



# 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.

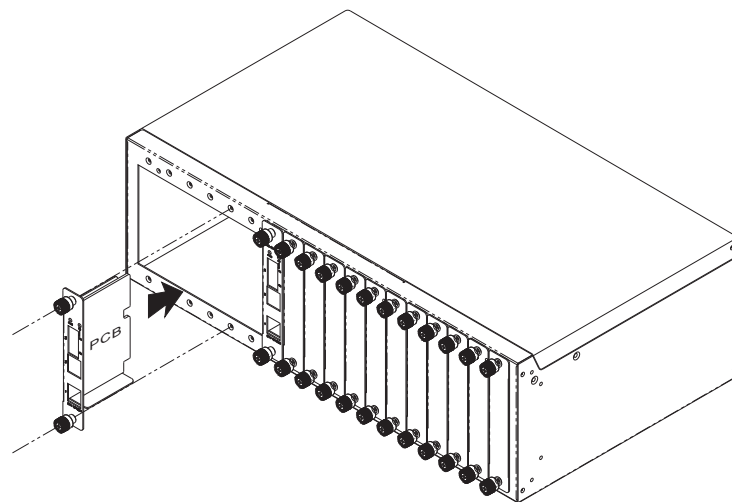
**RMC-111 series** supports MDI/MDIX auto detection, so you don't need to use crossover wires. **RMC-111 series** also support the **LFP (Link Fault Pass-through)** feature. When one side of the link fails, the other side continues transmitting packets, and waiting for a response that never arrives from 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

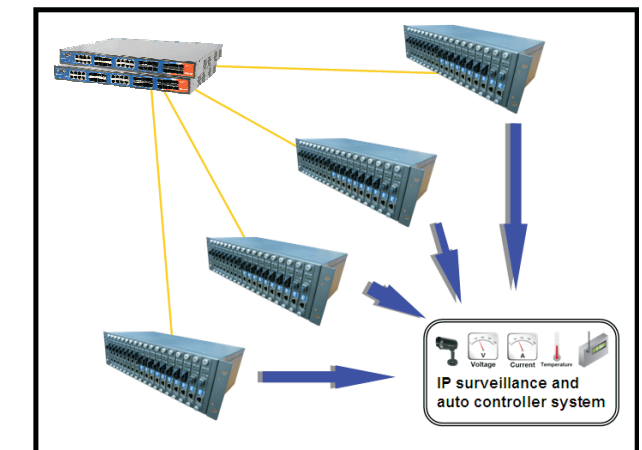
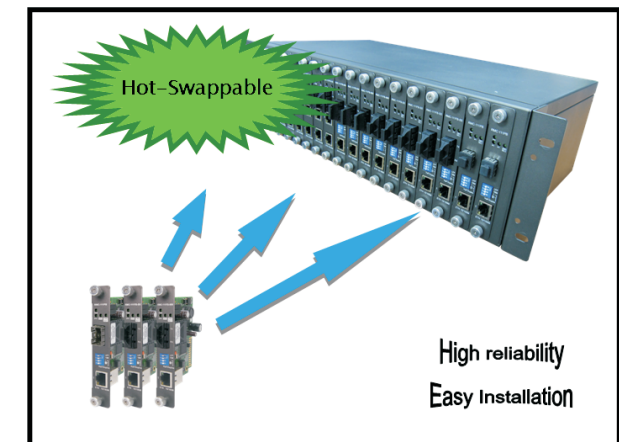


## Specifications

ORing Media Converter Model	RMC-111FB-MM-SC	RMC-111FB-SS-SC	RMC-111PB
<b>Physical Ports</b>			
10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX	1	1	1
<b>100Base-FX Multi-mode ports</b>			
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	-	-
<b>100Base-FX Single-mode ports</b>			
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
<b>Technology</b>			
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		
<b>LED Indicators</b>			
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		
<b>Power</b>			
Power consumption(Typ.)	2.2 Watts		
Overload current protection	Present		
<b>Physical Characteristic</b>			
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





