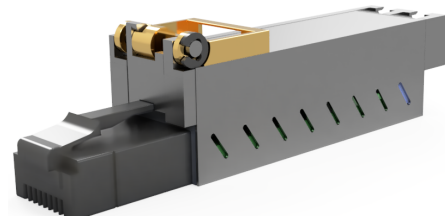.ılı'

# V1R

P l u g g a b l e   E t h e r n e t   t o   F i b e r
m o d u l e s

Patent pending Technology

# Introducing the next generation of small form factor modules

V1r modules are the new standard for small form factor converters.

Our new range of pluggable modules combine the latest technology into a sleek design for the world's smallest footprint that enables customers to plug modules directly into a Standard or PoE enabled ethernet port to convert signals from copper to fiber.

## Key Features & Benefits

**PoE-Powered Convenience:**
Power your compatible devices seamlessly with PoE, eliminating the need for an additional power supply.

**Dual Power Options:**
Auxiliary USB-C power available as a secondary option when PoE port isn't available. Power can be supplied with any USB 2.0 or greater port and any USB-C Port.

**Intuitive Status Indicators:**
LED lights display link status and auto-negotiation data rate for quick diagnostics.

**Interoperability Assurance:**
Fixed data rate and wavelengths ensure easy interoperability with MSA-compliant transceivers.

**Flexible Connectivity:**
Choose from Single-Mode and Multi-Mode configurations, including BiDi devices. V1R modules support both single-core and multi-core fiber installations, offering flexibility to meet diverse networking requirements.

**Varied Speed Configurations:**
Choose from 100Mbps, 1.25G, 2.5G, 5G, and 10G fixed speed options for optimal performance enhancing versatility.

**Efficient Form Factor**
Complete utilization of all Multi-Gigabit Ethernet ports for multi-purpose functionality, empowering customers to seamlessly transmit data over copper or fiber at any rate (100Mbps, 1Gbps, 2.5Gbps/5Gbps/10Gbps) without the need to predict future requirements or worry about availability of SFP/SFP+ or copper ports

**Smart Chipset Integration:**
Built-in chipset communicates seamlessly with Multi-Gigabit Ethernet ports, ensuring automatic data rate selection and port speed configuration in networking devices.*

**

*Legacy networking devices without Auto-Negotiation Gig-Ethernet ports may require port speed to be set manually.
**Devices with USB 2.0 ports or USB-C ports can power V1R modules negating the need for an additional external power supply.

# Seamless network Intergrations:

**Plug-and-Play Connectivity:**
Effortlessly convert fiber links to Ethernet within your data networks through our intuitive plug-and-play technology.*

**Diverse Device Connections:**
Directly link your network devices, including docking stations, access points, workstations, thin clients, printers, and IP cameras, using fiber connectivity for enhanced performance.

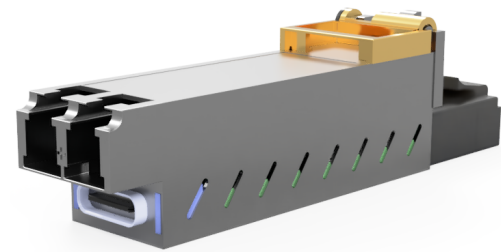**Extended Connectivity on Large Sites:**
Revolutionize your network infrastructure by connecting indoor access points or nodes across expansive sites or campuses with fiber links. Our industry first solution provides a unique interface to Multi-Gig Ethernet ports over fiber, supporting speeds of 100Mbps, 1.25G, 2.5G, 5G, and 10G, offering a fiber alternative to traditional copper connections that is not available with traditional MSA Transceivers.

**Centralized Network Management:**
Experience the industry's first option for interfacing with Multi-Gig Ethernet ports without the need for aggregation devices with inherent distance and bandwidth limitations. Centrally manage all network devices for a streamlined and efficient network operation.
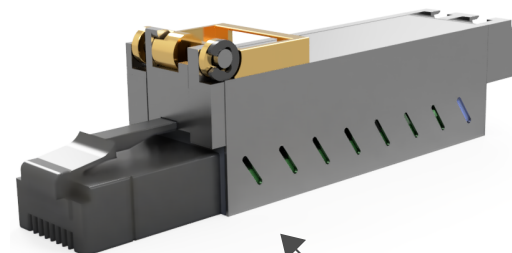
**Fiber to the Desk:**
Deploy fiber directly to workstations for enhanced performance and efficiency.

