MCR300-1T/1S
MCR300-1T-2S

Gigabit Ethernet to SFP Media Converters

MCR300-1T/1S MCR300-1T-2S

OVERVIEW

The IFS® Gigabit Ethernet to SFP Media Converters are designed for extended IP network applications offering the flexibility of SFP technology for Gigabit Ethernet transmission over optical fiber.

SFP Technology

These models convert 10/100/1000Base-T Ethernet on copper to 1000Base-LX/SX optical fiber via Small Form-format Pluggable (SFP) technology. They can be custom configured to your exact system design specifications by utilizing a variety of IFS SFP Mini-GBIC modules. IFS SFP Mini-GBIC modules are available in a variety of versions from multi-mode or single mode fiber, 1 or 2 fibers and wide-temperature versions.

Flexible Drop-and-Repeat or Redundant Path Operation

The MCR300-1T-2S model, with its 2 SFP ports, can easily be configured for either drop-and-repeat or redundant path operation. In drop-and-repeat mode, the MCR300-1T-2S operates like a 3-port switch and can be used as a repeater with an electrical drop or simply as an optical repeater/extender. In redundant path mode, the MCR300-1T-2S will quickly switch to the second SFP port as a redundant path if the primary optical path experiences an optical cable failure. Also, if the primary destination port link is down, the module will forward the data packet to the redundant path providing a highly fault-tolerant solution for mission critical IP applications.

Unified Enclosure Design

The IFS MCR300 Series modules are designed with a unified enclosure that can be used in a stand-alone installation or can easily be inserted into the IFS MCR-R15 media converter rack. The IFS Media Converter Rack can provide DC power for up to 15 MCR Series Media Converters.

STANDARD FEATURES

Ethernet

- 10/100/1000Base-TX
- Complies with IEEE 802.3 10Base-T; IEEE 802.3u 100Base-TX; and IEEE 802.3ab 1000Base-T
- Auto-negotiation and Auto-MDI/MDI-X
- Half-duplex or Full-duplex for 10/100Mbps; full-duplex for 1000Mbps

SFP (Mini-GBIC) Port

- IEEE 802.3z 1000Base-LX/SX standards
- MCR300-1T/1S: 1 SFP slot
- MCR300-1T-2S: 2 SFP slots (SFP slots can be configured for drop-and-repeat or redundant path operation)
- Optical fiber and distance varies by SFP (ordered separately)

Installation & Diagnostics

- Compact size, plug-n-play installation
- LED indicators for easy local network diagnostics
- DIP-switch for LFP function (Enable / Disable) setting
- Unified design for stand-alone or rack mount installation (MCR-R15 chassis)

