

FOC-USFP-USFP

FAST/GIGABIT ETHERNET FIBER/FIBER CONVERSION

Feature

Fiber/fiber Ethernet /Gigabit Universal automatic media converters

- **FOC-USFP-USFP.**
Supports 2 dual rate 100FX and 1000SX/LX/ZX SFP for the conversion:
- 100FX towards 100FX
- 1000FX towards 1000FX
- Usable SFP: without limit of Fiber: MM, SM, simple core fiber SM WDM, CWDM or DWDM
- Automatic detection of the rates in both 2 fibers and adjustment to a single rate 100FX or 1000FX

Automatics function enable/disable per mini Dip-switch

- « Link Alarm » support
- Auto negotiation of Ethernet rate or selection of fixed rate 100FX or 1000FX
- Flux full duplex
- Supports Jumbo frame 9KBytes.

Other

- 94x71x26 mm—800g
- Power supply DC5V
- AC/5V adapter is supplied AC, or 48Vcc in option
- 19" Chassis with dual power supply and FAN for 16 FOC/FOCM : RACK-MEDIA16
- DIN mounting in option
- 19" mounting in option

RATE ADAPTATION FOR ETHERNET FIBER EQUIPMENTS OR OPTICAL ETHERNET LINK EXTENSION

The **FOC-USFP-USFP** is an automatic and powerful media converter for optical Fast-Ethernet or Gigabit-Ethernet links or to interconnect optical Ethernet devices from all vendors. This converter adjust automatically the optical rate of both end devices or can be selected by DIP switch. The enable/disable function « Link Alarm » inform the fiber of the disconnection of the other fiber to down the service. This FOC-USF-USF is used as stand alone or in RACK-MEDIA16. 19" chassis.

The **FOC-USF-USF** converter Fast-Ethernet 100FX toward 100FX or Gigabit-Ethernet 1000SX/LX toward 1000SX/LX.

We can use 100FX SFP (CXR SFP-STM1-MM/SM...) with simple rate or dual rates SFP (CXR SFP-GSX/GLX...) which support with the FOC-USF-USF the both rates 100FX/1000FX.

The **FOC-USF-USF** with two dual rate SFP GE/FE is detecting automatically the rate of the two fibers and is adjusting his rate to the fastest rate of both connected equipments

Please be ware: the FOC-USF-USF cannot inter connector a 100FX interface and a 1000FX.interface.

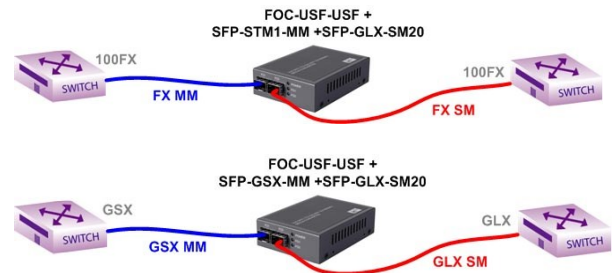
The **FOC-USF-USF** supports the 9K Jumbo Frame that are request by some applications like IP-TV.

The **FOC-USF-USF** supports the «Link Alarm» (or Link down) function that when in one side the fiber is cut then the traffic of the opposite fiber is down to inform the router or switch.



SIMPLE CONVERSION OR EXTENSION FROM LAN IN OPTICAL

The **FOC-USF-USF** converter interconnect two fiber Ethernet equipments supporting the IEEE 802.3u and 3z standards. The LED shows the activity of both sides.

