MEDIA CONVERTER INDUSTRIAL Rack-Mount

Quick Installation Guide

RMC-111 Series

Industrial Card Type Media Converter

Introduction

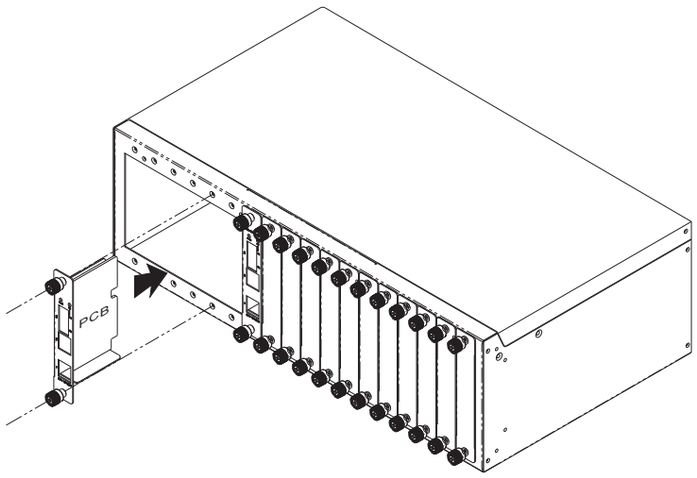
RMC-111 series is industrial rack mount card type Ethernet to fiber media converter for rack-mounted chassis box of RMC-1000, that supports hot-swappable and easy installation to RMC-1000. **RMC-111 series** is a cost-effective solution for the conversion between 10/100Base-T(X) and 100Base-FX interface, it allows you to extend communication distance by optical fiber.

RMC-111 series supports MDI/MDIX auto detection, so you don't need to use crossover wires. **RMC-111 series** also support the **LFP (Link Fault Pass-through)** feature. When one side of the link fails, the other side continues transmitting packets, and waiting for a response that never arrives from the disconnected side. Use the DIP-Switch to enable the LFP function, then **RMC-111 series** will force the link to shutdown as soon as noticed that the other link has failed, giving the application software a sign to react to the situation. Therefore, the **RMC-111 series** to collocate RMC-1000 is reliable media converter and can satisfy most demand of operating environment.

Features

- Supports 1 port 10/100Base-T(X) auto-negotiation and auto-MDI/MDI-X
- Supports Ethernet to fiber or Ethernet to SFP port for long distance communication
- Supports LFP (Link Fault Pass-through) function
- Supports full/half duplex operation mode
- Supports store and forward transmission
- Provided DIP-Switch for function setting
- Hot-swappable, High reliability and easy installation
- Up to 18 slot high density installation in RMC-1000 chassis on 19 inches rack

