

# OPTRONICS

Ethernet Fibre Media Converter

## Gigabit Media Converter



## Unmanaged Media Converter Chassis

Multimode to Singlemode Media Converter

ACTIVE COMPONENTS

# About Optronics

## OPTRONICS

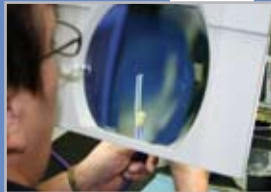
Optronics is one of the largest manufacturers of fibre optic interconnect products in the world.

Optronics designs, manufactures and markets fibre optic interconnect products and systems for use in enterprise and telecommunications applications.

In 1994, Optronics was acquired, a company founded in 1975 at the outset of fibre optic communications technologies.

Optronics branded products are readily available worldwide from our network of Authorised Distributors.

Optronics has manufacturing facilities in China and Europe. Its principal fibre optic cable assembly manufacturing site has fully integrated cable jacketing, connector and cable assembly fabrication facilities. The Company expects to undertake in excess of 18 million fibre optic terminations in the current year. Optronics has also comprehensive capabilities in fibre management products and complements its range patch cords, pigtailed and high core count pre-terminated assemblies with an extensive range of fibre optic patch panels, wall boxes and splice boxes (unloaded or customised).



Lately, new manufacturing investments in High Density Fibre connectivity means the company can supply assemblies to customers directly from Europe as well as from the Far East. In addition to our activities in the Far East and the USA, Optronics has established a new company in the UAE (Dubai) to better serve our customers in that region.



UK Rapid Response & Production Facilities

Chinese Production Facility

Optronics USA

Optronics UK

Optronics Dubai

Optronics China



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- > Unmanaged Media Converter Chassis



- > Ethernet Fibre Media Converter 10/100Mbps



- > Gigabit Media Converter 10/100/1000Mbps



- > Multimode to Singlemode Media Converter

## Active Components

# Active Components

- > Unmanaged Media Converter Chassis



- > Ethernet Fibre Media Converter 10/100Mbps



- > Gigabit Media Converter 10/100/1000Mbps



- > Multimode to Singlemode Media Converter





The 2U 14 -Bay Rack Mount Media Converter Chassis provides higher rack mount media converter density for large installations that can accommodate rear access to the chassis for power supply maintenance.

The high port density allows a variety of media converter solutions to be housed in a minimum amount of rack spaces for enterprise-level businesses and carriers. Redundant, fan-cooled load-sharing power supplies can be hot-swapped to ensure system uptime.

## Technical Specifications

DESCRIPTION	VALUE
Power in	AC 100 V-260 V; OR DC 48V
Power out	DC 5V, 12A
Protection of power supply	circuit-breaker when overvoltage; circuit-breaker when overflow;circuit-breaker when short circuit
Temperature	0 - 70°C (Operating); -45 - 80°C (Storage)
Humidity	5%-80% non-condensing (Operating); 10%-90% (Storage)
Dimensions	485mm x231mm x 90mm (LxWxH);19 inches 2U

## Ordering Information

DESCRIPTION	PART NO
14 Slots Media Connector Chassic Euro Adaptor	<b>MCC-14EU/Z</b>
14 Slots Media Connector Chassic United States Adaptor	<b>MCC-14US/Z</b>
14 Slots Media Connector Chassic United Kingdom Adaptor	<b>MCC-14UK/Z</b>
14 Slots Media Connector Chassic Australia Adaptor	<b>MCC-14AU/Z</b>

## Features

- > Cross flow cooling fan built-in
- > Number of slots: 14
- > 14 slots chassis: 10/100M or 10/100/1000M stand-alone external power supply media converters

## Applications

- > LAN
- > FTTx
- > Telecommunication Networks



Media Converters provide an intelligent solution for fibre optic connectivity where simplicity, low cost, and minimum footprint are the primary considerations. The converters are designed to handle both legacy 10BaseT and 100BaseTX Fast Ethernet devices on their twisted pair port while maintaining 100BaseFX Fast Ethernet transmission on the Fibre optic port. Plug-and-play simplicity makes connection easy.