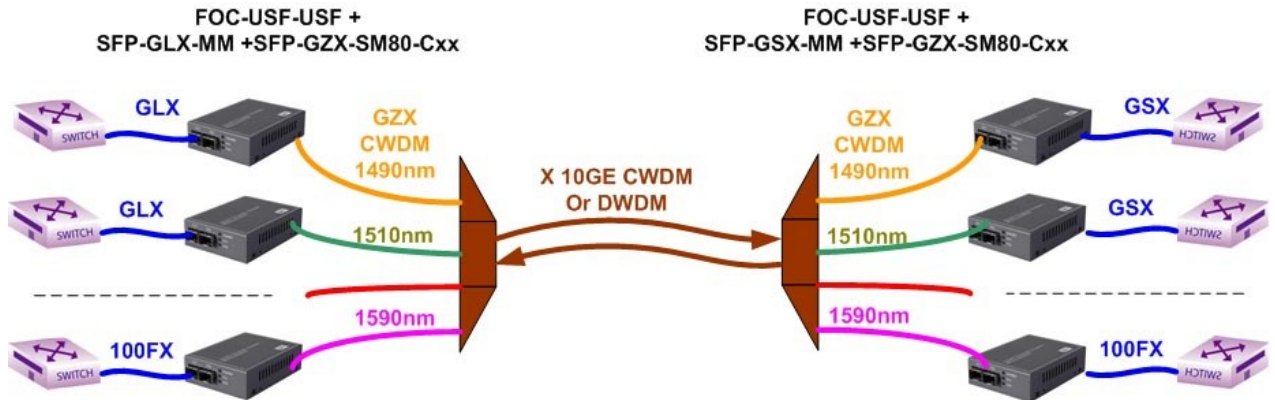


The **FOC-USF-USF** are also used as LAN extension to connect two optical branches of LAN over a long distance fiber. This doesn't reduce the full duplex rate of 200Mbps or 2000Mbps.



Optical Ethernet converter

CWDM CONVERSION



The **FOC-USFP-USFP** can be used as optical transponder 100FX/1000FX toward a CWDM or DWDM Lambda by using the appropriated SFP.

SPECIFICATIONS

FOC-USFP-USFP																			
STANDARDS	IEEE 802.3u 100FX and IEEE 803.3z 1000BaseX																		
2 PORTS FIBER	Use 2 SFP modules 100FX, 1000FX or dual rate 100FX/1000FX																		
Rate	<table border="1"> <thead> <tr> <th>100FX</th> <th>1000FX</th> <th>100FX and 1000FX</th> </tr> </thead> <tbody> <tr> <td>CXR SFP Modules Multi-mode standard 2 cores fiber SFP-STM1-MM 1310nm 2 km</td> <td>SFP-GSX-MM 850nm 500m SFP-GSX-MM 1310nm 2 km</td> <td></td> </tr> <tr> <td>CXR SFP Modules Single-mode standard 2 cores fiber SFP-STM1-SM30/60 1310nm 30, 60km SFP-STM1-SM1xx 1310nm 100/120km</td> <td>SFP-GLX-SM20/40 1310nm 20/40km SFP-GZX-SM50/80/120 1550nm</td> <td></td> </tr> <tr> <td>CXR SFP Modules Single-mode WDM single core fiber SFP-STM1-SM20W3 1310nm SFP-STM1-SM20W5 1550nm</td> <td>SFP-GLX-SM20W3 1310nm SFP-GLX-SM20W5 1550nm</td> <td></td> </tr> <tr> <td>CXR SFP Modules Single-mode CWDM 2 cores fiber SFP-STM1-SM80-Cxx color XX</td> <td>SFP-GLX-SM80-Cxx color xx</td> <td></td> </tr> <tr> <td>- Connectors</td> <td>LC/PC for WDM LC/PC Bidi</td> <td>LC/PC for WDM LC/PC Bidi</td> </tr> </tbody> </table>	100FX	1000FX	100FX and 1000FX	CXR SFP Modules Multi-mode standard 2 cores fiber SFP-STM1-MM 1310nm 2 km	SFP-GSX-MM 850nm 500m SFP-GSX-MM 1310nm 2 km		CXR SFP Modules Single-mode standard 2 cores fiber SFP-STM1-SM30/60 1310nm 30, 60km SFP-STM1-SM1xx 1310nm 100/120km	SFP-GLX-SM20/40 1310nm 20/40km SFP-GZX-SM50/80/120 1550nm		CXR SFP Modules Single-mode WDM single core fiber SFP-STM1-SM20W3 1310nm SFP-STM1-SM20W5 1550nm	SFP-GLX-SM20W3 1310nm SFP-GLX-SM20W5 1550nm		CXR SFP Modules Single-mode CWDM 2 cores fiber SFP-STM1-SM80-Cxx color XX	SFP-GLX-SM80-Cxx color xx		- Connectors	LC/PC for WDM LC/PC Bidi	LC/PC for WDM LC/PC Bidi
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FUNCTIONS	Transparent Media Converter																		
Maximum transfer Rate	200Mbps or 2000Mbps full duplex																		
MTU maxi Frames	Jumbo Frame 9Kb																		
Selection du Rate	Automatic with SFP dual rate, or by DIP switch selection																		
LINK ALARM (Active/Non)	Un-active B Ethernet port when A Ethernet port is cut, Un-active A Ethernet port when B Ethernet port is cut																		
SETTLING																			
Auto or Manual	Auto-Mode or per DIP-switch																		
POWER SUPPLY	DC 5V, supply with AC 120/240V adapter (DCAC-FOC)																		
Optional adapter DC48v or 24V	In option DCDC-FOC-48V or DCDC-FOC-24V adapter																		
Consumption	1,8V in 5Vdc and 2,2 W in AC																		
CHASSIS																			
Sharing of Power supply and FAN	Option RACK-MEDIA16N or RACK-MEDIA16S																		
PHYSICAL																			
Dimensions and Weigh	71 x 94 x 26mm (LxPxH) - 600g																		
Working Temperature	0 to 50 °C (Version converter FOCD-I: -10 to +60 °C and FOCD-H: -40 to +75 °C)																		
Stocking Temperature	-20 to 60 °C																		
Non condensed Humidity	5 to 90%																		
MTBF	>50 000 hours																		
EMISSION/SECURITE	CE - FCC Class A																		