Installation

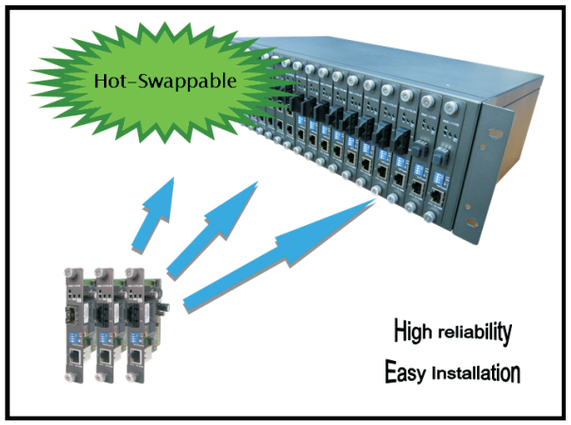


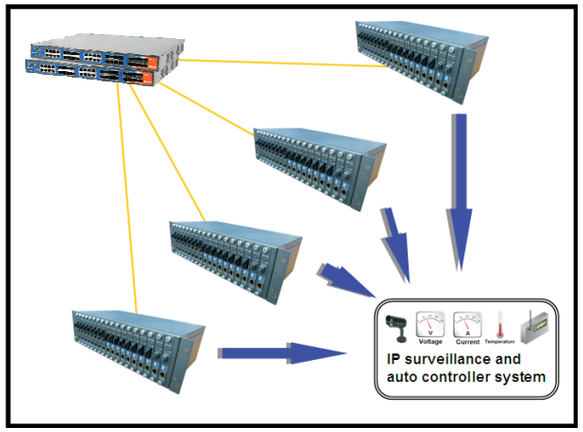
Specifications

ORing Media Converter Model		RMC-111FB-MM-SC	RMC-111FB-SS-SC	RMC-111PB
Physical Ports				
10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX		1	1	1
100Base-FX Multi-mode Ports	Fiber Ports Number	1	-	-
	Fiber Diameter (μm)	62.5/125 μm 50/125 μm	-	-
	Fiber Optical Connector	SC	-	-
	Typical Distance (Km)	2 Km	-	-
	Wavelength (nm)	1310 nm	-	-
	Max. Output Optical Power (dbm)	-14 dbm	-	-
	Min. Output Optical Power (dbm)	-23.5 dbm	-	-
	Max. Input Optical Power (Saturation)	0 dbm	-	-
	Min. Input Optical Power (Sensitivity)	-31 dbm	-	-
	Link Budget (db)	7.5 db		-
100Base-FX Single-mode Ports	Fiber Ports Number	-	1	-
	Fiber Diameter (μm)	-	9/125 μm	-
	Fiber Optical Connector	-	SC	-
	Typical Distance (Km)	-	30 Km	-
	Wavelength (nm)	-	1310 nm	-
	Max. Output Optical Power (dbm)	-	-8 dbm	-
	Min. Output Optical Power (dbm)	-	-15 dbm	-
	Max. Input Optical Power (Saturation)	-	0 dbm	-
	Min. Input Optical Power (Sensitivity)	-	-34 dbm	-
	Link Budget (db)	-	19 db	-
100Base-FX SFP port		-	-	1
Technology				
Ethernet standards		IEEE 802.3 for 10Base-T, IEEE 802.3u for 100Base-TX and 100Base-FX, IEEE 802.3x for Flow control		
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		
LED Indicators				
Power indicator		Green :(ON) power input on-line / (OFF) power input off-line		
10/100Base-T(X) RJ 45 port indicator		Green for port Link/Act -(ON) Link up / (Blinking) Acting / (OFF) Link down Amber for 100Mbps/10Mbps indicator- (ON) Working at 100Mbps / (OFF) Working at 10Mbps Green for port duplex indicator- (ON) Full-Duplex / (OFF) Half-Duplex		
100Base-FX fiber port indicator		Green for fiber port Link/Act - (ON) Link up / (Blinking) Acting / (OFF) Link down Green for fiber port duplex indicator- (ON) Full-Duplex/ (OFF) Half-Duplex		
LFP stats indicator		Amber LED - (ON) LFP function fail / (OFF) LFP function disable		
Power				
Power consumption(Typ.)		2.2 Watts		
Overload current protection		Present		
Physical Characteristic				
Dimension (W x D x H)		21.8 (W) x 73.1 (D) x 126 (H)mm (0.86 x 2.88 x 4.96 inch)		
Weight (g)		145 g		140 g

Environmental	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Temperature	-10 to 60°C (14 to 140°F)
Operating Humidity	5% to 95% Non-condensing
Regulatory Approvals	
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	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
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
Warranty	2 years

