



Telecast
Fiber Systems, Inc.

Preliminary Data Sheet

TR5900

10/100 Base Ethernet Modules for the Viper II



Features

- Rack modules or stand-alone, convertible
- High speed 10/100 Mbps transmission
- Plug-and-play operation
- WDM transceiver, uses only 1-fiber
- Long distance, 20 dB optical link budget
- IEEE 802.3 Standards compliant
- Auto-Negotiation, full- and half-duplex
- Supports MDI/MDI-X auto crossover
- Low latency for VOIP (100ns max.)
- Battery back-up option in Viper II Frame
- Low power consumption
- High reliability design

The Viper II™ system module set for transmitting bi-directional fast Ethernet signals on one fiber.

Telecast's 5900 fiber optic module set brings fast Ethernet capability to your Viper II system. Using only one single-mode optical fiber, the 5900 transmits either 10Base or 100Base data over distances up to 25 kilometers.

This easy to install, plug-and-play media converter set complies with IEEE802.3 standards, and supports full duplex and half duplex communications with auto negotiation on both the fiber and twisted pair media. An RJ-45 interfaces to the twisted pair, while a single SC type connector interfaces to the optical fiber path. The 5900 set also supports MDI/MDI-X auto crossover, so you don't need to search for elusive crossover cables.

Durable and Flexible

The module set is available as stand alone "throw down" modules (MTR5900), or as rack mount (TR5900) modules to fit our Viper II 16-slot frame. Or use our easy, rack mount conversion kit to reconfigure them as you like.



Applications

- Campus A/V networks
- Government facilities
- In-building video/audio/data distribution
- Studio-Transmitter Links
- Television broadcast production

Signal Interface

Data Support	10BaseT
	100BaseT
Connector, Twisted Pair	RJ45
Cable compatibility	UTP 100-ohm Cat.5
EMI & Safety	FCC Class A, CE

Electro-Optical

Operating wavelength	1300 nm or 1550 nm range
Transmitter output options	-10 dBm
Receiver input range	-30 dBm
Optical source/detector type	Laser diode/PIN
Fiber compatibility	single mode

Mechanical/Environmental

Dimensions (WxLxD)	3.35" x 7.65" x 0.94"
Weight (per stand alone module)	10 ounces
Power Req. (typ., per module)	3 watts @ 10 to 18VDC
Temperature Range	0° to +50°C
Humidity Range	10 to 90% RH, Noncond.

Operating Notes for: 5900 10/100Base Ethernet Modules for Viper II

Power Requirements

All Viper II modules typically consume only 3 watts. The stand-alone module accepts a 10-18VDC, 350mA power cube with a 2.5mm jack, center pin positive. When mounted in the V2 frame, the modules are powered via the 24-pin Future-Bus connector on the top right side of the module.

Connections

UTP RJ45
Fiber SC type, single fiber, single mode, or
SC type, dual fiber, multimode or single mode

Faceplate Indicators

The **RX5900** front panel has five LED indicators:

FIBER DATA

When green, data activity is flowing between modules

FIBER LINK

When green, a valid link between modules is present

FULL DUPLEX

When green, the link is transmitting in both directions simultaneously

DATA TX

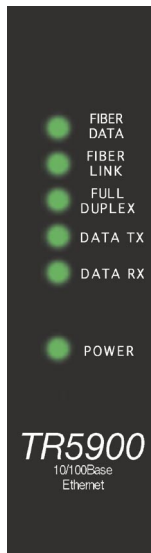
When green, incoming UTP data is transmitting over fiber

DATA RX

When green, incoming fiber data is transmitting over UTP

POWER

When green, the module is powered ON



Installation, Care and Maintenance

As stand-alone modules, the 5900 can be installed in any orientation but keyholes are furnished to allow the units to easily be hung on any vertical surface. Velcro™ may also be used.

Conversion to Rack Mount

Five steps are required to convert from "stand-alone" modules into rack mountable modules. A RMK (rack mount conversion kit) for each particular module is required to make this conversion.

1. Remove the three phillips screws that secure the rear plate
2. Carefully remove the rear plate and store it for future use
3. Using the same three screws, attach the module to rack "sled".
4. Connect the ribbon cable from the module to the faceplate
5. Secure the fiber optic jumper from the module to the chassis mount ST connector barrel on the rear of the rack "sled"

Perform steps in reverse order to revert to a stand-alone module.

Ordering Information

A complete Ethernet link consists of two modules: a -A module and a -E module for single fiber applications, or two -AA modules for dual fiber applications.

MTR5900-A Throw down module, single fiber, single mode
-10 dBm@1300nm laser output; -30 dBm@1550nm input
TR5900-A Rack mount module, single fiber, single mode
-10 dBm@1300nm laser output; -30 dBm@1550nm input

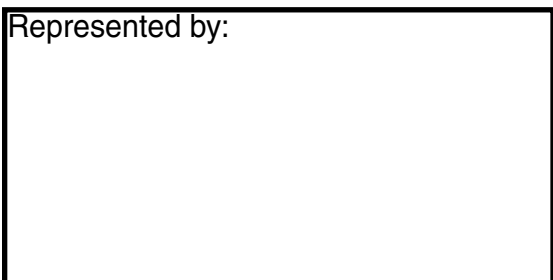
MTR5900-E Throw down module, single fiber, single mode
-10 dBm@1550nm laser output; -30 dBm@1300nm input
TR5900-E Rack mount module, single fiber, single mode
-10 dBm@1550nm laser output; -30 dBm@1300nm input

MTR5900-AA Throw down module, dual fiber, single or multimode
-10 dBm@1300nm laser output; -30 dBm@1300nm input
TR5900-AA Rack mount module, dual fiber, single or multimode
-10 dBm@1300nm laser output; -30 dBm@1300nm input

Values are the same for Stand Alone and Rack Mount modules

Consult factory for CWDM multichannel applications of the TR5900.

Represented by:



CE

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