**Auxiliary USB-C**
USB-C power port and LED Status lights

**Aluminum case:**
featuring an aluminum case with integrated heatsink for effective thermal management, coupled with cross-ventilation vents to enhance cooling performance.

**Additional accessories:**
In situations where networking devices have limited space around the V1R module, a RJ-45 Extension Extender Cord can be utilized.

*Legacy networking devices without Auto-Negotiation Gig-Ethernet ports may require port speed to be set manually

# V1R

# Key benefits:

**Optimized Rack Space:**
Achieve high density and maximize your rack space, eliminating the need for excessive equipment.

**Simplified Campus Networks:**
Streamline large campus networks by removing aggregation switches, reducing the need for multiple communication rooms.

**Extended Reach:**
Cover greater distances with our solution, providing reliable connectivity even in expansive environments.

**Compact Footprint:**
Benefit from a small footprint, optimizing space utilization in various deployment scenarios.

**Flexible Power Options with Secondary Auxiliary USB-C:**
Empower your pluggable V1R devices by directly connecting to the USB-C port, enabling power utilization from any USB port commonly found on networking devices. Alternatively, you can use mains power for added flexibility. *

**Utilization of Multi-Gig Ethernet Ports:**
Maximize network efficiency by utilizing unused Multi-Gig Ethernet ports when fiber ports are fully utilized.
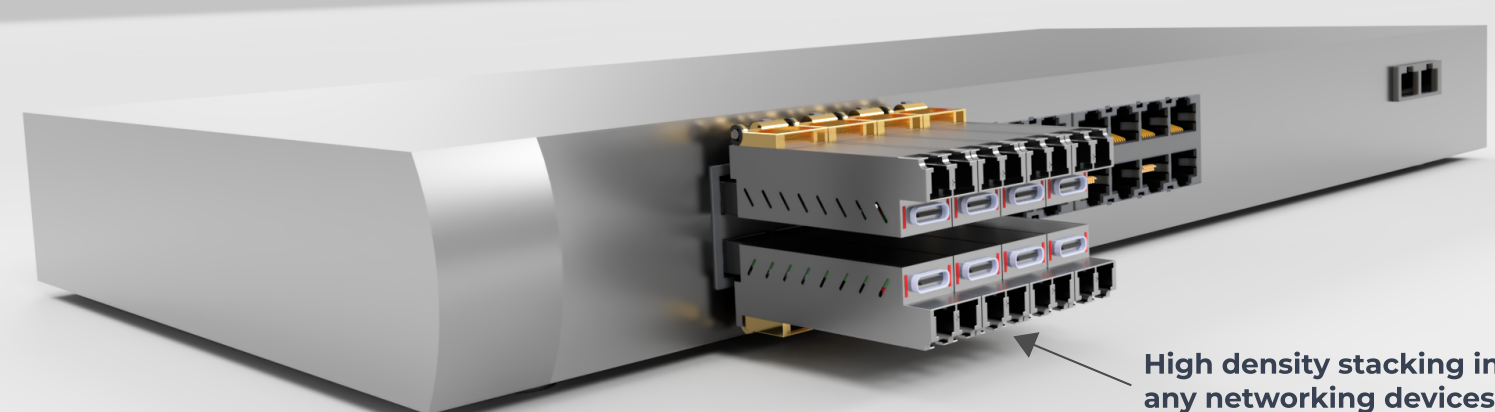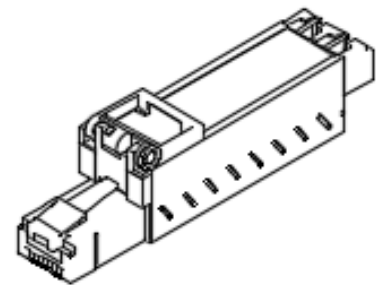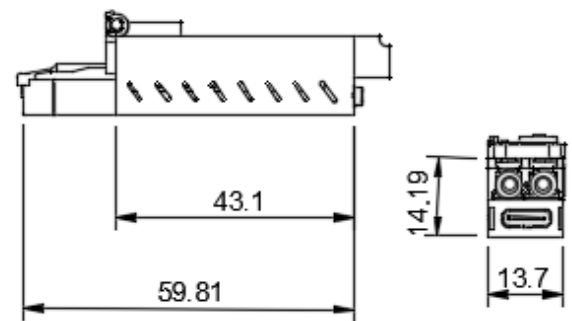
**Future-Proof Network Assurance:**
Ensure the enduring relevance of your network through seamless adaptation to emerging technologies and evolving industry standards. This commitment to future-proofing is fortified by compliance with TAA (Trade Agreements Act) and IEEE standards, as well as unwavering adherence to stringent ethical standards.

