

# Video Over Fiber Solutions



High Speed  
Optical Modules

## Leading-edge Technologies for Video Over Fiber Solutions

Omron is a \$7.5 billion global supplier of electronic components and solutions for a broad range of applications. With almost 80 years of experience manufacturing electronic components, Omron provides global and local networks of technical and sales support from design through delivery

### Combining Core Competencies and New Technologies

Omron applies a comprehensive mix of manufacturing and technological skills to provide innovative solutions to the Video over Fiber market.

Omron's SX Series Optical Modules enable the transmission of High Definition video over long distances for use in:

- Operating rooms
- Emergency rooms
- Remote video consultations
- Information sharing
- Training and collaboration
- Digital signage
- Security
- Automated homes



### SX4 MiniModule for DVI

The P1TX4C-SX4x-01MM (TX-SX4 Module) is an optical subassembly module that transmits four video or data channels over one multimode fiber. Each channel is capable of transmitting up to 1.65Gbps (model = V) or 3.5Gbps (model = D). With a microcontroller preprogrammed for optimal optical transmission on board, TX-SX4 module is a fully integrated electrical to optical transmitter versatile enough to be designed into a variety of systems.

#### Features

- Multiple signals over one multimode fiber
- Integrated microcontroller for laser driver control
- ~ 0.5W power consumption
- Metal enclosure with SC optical interface



## SX51 Module for HDMI

The P1TX6-SX51-01M (TX-SX51) is an optical module that transmits an HDMI™ signal on one strand of multimode fiber. The TX-SX51 incorporates a bidirectional optical module to convert and transmit an uncompressed electrical HDMI™ video signal, along with the HDCP/EDID/CEC functionality, over distances of up to 1000m.

### Features

- 5 transmit lanes and 1 receive lane over 1 multimode fiber
- Compatible with HDMI™ compliant sources and sinks
- Scalable to 16-bit color
- On-board hardware and firmware for HDCP/EDID/CEC functionality
- Accepts TMDS inputs directly into its 40 pin plug-down connector
- Automatic laser disable upon fiber disconnect



## SX51 Data Module for KVM and Other Applications

The P1TX6B-SX51x-02 (TX Data Module) is an optical communication module that transmits over 14Gbps of data. The TX Data Module transmits up to four 3.4 Gbps data channels PLUS two side-band channels (one each direction), all on a single multimode fiber. With integrated drivers and amplifiers, the TX Data Module eliminates the need for in-house optical design expertise.

### Features

- 5 transmit lanes and 1 return lane over a single multimode fiber
- Low power consumption (1W)
- Up to 1000M
- Mechanical enclosure serves as heat sink while allowing for FCC part 15 Class A compliance
- No manipulating or compressing the data
- Small footprint
- High-speed CML inputs



# Omron Electronic Components: The Quality, Flexibility and Global Support You Need.

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**Omron Network Products LLC (ONP)**, a subsidiary of Omron's Electronic Components Business Unit, is a Silicon Valley based manufacturer of precision high-speed optical modules.

**Combining Core Competencies and Break-Through Technologies**  
Omron's optical module products are based on our proprietary technology that combines patented CWDM designs with proprietary manufacturing techniques to deliver highperformance in tiny, integrated packages. ONP Technology is versatile enough to work in standard packages (e.g. SFP, QSFP, XFP) or custom configurations.

### **In-House Design Expertise:**

- World's leading developer and supplier of integrated CWDM products
- 13 years creating and developing CWDM technologies
- Only manufacturer able to integrate ferrule & lenses into filter based optics
- Capable of standard or custom designs

### **In-House Manufacturing Expertise:**

- Primary Factory (Pleasanton, CA)
- Expansion Factory (Thailand)

### **Key Application: High-Definition Video**

ONP's products exceed copper distances by 10x without quality loss and enable lower cost installation.

- HDMI™, DVI, DisplayPort™ or Proprietary Video
- 3.4Gbps/Channel
- Eliminates mixing of pixel signals
- Scalable architecture to 10 Gbps/Channel
- Direct Mapping of Multiple TMDS Signals on a Single Fiber

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