Data Sheet

iMC2S

Industrial 2 Ports Ethernet to Fiber Media Converter/ Unmanaged Switch

Product Overview

iMC2S is an industrial grade cost-effective solution for conversion of 10/100Base-T(X) to 100Base- FX or 100Base-X SFP interface which allows extending of communication distance using optical fiber. The media converter supports MDI/MDIX auto detection for 100Base-T(X) interface, so crossover wires are not required. The iMC2S has a wide operating temperature range from -40°C to +85°C, accepts a wide input voltage range, and is suitable for harsh operating environments.

iMC2S supports Link Fault Pass-through (LFP) feature, which is used to solve problems encountered when operating traditional media converters. Such problems occur when one side of the link fails, and the other side still continues to transmit packets while waiting for a response that will never arrive. With LFP, system administrators can notice a link failure within a short period of time, minimizing the loss caused by this problem. A DIP-Switch enables the LFP function, enabling the iMC2S to force a link to shut down immediately when the other link fails, giving the application software a chance to react to the situation.

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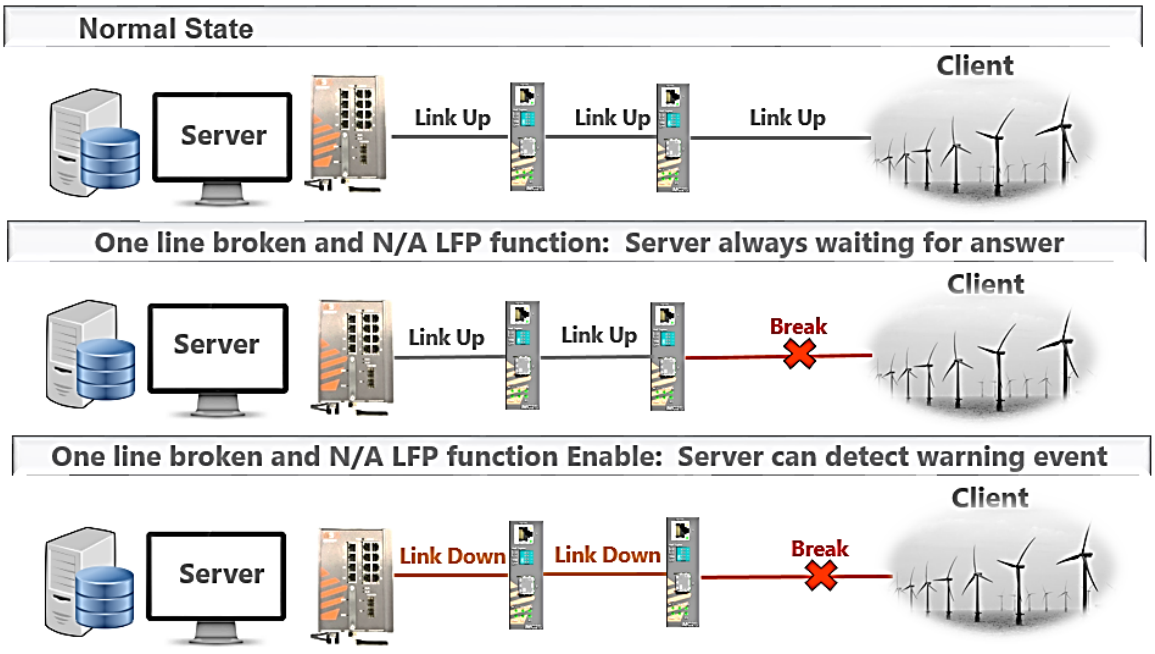
Network Architecture



The LFP function of iMC2S

Features

Table 1. Features

Feature	
Supports:	• 1 x 10/100Base-T(X) auto-negotiation and auto-MDI/MDI-X port • 1 x 100FX SC/ST port or 1 x 100Base-X SFP port • Ethernet to Fiber or Ethernet to SFP port • Link Fault Pass-through (LFP) function • Full/half duplex operation • Store and forward transmission
Dual Input Power Supplies	
IP-40 Galvanized Steel Housing	
DIP-Switch for setting various functions	
Operating Temperature -40°C to +85°C	
DIN rail and panel mount	