Connections of Media converter





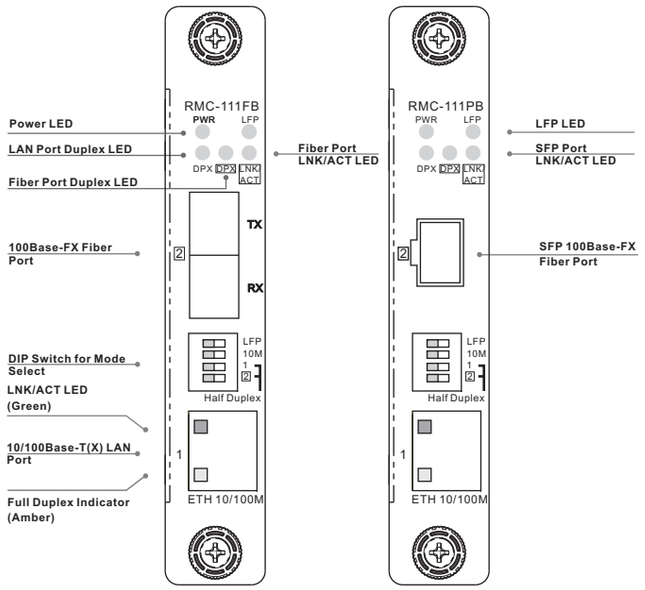
MEDIA CONVERTER INDUSTRIAL Rack-Mount

Quick Installation Guide

RMC-111 Series

Industrial Card Type Media Converter

Front Panel



■ DIP Switch Function

DIP-Switch		Description
1	ON	LFP mode enable
	OFF	LFP mode disable
2	ON	Ethernet speed 10Mbps
	OFF	Ethernet speed 100Mbps
3	ON	Ethernet Half-duplex
	OFF	Full/Half-duplex Auto-negotiate
4	ON	Fiber Half-duplex
	OFF	Fiber Full-duplex

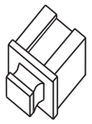
ORing Industrial Networking Corp.

TEL: +886-2-2218-1066 Website: www.oring-networking.com
FAX: +886-2-2218-1014 E-mail: support@oring-networking.com

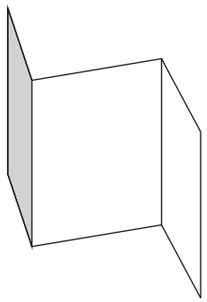
Accessory

① Dust Cover (RJ-45)

② Dust Cover (SFP)



③ QIG



Packing list

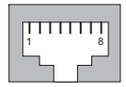
Model name	Model Description	Accessory
RMC-111FB-MM-SC	Industrial Rack mount card type Ethernet to fiber media converter with 1x10/100Base-T(X) and 1x100Base-FX, multi-mode, 2Km/1310nm, SC connector	①X 1, ③X 1
RMC-111FB-SS-SC	Industrial Rack mount card type Ethernet to fiber media converter with 1x10/100Base-T(X) and 1x100Base-FX,single-mode, 30Km/1310nm, SC connector	①X 1, ③X 1
RMC-111PB	Industrial Rack mount card type Ethernet to fiber media converter with 1x10/100Base-T(X) and 1x100Base-FX, SFP socket	①X 1, ②X 1, ③X 1

Communication Connections

10/100Base-T(X) Ethernet Port Connection

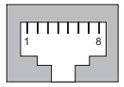
■ RJ45 (8-pin, MDI) Port Pinouts

Pin	Single
1	Tx+
2	Tx-
3	Rx+
6	Rx-

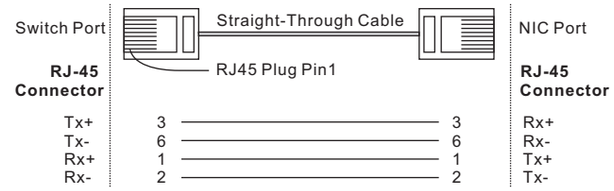


■ RJ45 (8-pin, MDI-X) Port Pinouts

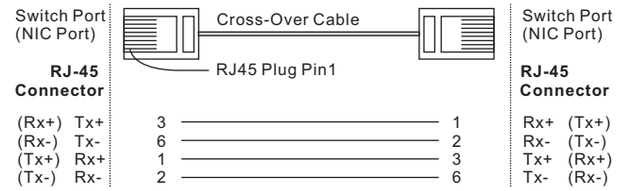
Pin	Single
1	Rx+
2	Rx-
3	Tx+
6	Tx-



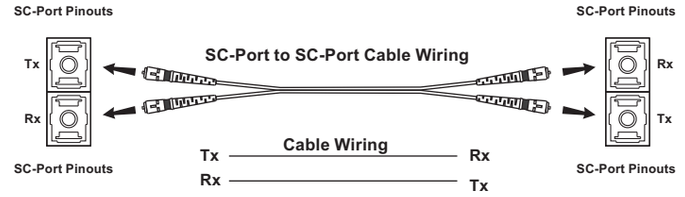
■ RJ45 (8-pin) to RJ45 (8-Pin) Straight-Through Cable Wiring



■ RJ45 (8-pin) to RJ45 (8-Pin) Cross-Over Cable Wiring



100Base-FX Connection



100Base-FX SFP Port Connection