Each Media Converter provides a 10/100BaseT/TX auto-negotiating RJ45 twisted-pair connector port with Auto-MDIX capability for more convenient connection. Built-in 10/100 switch enables the Fibre cable connection to operate at 100 Mbps connected to either a 10BaseT or a 100BaseTX network, while remaining completely 100BaseFX standard-compliant. Fibre connection can also operate in full duplex mode whether the RJ45 port is connected to a full duplex switch or a half duplex hub.

## Features

- > Auto-Cross over for MDI/MDIX in TP port
- > Auto-Negotiation in TP port
- > Supports link fault pass through (LFP) function
- > LED display for link/activity, full/half, 10/100M
- > Converter mode with auto-change-forward (Switch) function

## Applications

- > LAN
- > FTTx
- > Telecommunication networks

## Technical Specifications

DESCRIPTION	VALUE	
Complies with	100Base-FX standards	EEE 802.3 10Base-T, 802.3u 100Base-TX
Connector	UTP RJ-45 connector, optical SC, FC,ST connector	
Transmission Type	10/100M FDX/HDX	
Data Buffer	128Kb RAM	
Wavelength(typical)	Multi-mode:1310nm (≤2Km)	
	Single-mode: 1310nm up to 20Km,1550nm up to 120Km	
Operation mode	Full duplex mode or half duplex mode	
Temperature	0 - 70°C (Operating); -45 - 80°C (Storage)	
Humidity	5%-80% non-condensing (Operating); 10%-90% (Storage)	
Power Supply	External 1A,+5VDC	Internal 110~260VAC
	Dimensions	
Dimensions	External power version 95mm x70mm x 26mm (LxWxH)	
	Internal power version 140mm x110mm x 30mm (LxWxH)	
Power Consumption	2.5W	
Compliance	RoHS & REACH	
	FCC Part 15 Class B	
	CE EN55022: 1998+A1: 2000+A2: 2003	
	EN61000-3-2: 2000+A2: 2005	
	EN61000-3-3: 1995+A1: 2001	
MTBF	EN55024: 1998+A1: 2001+A2: 2003	
	65,000 h (25°C)	



The 10/100/1000 Media Converter provides an intelligent solution for long distance connections between legacy 10BaseT and 100BaseTX networks and the newer 1000Base Gigabit Ethernet networks. The built-in 10/100/1000 converter enables the fibre cable connection to operate at 1000 Mbps connected to either a 10BaseT, 100BaseTX, or a 1000BaseT network, while remaining completely 1000BaseSX standard-compliant for the Fibre optic connection. The fibre connection can also operate in full duplex mode whether the RJ45 port is connected to a full duplex switch or a half duplex hub.

Each Media Converter provides a 10/100/1000BaseT/TX auto-negotiating RJ45 twisted-pair connector port featuring store-and-forward switching architecture. The built-in switch does the network segmentation to provide the maximum fibre distance. Auto-MDIX capability on the twisted-pair port allows convenient connection.

## Technical Specifications

DESCRIPTION	VALUE
Complies with	IEEE802.3 10 Base-T standard   IEEE 802.3u 100Base-TX/FX standard
Connector	UTP RJ-45 connector, optical SC, FC,ST connector
Data Buffer	2 Megabyte
Wavelength(typical)	Multi-mode:850nm(≤550m) 1310nm (≤2Km) Single-mode: 1310nm up to 20Km
Operation mode	Full duplex mode or half duplex mode
Temperature	0 - 70°C (Operating); -45 - 80°C (Storage)
Humidity	5%-80% non-condensing (Operating); 10%-90% (Storage)
Power Supply	External 1A,+5VDC   Internal 110~260VAC
Dimensions	External power version 95mm x70mm x 26mm (LxWxH) Internal power version 140mm x110mm x 30mm (LxWxH)
Power Consumption	2.5W
Compliance	RoHS & REACH FCC Part 15 Class B CE EN55022: 1998+A1: 2000+A2: 2003 EN61000-3-2: 2000+A2: 2005 EN61000-3-3: 1995+A1: 2001 EN55024: 1998+A1: 2001+A2: 2003

## Features

- > Automatic identification of MDI/MDI-X cross line.
- > 10/100/1000Mbps port with full/half duplex auto-negotiation
- > Back pressure flow control for full duplex
- > Converter mode with auto-change-forward (switch) function

## Applications

- > LAN
- > FTTx
- > Telecommunication Networks



Multimode to Singlemode Converters provide efficient solutions for interconnecting multimode Fibre LANs over longer distances by integrating singlemode fibre optic cable into the LAN. The converter also enables Ethernet LAN and WAN connectivity, by providing a multimode interface to singlemode fibre carrier demarcation points. Models are available for singlemode to multimode conversion between fast Ethernet devices, or for Asynchronous Transfer Mode (ATM) applications transported over a Synchronous Optical Network (SONET). Each Media Converter is enclosed in a compact, strong metal case and includes an external power supply for stand-alone applications.