Product Specifications

Table 2. Technical Specification

Description	Specification
10/100Base-T(X) RJ45 Port Auto MDI/MDIX	1
100Base-FX SC/ST Port or 100Base-X SFP Port	1
Technology	
Processing	Store-and-Forward
DIP Switch setting	DIP-Switch 1 for LFP mode selection: (ON) enable / (OFF) disable DIP-Switch 2 for Ethernet speed selection: (ON)10Mbps / (OFF) 10/100Mbps Auto-negotiate DIP-Switch 3 for Ethernet full/half duplex selection: (ON) Half-duplex / (OFF) Full/Half-Duplex Auto-negotiate DIP-Switch 4 for fiber full/half duplex selection: (ON) Half-Duplex / (OFF) Full-Duplex
Physical Characteristics	
Enclosure	IP-40 Galvanized Steel
Dimensions (W x D x H)	26.86 (W) x 80.55 (D) x 115.31 (H) mm (1.06 x 3.17 x 4.54 inches) panel mount 25.84 (W) x 87.53 (D) x 104.39 (H) mm (1.02 x 3.45 x 4.11 inches) DIN rail mount
Unit Weight (g)	~500 g
Power	
Input Power	Dual Input 10-48VDC
Power Consumption (Typ.)	2.2 Watts
Overload Current Protection	Present
Reverse Polarity Protection	Present on terminal block

Table 3. Compliance Specifications

Type	Standards
Electromagnetic Emissions	FCC Part 15, Class A, CISPR Class A (EN55022)
Electromagnetic Immunity	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
Safety Standards	EN60950-1
Operating Environment	-40°C to +85°C (-40° to 185°F) (no fans) EN 60068-2-21
Storage Environment	-40°C to +85°C (-40° to 185°F) EN 60068-2-14
Operating Humidity	5% to 95% Non-condensing EN 60068-2-30
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-32
Warranty	5 years

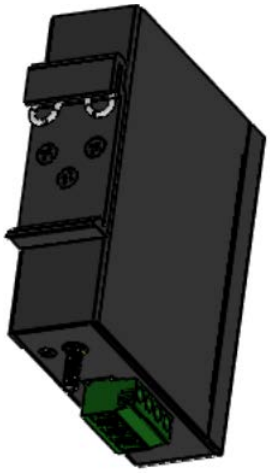
Table 4. Standards and Management

Description	Specification
IEEE Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-T(X) and 100Base-FX IEEE 802.3x for Flow control
RFC Compliance	RFC 4445 MDI RFC 5171 UDLD Protocol

