceiver at one end and MSU-M4I Outdoor industrial Junction box at other end:



## Front Panel:

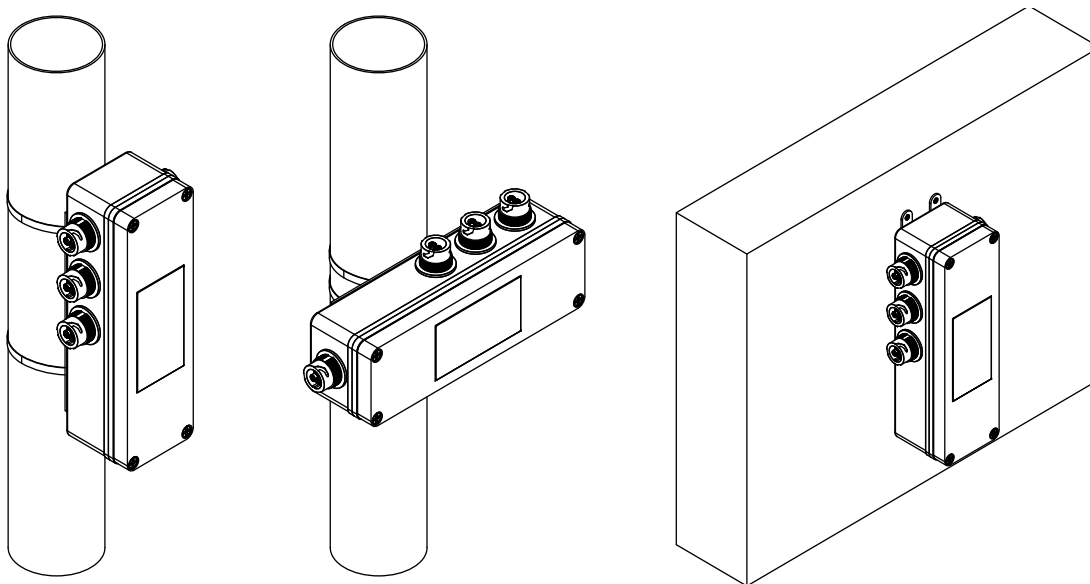


**4 x 1310:** MTP/MPO-12 Male connector interfacing 4 x 1310nm 40G or 100G PSM4 Transceiver

**1310:** Double LC for Interfacing 1301nm LR Transceivers



## Installation:



MSU-S4I is available for ordering with included pole mount kit, which allows easy install on any pole with diameter over 50mm vertically (recommended method) or horizontally. If necessary - MSU-S4I is also available with included wall installation kit.

## Ordering Information:

| PN        | Description  |
|-----------|--|
| MSU-S4I-P | 4 Channel Single-Mode Fiber Industrial class Junction Box with ODVA MPO-12 Male connector and 4 x ODVA LC/UPC Connectors for use with 1310nm, IL below 0.8 dB, with Pole Mount kit |
| MSU-S4I-W | 4 Channel Single-Mode Fiber Industrial class Junction Box with ODVA MPO-12 Male connector and 4 x ODVA LC/UPC Connectors for use with 1310nm, IL below 0.8 dB, with Wall Mount kit |

## Warranty:

EDGE Optic's provides a limited warranty for **sixty (60)** months from Purchaser's receipt of the Equipment represented in this data sheet against defective design or workmanship.