## Features

- > Extend a Gigabit Ethernet backbone connection up to 80 km for MAN(metropolitan area network) applications
- > Converts Multimode to Singlemode (and vice versa)
- > Converts Single mode to Singlemode or Multimode to Multimode
- > Increases Distance Between Nodes
- > Cross Connects Fibre Types
- > Performs Optical Repeater Function (with 1x9 or SFP transceiver modules)

## Applications

- > LAN
- > FTTx
- > Telecommunication networks

## Technical Specifications

DESCRIPTION	VALUE	
Complies with	100Base-FX standards	EEE 802.3 10Base-T, 802.3u 100Base-TX
Connector	UTP RJ-45 connector, optical SC, FC,ST connector	
Transmission Type	Multi-mode or single mode	
Wavelength(typical)	Multi-mode:850nm (≤550m), 1310nm (≤2Km)	
	Single-mode: 1310nm up to 40Km,1550nm up to 80Km	
Operation mode	Full duplex mode or half duplex mode	
Temperature	0 - 70°C (Operating); -45 - 80°C (Storage)	
Humidity	5%-80% non-condensing (Operating); 10%-90% (Storage)	
Power Supply	External 1A,+5VDC	
Dimensions	External power version 95mm x70mm x 26mm (LxWxH)	
Compliance	RoHS & REACH	
	FCC Part 15 Class B	
	CE EN55022: 1998+A1: 2000+A2: 2003	
	EN61000-3-2: 2000+A2: 2005	
MTBF	EN61000-3-3: 1995+A1: 2001	
	EN55024: 1998+A1: 2001+A2: 2003	
MTBF	65,000 h (25°C)	

## Part Number Generator

### Ethernet Fibre Media Converter 10/100Mbps

Type	Speed		Wavelength		Connector		Distance		Power Adaptor		Power supply	
MCF	01	10/100M	M	Multi-mode	SC	SC connector	2	2km	EU	Euro type	E/Z	External
			S	Single-mode	ST	ST connector	20	20km	US	U.S. type	I/Z	Internal
					FC	FC connector	40	40km	UK	U.K. type		
							60	60km	AU	AU type		
							80	80km				
							100	100km				
							120	120km				

#### Example Part Number

MCF 01 M SC 2 EU E/Z

This part number generator has created an:10/100Base Un-managed media converter 2km SC. U.K. External power supply.

### Gigabit Media Converter 10/100/1000Mbps

Type	Speed		Wavelength		Connector		Distance		Power Adaptor		Power supply	
MCF	02	10/100/1000M	M	Multi-mode	SC	SC connector	2	2km	EU	Euro type	E/Z	External
			S	Single-mode	ST	ST connector	20	20km	US	U.S. type	I/Z	Internal
					FC	FC connector	40	40km	UK	U.K. type		
							60	60km	AU	AU type		
							80	80km				
							100	100km				
							120	120km				

#### Example Part Number

MCF 02 M SC 20 UK E/Z

This part number generator has created an: Single Mode Gigabit RJ45 - SC UK Power 1Gbs Media Converter 20km. External

### Multimode to Singlemode Media Converter

Type	Speed		MM connector		SM connector		Distancemm		Distance SM		Power Adaptor		Power supply	
MCF	01	10/100M	SC	SC connector	SC	SC connector	1	550m	10	10km	EU	Euro type	E/Z	External
	02	10/100/1000M	ST	ST connector	ST	ST connector	2	2km	20	20km	US	U.S. type		
			FC	FC connector	FC	FC connector			40	40km	UK	U.K. type		
									60	60km	AU	AU type		
									70	70km				
									80	80km				