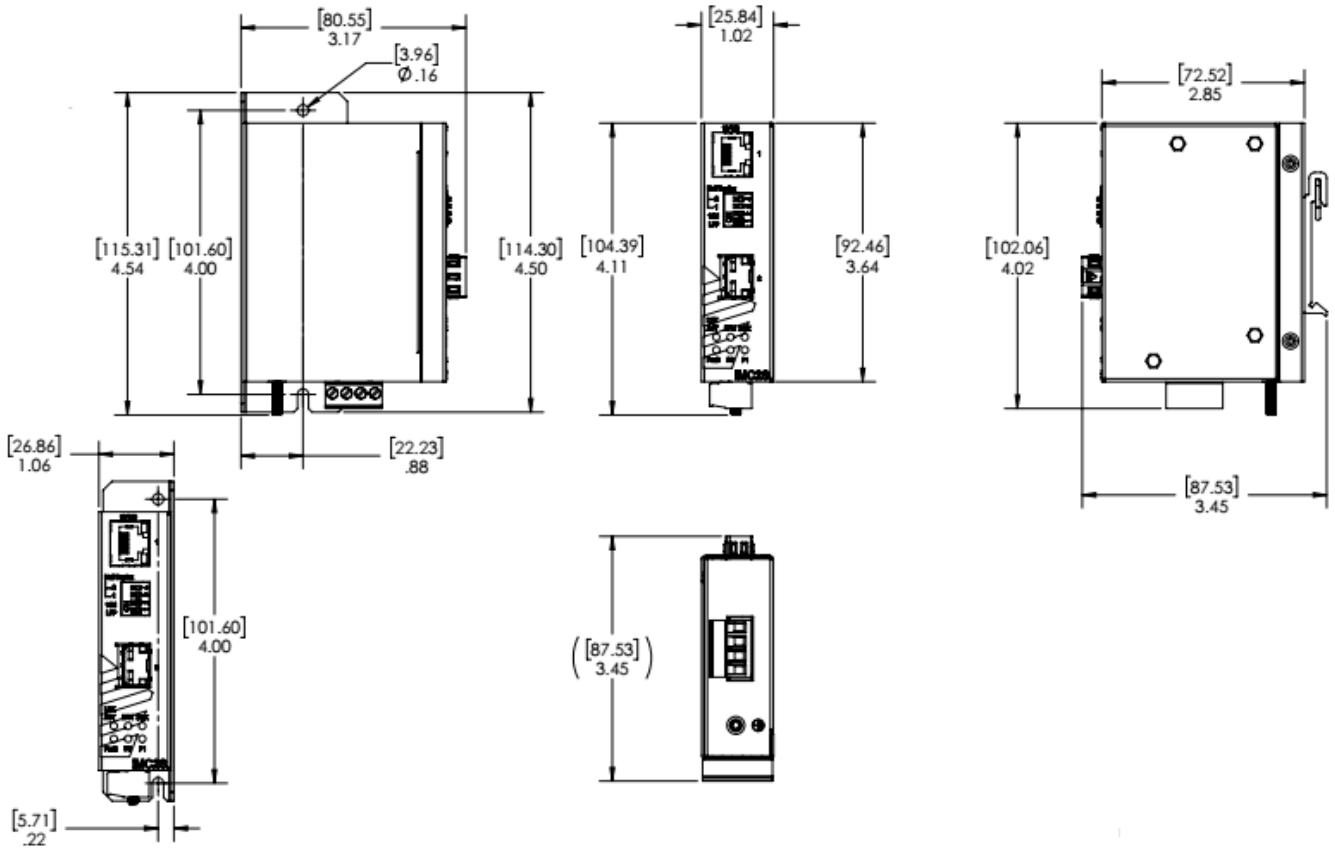
Dimensions

All dimensions are shown in inches.

Panel mount



Dinrail mount



Option with 100Base-X SFP Ethernet port 2 shown

Ordering Information

Base	Power Supply	Mount	Ethernet Port 1	Ethernet Port 2	Conformal Coating	Description
iMC2S	LV	D	1RJ45	1SMSC15	C1	
iMC2S	|	|	|	|	|	Core assembly and packaging
	LV	|	|	|	|	Dual Input 10-48VDC
		D	|	|	|	DIN Rail Mounting
		P	|	|	|	Panel Mounting
		N	|	|	|	No Mounting Hardware
			1RJ45	|	|	1 X 10/100Base-T(X) RJ45
				1MMSC	|	1 X 100FX Multimode SC, 1310nm, 2km
				1MMST	|	1 X 100FX Multimode ST, 1310nm, 2km
				1SMSC15	|	1 X 100FX Singlemode SC, 1310nm, 15km
				1SMST15	|	1 X 100FX Singlemode ST, 1310nm, 15km
				1SMSC40	|	1 X 100FX Singlemode SC, 1310nm, 40km
				1SMST40	|	1 X 100FX Singlemode ST, 1310nm, 40km
				1SMSC60	|	1 X 100FX Singlemode SC, 1310nm, 60km
				1SMST60	|	1 X 100FX Singlemode ST, 1310nm, 60km
				1SMSC80	|	1 X 100FX Singlemode SC, 1550nm, 80km
				1SMST80	|	1 X 100FX Singlemode ST, 1550nm, 80km
				1SMSC100	|	1 X 100FX Singlemode SC, 1550nm, 100km
				1SMST100	|	1 X 100FX Singlemode ST, 1550nm, 100km
				1SFP		1 X 100Base-X SFP (Blank no optical transceivers**)
					C1	Conformal Coating

Example Order Code
Description:

iMC2S-LV-D-1RJ45-1SMSC15-C1

Industrial Media Converter Slim Line, (Power Supply) Dual Input 10-48VDC, (Mount) DIN Rail Mounting, (Ethernet Port 1) 1 X 10/100Base-T(X) RJ45, (Ethernet Port 2) 1 X 100FX Singlemode SC, 1310nm, 15km, C1 - added for conformal coating