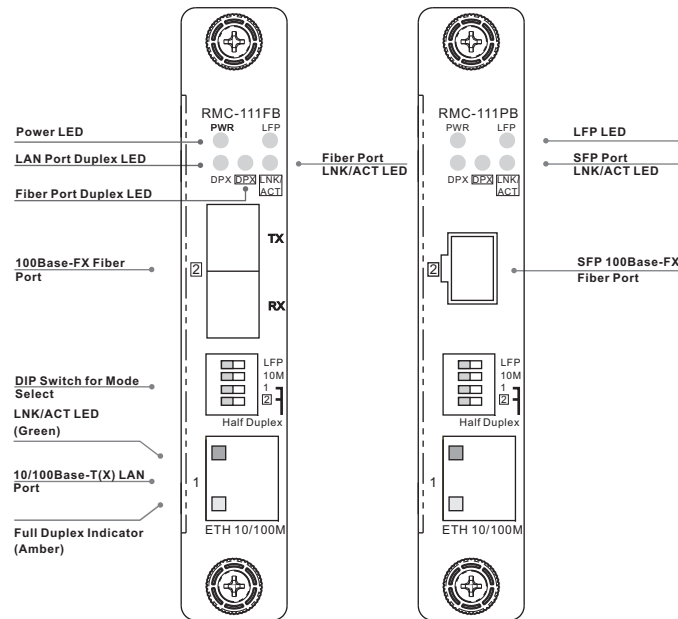
MEDIA CONVERTER INDUSTRIAL Rack-Mount

# Quick Installation Guide

# RMC-111 Series

# Industrial Card Type Media Converter

## Front Panel



### DIP Switch Function

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

## Accessory

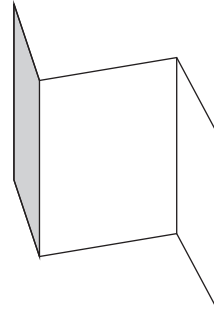
### ① Dust Cover (RJ-45)



### ② Dust Cover (SFP)



### ③ QIG

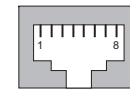


## Communication Connections

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

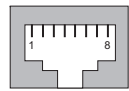
#### RJ45 (8-pin, MDI) Port Pinouts

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

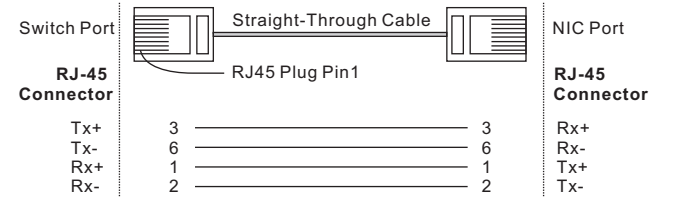


#### RJ45 (8-pin, MDI-X) Port Pinouts

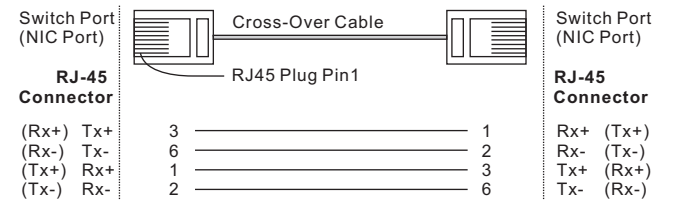
Pin	Single
1	Rx+
2	Rx-
3	Tx+
6	Tx-



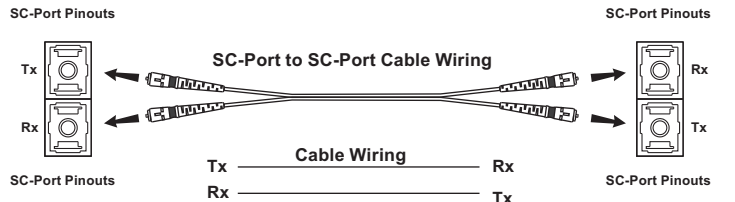
#### RJ45 (8-pin) to RJ45 (8-Pin) Straight-Through Cable Wiring



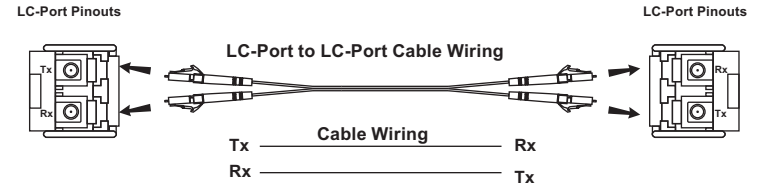
#### RJ45 (8-pin) to RJ45 (8-Pin) Cross-Over Cable Wiring



### 100Base-FX Connection



### 100Base-FX SFP Port Connection



## 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	① X 1, ② X 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	① X 1, ② X 1
RMC-111PB	Industrial Rack mount card type Ethernet to fiber media converter with 1x10/100Base-T(X) and 1x100Base-FX, SFP socket	① X 1, ② X 1, ③ X 1



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