Warranty

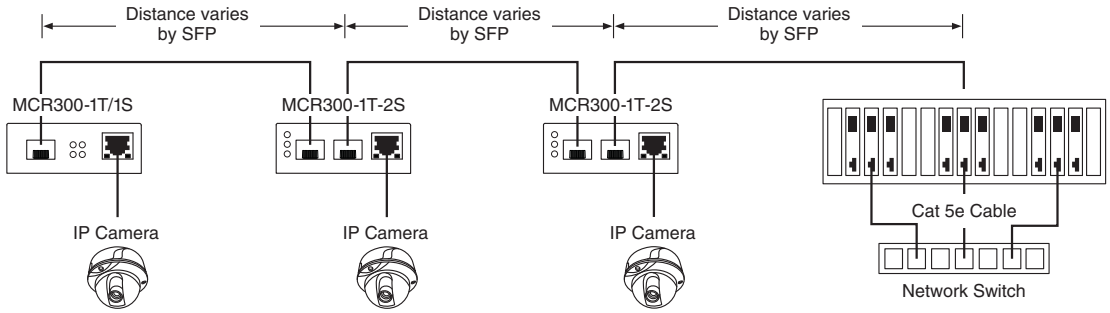
- 3-year warranty

Specifications

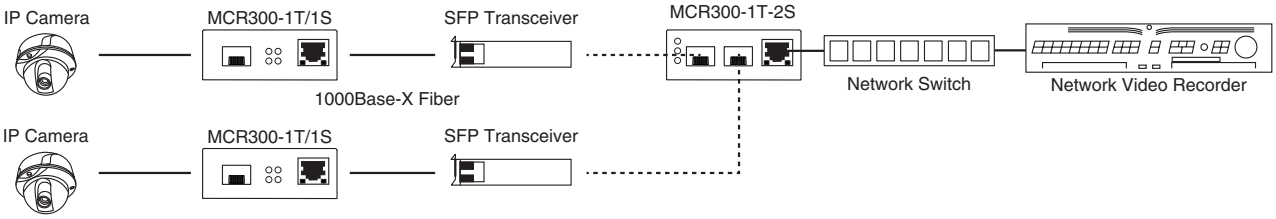
Ethernet	MCR300-1T/1S	MCR300-1T-2S
Data Rate	10/100/1000Mbps	
Packet Forwarding Rate (64bytes)	14,880pps @ 10Mbps 148,810pps @ 100Mbps 1,488,000pps @ 1000Mbps	
Jumbo Packet Size	9K	
Flow Control	Half/Full-duplex	
Connector	RJ-45 (Auto-MDI/MDI-X)	
Cable Type and Distance	10Base-T: 2-pair UTP Cat. 3,4,5, up to 100 m 100Base-TX: 2-pair UTP Cat. 5, up to 100 m 1000Base-T: 2-pair UTP Cat. 5/5e/6, up to 100m	
Fiber		
Data Rate	1000Base-LX/SX	
Connector	1 x SFP (Mini-GBIC) port	2 x SFP (Mini-GBIC) port
Fiber Type and Distance	Varies by SFP module	
LED Indicators & Controls		
Power/Status	Green/On – power detected	
10/100/100Base-T port link/ activity	Green/On – link established Green/blinking – active port (TX/RX)	
10/100/1000Base-T port speed	Green/On – 1000Mbps full duplex mode operation Green/Off – 10/100Mbps full duplex mode operation	
SFP (Mini-GBIC) port link	Green/On – link established Green/blinking – active port (TX/RX)	
DIP switch	LFP function (Enable/Disable) setting	
Electrical & Mechanical		
Power	5VDC, 1.1A (5.6 watts)	
Enclosure	Metal (Wall mounted)	
Dimensions (W x D x H) in, mm	3.82 x 2.76 x 1.02 in.; (97 x 70 x 26 mm)	
Weight	0.41 lbs. / 190 grams	
Environmental		
Operating Temperature	0°C~50°C	
Storage Temperature	-10°C~70°C	
Relative Humidity	5%~90% (non-condensing)	
MTBF	> 50,000 hrs @ 25°C	
Standards Compliance		
IEEE	IEEE 802.3, 10Base-T IEEE 802.3u, 100Base-TX IEEE 802.3ab 1000Base-T IEEE 802.3z 1000Base-SX/LX/BX	
EMI	EN 55022 CLASS A EN61000-3-2:2006 EN61000-3-3: 1995+1A:2001+A2:2005	
EMS	EN 55024:1998+A1:2001+A2:2003 IEC 61000-4-2:2001 IEC 61000-4-3:2008 IEC 61000-4-4:2004 IEC 61000-4-5:2005 IEC 61000-4-6:2008 IEC 61000-4-8:2001	

Typical Applications

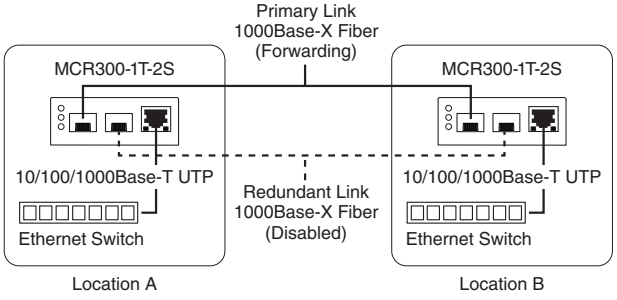
GigE Drop-N-Repeat Network



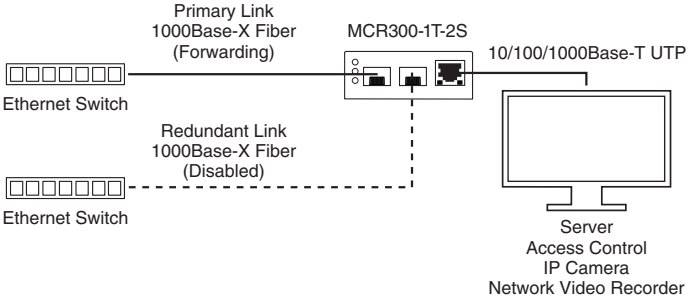
3-port switch (1-RJ45/2-SFP)



