

DMC-805X

Version 1.00

**10G CX4 To 10G SFP+
Media Converter**

User Manual

FCC Class A Certification

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this user's guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

CE Mark Warning

This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

VCCI Class A Compliance (Japan)

This is a product of VCCI Class A Compliance

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

VCCI-A



Introduction

Thank you for choosing the DMC-805X, a 10G CX4 to 10G SFP+ Media Converter. The DMC-805X` converts 10G CX4 signals to 10G fiber signals. Comes with an SFP+ slot for user-selectable fiber transceivers and extends the network connection to various lengths depending on SFP+ transceiver capability.

About DMC-805X

The DMC-805X is a high performance 10G media converter which is flexible for distance extension on a server equipped with CX4 NIC or previous 10G switch built with 10G CX4 ports.

The DMC-805X can be used as standalone converter or installed in D-Link special designed chassis (DMC-1000). A management option is available for the DMC-805X installed in the chassis (DMC-1000). The management module (DMC-1002) lets users monitor in real-time the status of DMC-805X and power supplies in the chassis. It also sends out alarms to alert users of abnormal situations. Management follows industry standards, including SNMP and http, allowing users to monitor and manage from a third-party SNMP management workstation or via a web browser.

Product Features

- Compliance with IEEE802.3ak CX4 XAUI and IEEE802.3ae/10GBASE SFP+
- One-channel media conversion between 10GBASE-CX4 and 10GBASE-SR/ER/LR/LRM/ZR SFP+ module
- Extends network connection to various lengths depending on SFP+ transceiver capability
- Used as stand-alone converter or installed in D-Link special designed chassis (DMC-1000)
- Provides intelligent functions such as LLR (Link Loss Return) and LLCF (Link Loss Carry Forward)
- Front panel status LEDs
- Hot-swappable when installed in a standard rack-mount chassis (DMC-1000)

Installation

This chapter gives step-by-step installation instructions for the DMC-805X.

Selecting a Site for the Equipment

As with any electric device, you should place the equipment where it will not be subjected to extreme temperatures, humidity, or electromagnetic interference. Specifically, the site you select should meet the following requirements:

1. The ambient temperature should be between 32 and 104 degrees Fahrenheit (0 to 40 degrees Celsius).
2. The relative humidity should be less than 90 percent, non-condensing.
3. Surrounding electrical devices should not exceed the electromagnetic field (RFC) standards for IEC 801-3, Level 2 (3V/M) field strength.
4. Make sure that the equipment receives adequate ventilation. Do not block the ventilation holes on each side of the switch or the fan exhaust port on the side or rear of the equipment.
5. The power outlet should be within 1.8 meters of the switch.

Connecting to Power

1. The DMC-805X is a plug-and-play device.
2. Connect the supplied AC to DC power adaptor with a power voltage of 12Vdc/0.5Amp to the DC-Jack on the converter, and then attach the plug into a standard AC outlet.

Installing in a Chassis

The DMC-805X can be fit into any of the expansion slots on D-Link special designed chassis (DMC-1000).

Follow up the following steps to install the converter onto a carrier supplied with D-Link special designed chassis (DMC-1000):

- Step 1- Unscrew and pull out the media converter board.
(Refer to figure 1)
- Step 2- Plug in the media board to any of the vacant slot.
(Refer to figure 2)
- Step 3- Fit the converter onto the carrier and use the screw to secure it.

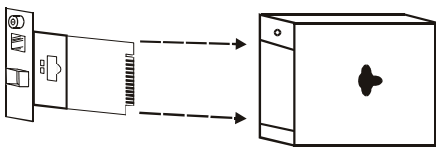


Figure 1

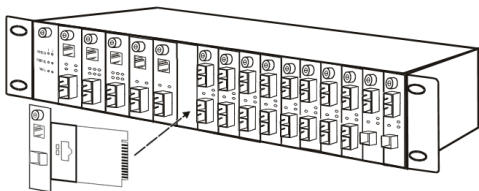


Figure 2

Monitoring the Converter through Management Module (DMC-1002)

There is a **management module** named as **DMC-1002** that can control this media converter through D-Link special designed **chassis system (DMC-1000)**, this media converter can be controlled through Web Browser, SNMP and terminal emulation program.

The **management module** will detect the default reset on the DIP switches and display out the status, also the **management module (DMC-1002)** can control the function through the **chassis system (DMC-1000)**.

Figure 3 is a captured screen of DMC-805X from the Web GUI.



Figure 3

NOTE: To control the function in a working station, need to collocate together with optional Chassis System and Management Module.

LED Indicator

The LED indicators give you instant feedback on status of the converter:

LEDs	State	Indication
PWR (Power)	Lights on	Power on
	Lights off	Power off
CX4	Lights on	Linking
	Lights Blinking	Data transmitting and receiving
	Lights off	Not Linking
SFP+	Lights on	Linking
	Lights Blinking	Data transmitting and receiving
	Lights off	Not Linking

Refer to figure 4 to check the LED location on the front panel.



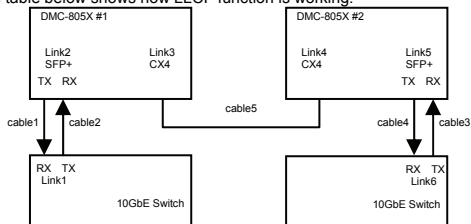
Figure 4

Link Pass Through Function (LLCF) Link Loss Carry Forward

When a device connected to the converter and the CX4 XAUI lost the link connection, the converter's fiber will disconnect the link of transmit, so that the other ends will know that there is a linkage error on this end. And when the Fiber line lost the link, the converter's CX4 XAUI will be disconnected, and the other end will know that there is linkage problem exist.