*V1R modules are not a PoE power injector and are not able to power networking devices.

## Dimensions:
Diagram dimensions in millimeters.



**High density stacking in any networking devices.**

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# V1R

## Ordering Information:
Before placing orders for pluggable modules, please ensure the following:

## Data Rate and Port Compatibility:
Confirm that both networking devices have the same data rate, and ensure that the ports on both devices can be set to that specific speed.

## Transceiver Module Consideration:
If opting to connect using a transceiver module at the corresponding end, carefully check for compatibility in terms of wavelengths, distance, and data rate. See Table for details.

| Single-Mode Pluggable Modules | | | | |
|---|---|---|---|---|
| Data Rate | Fiber | Distance | Ordering Information | Product Description |
| 100Mbps | SMF | 40KM | V1R-100FX-SMF-40KM | V1R Copper to Fibre PoE powered Ethernet module. 100Base-T to 100Base-FX, Copper Ethernet to Single Mode Fibre 1310nm, 40KM distance, PoE Powered device with AUX USB-C power option |
| 1.25G | SMF | 20KM | V1R-1.25G-SMF-20KM | V1R Copper to Fibre PoE powered Ethernet module. 1000Base-T to 1000Base-LX, Copper Ethernet to Single Mode Fibre 1310nm, 20KM distance, PoE Powered device with AUX USB-C power option |
| 2.5G | SMF | 20KM | V1R-2.5G-SMF-20KM | V1R Copper to Fibre PoE powered Ethernet module. 2.5GBASE-T to 2500Base-LX, Copper Ethernet to Single Mode Fibre 1310nm, 20KM distance, PoE Powered device with AUX USB-C power option |
| 5GiG | SMF | 20KM | V1R-5G-SMF-20KM | V1R Copper to Fibre PoE powered Ethernet module. 5GBASE-T to 5000Base-LX,  Copper Ethernet to  Single Mode Fibre 1310nm, 20KM distance, PoE Powered device with AUX USB-C power option |
| 10GiG | SMF | 20KM | V1R-10G-SMF-20KM | V1R Copper to Fibre PoE powered Ethernet module. 10GBASE-T to 10GBase-LR, Copper Ethernet to  Single Mode Fibre 1310nm, 20KM distance, PoE Powered device with AUX USB-C power option |

| Multi-Mode Pluggable Modules | | | | |
|---|---|---|---|---|
| Data Rate | Fiber | Distance | Ordering Information | Product Description |
| 1.25G | MMF | 300m | V1R-1.25G-MMF-300M | V1R Copper to Fibre PoE powered Ethernet module. 1000Base-SX, Multi-Mode Fibre, 300 meters distance, 850nm |
| 2.5G | MMF | 300m | V1R-2.5G-MMF-300M | V1R Copper to Fibre PoE powered Ethernet module. 2500Base-SX, Multi-mode Fibre, 300 Meters distance, 850nm |
| 5GiG | MMF | 300m | V1R-5G-MMF-300M | V1R Copper to Fibre PoE powered Ethernet module. 5GBASE-T to 5GBASE-SR, Multi-mode Fibre, 300 Meters distance, 850nm (requires 2 x Modules. PN# V1R-5G-MMF-300M) |
| 10GiG | MMF | 300m | V1R-10G-MMF-300M | V1R Copper to Fibre PoE powered Ethernet module. 10GBASE-T to 10GBASE-SR, Multi-mode Fibre, 300 Meters distance, 850nm |