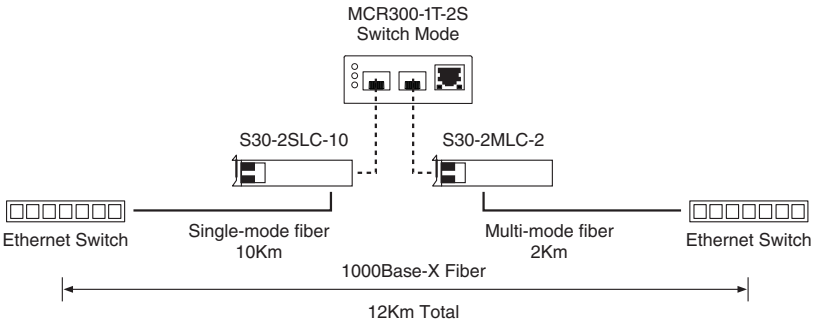
Site to Site with Redundant Fiber Link



Redundant Fiber Link for Critical Network Services



Fiber Extender or Fiber Mode-Converter



MCR300-1T/1S
MCR300-1T-2S

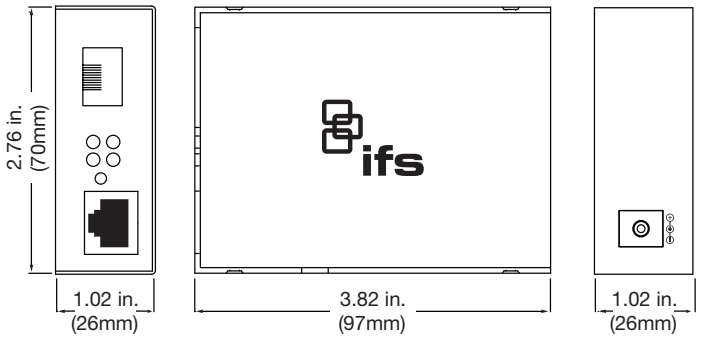
Gigabit Ethernet to SFP Media Converters

North America
T 855-286-8889

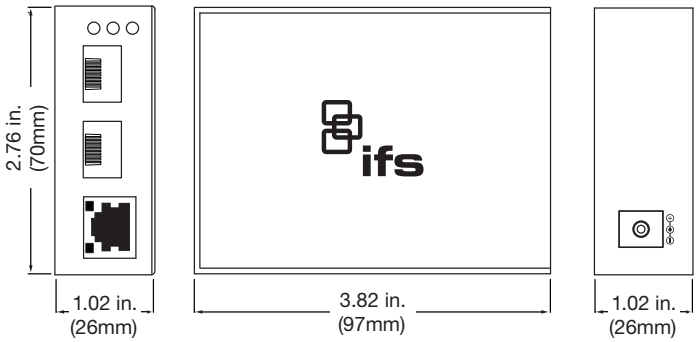
Latin America
T 561-998-6114

Dimensional Diagrams

MCR300-1T/1S



MCR300-1T-2S



Ordering Information

MCR300-1T/1S	Gigabit Ethernet to SFP Media Converter
MCR300-1T-2S	Gigabit Ethernet to (2) SFPs Media Converter

Important Ordering Information: These units require a Small Form-factor Pluggable (SFP) for operation. IFS SFPs are available for multi-mode, single mode, 1 or 2 fibers for various transmission distances over optical fiber. Please refer to the IFS SFP data sheet to select the appropriate SFP for your particular application needs. These units use Gigabit SFPs only.

Note: Power Supply must be ordered separately.

Accessories

S30 Series	Gigabit SFPs
PS5VDC2A-US	5VDC, 2A Wall-mount Power Supply
MCR-R15	MCR Series Media Converter Chassis

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310-3741 2013/12 (76225)