The LLCF setting is always Enable on this converter.

The table below shows how LLCF function is working:



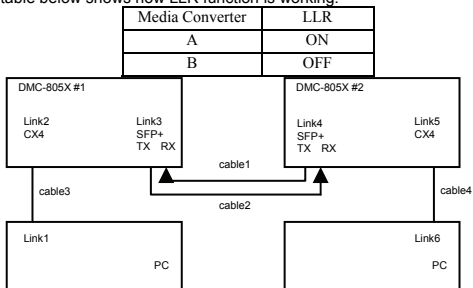
Link Status	Link 1	Link 2	Link 3	Link 4	Link 5	Link 6
Disconnect						
Cable 1	Off	On	On	On	On	Off
Cable 2	Off	Off	On	Off	On	Off
Cable 3	Off	On	Off	On	Off	Off
Cable 4	Off	On	On	On	On	Off
Cable 5	Off	On	Off	Off	On	Off

Link Pass Through Function (LLR) Link Loss Return

When a device connected to the converter and the fiber line lot the link, the converter's fiber will disconnect the link of transmit.

There is a switch to enable or disable the function of the media converter.

The table below shows how LLR function is working:



Link Status	Link Status					
	Link 1	Link 2	Link 3	Link 4	Link 5	Link 6
Disconnect						
Cable 1	Off	On	Off	Off	On	Off
Cable 2	Off	On	On	Off	On	Off
Cable 3	Off	Off	On	Off	On	Off
Cable 4	Off	On	Off	Off	Off	Off

NOTE: If connecting two converters with LLR function in both end, it is recommended that the monitor end converter had to turn off the LLR function, and turn on the LLR function of the remote end converter.

Switch

There is one pin DIP switch on the module which defines as switch 1:

Switch 1: LLR

When the switch was turned to “On”, it means that the LLR was enabled and “Off” for disabled.

Note: When using two converters, don't enable the both devices' LLR function at the same time.

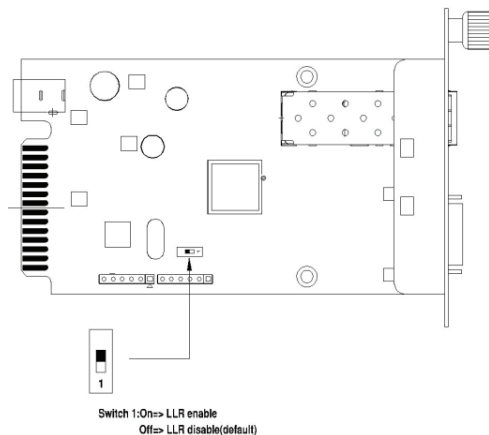


Figure 5

Specifications

Standards:	IEEE802.3ak 10GBASE-CX4 IEEE802.3ae/aa 10GBASE-SR/ER/LR/LRM/ZR
Data Transfer Rate:	20Gbps
Duplex Mode:	Full Duplex Mode
LED indicators:	PWR, CX4, SFP+
Supported SFP+ Transceivers	DEM-431XT: 10GBASE-SR SFP+ Transceiver (w/o DDM), 80m: OM1 & OM2 MMF, 300m: OM3 MMF DEM-431XT-DD: 10GBASE-SR SFP+ Transceiver (with DDM), 80m: OM1 & OM2 MMF, 300m: OM3 MMF DEM-432XT: 10GBASE-LR SFP+ Transceiver (w/o DDM), 10km DEM-432XT-DD: 10GBASE-LR SFP+ Transceiver (with DDM), 10km DEM-433XT: 10GBASE-ER SFP+ Transceiver (w/o DDM), 40km DEM-433XT-DD: 10GBASE-ER SFP+ Transceiver (with DDM), 40km DEM-434XT: 10GBASE-ZR SFP+ Transceiver (w/o DDM), 80km DEM-435XT: 10GBASE-LRM SFP+ Transceiver (w/o DDM), 220m: OM1 & OM2 MMF, 300m: OM3 MMF DEM-435XT-DD: 10GBASE-LRM SFP+ Transceiver (with DDM), 220m: OM1 & OM2 MMF, 300m: OM3 MMF DEM-436XT-BXU: 10GBASE-LR BiDi SFP+ Transceiver (w/o DDM), 20km, TX: 1270nm, RX: 1330nm DEM-436XT-BXD: 10GBASE-LR BiDi SFP+ Transceiver (w/o DDM), 20km, TX: 1330nm, RX: 1270nm

CX4 Cable	10GBASE-CX4 XAU1 4-lane PCS (Clause 48) and copper cabling similar to that used by InfiniBand technology, up to 15m
DIP Switch	Bit 1: Off: LLR disable(default) On: LLR enable
Dimensions	L120 × W88 × H25 mm
Power	External power adapter 12V/0.5A
Temperature:	Storage: -10°C ~ 70°C (14 ~ 158° F) Operating: 0°C ~ 40°C (32°F ~ 104°F)
Humidity:	10% ~90% non-condensing
Power Consumption:	3.4 Watts Max.
EMI Compatibility:	FCC part 15 Class A CE Certification, Class A VCCI Class A

Notes

Notes

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