#### Example Part Number

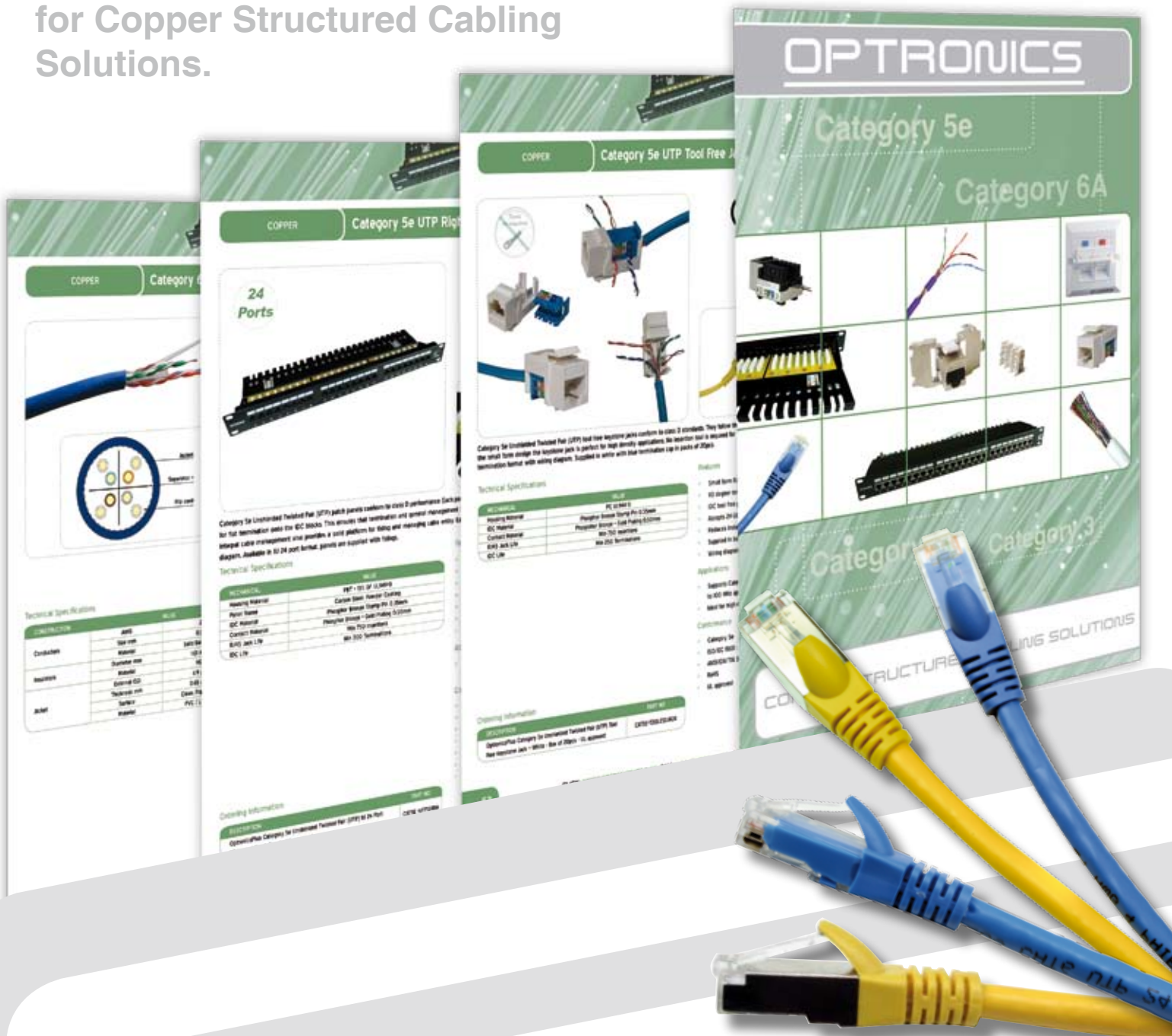
MCF 01 SC SC 2 10 EU E/Z

This part number generator has created an:10/100M Multi-mode 1310nm 2km to Single-mode 1310nm 10km. SC to SC. Euro type power adaptor. External

# OPTRONICS

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CALL: + 44 (0) 1908 441104

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# OPTRONICS

Other catalogues available for download at  
<http://www.optronicsnet.com>



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ACTIVE COMPONENTS