| Bi-Directional Pluggable Modules | | | | |
|---|---|---|---|---|
| Data Rate | Fiber | Distance | Ordering Information | Product Description |
| 100Mbps | SMF | 40KM | V1R-100FX-BXD-15KM | V1R Copper to Fibre PoE powered Ethernet Bidi module. 100Base-T to 100Base-FX, Copper Ethernet to Single Mode Fibre TX1550nm/RX1310nm Bidi Transceiver, 40KM distance, PoE Powered device with AUX USB-C power option (pairs with PN# V1R-100FX-BXU-15KM) |
| 100Mbps | SMF | 40KM | V1R-100FX-BXU-15KM | V1R Copper to Fibre PoE powered Ethernet Bidimodule. 100Base-T to 100Base-FX, Copper Ethernet to Single Mode Fibre TX1310nm/RX1550nm Bidi Transceiver, 40KM distance, PoE Powered device with AUX USB-C power option. (pairs with PN#  V1R-100FX-BXD-15KM) |
| 1.25G | SMF | 20KM | V1R-1.25G-BXD-20KM | V1R Copper to Fibre PoE powered Ethernet Bidi module. 1000Base-T to 1000Base-LX, Copper Ethernet to Single Mode Fibre TX1550nm/RX1310nm Bidi Transceiver, 20KM distance, PoE Powered device with AUX USB-C power option. (pairs with PN# V1R-100FX-BXU-15KM) |
| 1.25G | SMF | 20KM | V1R-1.25G-BXU-20KM | V1R Copper to Fibre PoE powered Ethernet Bidi module. 1000Base-T to 1000Base-LX, Copper Ethernet to Single Mode FibreTX1310nm/RX1550nm Bidi Transceiver, 20KM distance, PoE Powered device with AUX USB-C power option. (pairs with PN#  V1R-1.25G-BXD-20KM) |
| 2.5G | SMF | 20KM | V1R-2.5G-BXD-20KM | V1R Copper to Fibre PoE powered Ethernet Bidi module. 2.5Base-T to 2.5GBASE-LX, Copper Ethernet to Single Mode Fibre TX1550nm/RX1310nm Bidi Transceiver, 20KM distance, PoE Powered device with AUX USB-C power option. (pairs with PN#  V1R-2.5G-BXU-20KM) |
| 2.5G | SMF | 20KM | V1R-2.5G-BXU-20KM | V1R Copper to Fibre PoE powered Ethernet Bidi module. 2.5Base-T to 2.5GBASE-LX, Copper Ethernet to Single Mode FibreTX1310nm/RX1550nm Bidi Transceiver, 20KM distance, PoE Powered device with AUX USB-C power option. (pairs with PN#  V1R-2.5G-BXD-20KM) |
| 5GiG | SMF | 20KM | V1R-5G-BXD-20KM | V1R Copper to Fibre PoE powered Ethernet Bidi module. 5GBASE-T to 5000BASE-X, Copper Ethernet to Single Mode Fibre TX1270nm/RX1330nm Bidi Transceiver, 20KM distance, PoE Powered device with AUX USB-C power option (pairs with PN#  V1R-5G-BXU-20KM) |
| 5GiG | SMF | 20KM | V1R-5G-BXU-20KM | V1R Copper to Fibre PoE powered Ethernet Bidi module. 5GBASE-T to 5000BASE-X, Copper Ethernet to Single Mode Fibre TX1330nm/RX1270nm Bidi Transceiver, 20KM distance, PoE Powered device with AUX USB-C power option (pairs with PN#  V1R-5G-BXD-20KM) |
| 10GiG | SMF | 20KM | V1R-10G-BXD-20KM | V1R Copper to Fibre PoE powered Ethernet Bidi module. 10GBASE-T to 10GBASE-LR, Copper Ethernet to Single Mode Fibre TX1270nm/RX1330nm Bidi Transceiver, 20KM distance, PoE Powered device with AUX USB-C power option (pairs with PN#  V1R-10G-BXU-20KM) |
| 10GiG | SMF | 20KM | V1R-10G-BXU-20KM | V1R Copper to Fibre PoE powered Ethernet Bidi module. 5GBASE-T to 10GBASE-LR, Copper Ethernet to Single Mode Fibre TX1330nm/RX1270nm Bidi Transceiver, 20KM distance, PoE Powered device with AUX USB-C power option (pairs with PN# V1R-10G-BXD-20KM) |