MODELE NUMBER

FOC-USFP-USFP	Media converter with 2 SFP slot support: 100FX to 100FX and 1000SX/LX to 1000SX/LX, delivered w/ SFP module
	Rack and fixing accessories for FOC/FOCM
RACK-MEDIA16N	Rack 19" 2U without redundancy power and 3 FAN for 16 FOC/FOCM
RACK-MEDIA-AC	AC power for RACK-MEDIA16N maxi 2
RACK-MEDIA-DC	AC power for RACK-MEDIA16N maxi 2
RACK-MEDIA16N-2AC	Rack 19" 2U with mounted with 2 redundancy powers installed and 3 FAN for 16 FOC/FOCM
RACK-MEDIA16S	Rack 19" 2U with one fixed power and 3 FAN for 16 FOC/FOCM
KIT-SLIDE-IN-FOC	Mounting kit for FOC/FOCM to slide in RACK-MEDIA16 ** Already supplied with RACK*** Spare parts
DIN-FOC	Kit DIN for FOC , FOCF or FOCI
RACK19-1FOCx	19" or 23" chassis mounting kit, fixed on one side of the bay, 1U high, for one 1 FOC, FOCM, FOCF, FOCI
WALL-FOC	Wall mounting kit for FOC/FOCM/FOCF
Q-FOC	Kit for 4 FOC/FOCM with common AC/DC adaptor
	Power supply for FOC/FOCM
DCAC-FOC	AC adapter to 5V for FOC, Europe plug ** spare already includes in FOC
DCAC-FOC-UK	AC adapter to 5V for FOC, UK plug ** spare already includes in FOC
DCAC-FOC-USA	AC adapter to 5V for FOC, USA plug, ** spare already includes in FOC
DCAC-FOC-IEC320M	AC adapter to 5V for FOC , male IEC320 AC socket, no cord
DCAC-FOC-IEC320M-E	AC adapter to 5V for FOC , AC plug male IEC320, European power cord
DCDC-FOC-48V	DC48V to DC5V adapter for FOC
DCDC-FOC-24V	DC24V to DC5V adapter for FOC
	SFP MODULE support: 100FX, STM1-OC3, CXR E1/E3 FO-modem and MX devices. -5 to +70°C
SFP-STM1-MM-850	SFP module 100FX, STM1 - OC3 multimode 850nm, compatible with FO-xxxx-MM, LC
SFP-STM1-MM2	SFP module 100FX, STM1 - OC3 multimode 1310 for 2km, LC
SFP-STM1-SM30	SFP module 100FX, STM1 - OC3 single mode 1310 for 30km, LC
SFP-STM1-SM60	SFP module 100FX, STM1 - OC3 single mode 1310 for 50km, LC
SFP-STM1-SM100-15	SFP module 100FX, STM1 - OC3 single mode 1550 for 100km, LC
SFP-STM1-SM120-15	SFP module 100FX, STM1 - OC3 single mode 1550 for 120km, LC
SFP-STM1-SM160-15D	SFP module 100FX, STM1 - OC3 single mode 1550 for 160km, LC, with DDM, L-4.2
SFP-STM1-SM200-15D	SFP module 100FX, STM1 - OC3 single mode 1550nm w 46 to 50dB budget for 200km, LC, with DDM, L-4.2
SFP-STM1-SM15-W13	SFP module 100FX, STM1 - OC3 single mode WDM 1310 for 15km, LC, must be used face to SFP-STM1-SM15-W15
SFP-STM1-SM15-W15	SFP module 100FX, STM1 - OC3 single mode WDM 1550 for 15km, LC, must be used face to SFP-STM1-SM15-W13
SFP-STM1-SM60-W13	SFP module 100FX, STM1 - OC3 single mode WDM 1310 for 60km, LC, must be used face to SFP-STM1-SM60-W15
SFP-STM1-SM60-W15	SFP module 100FX, STM1 - OC3 single mode WDM 1550 for 60km, LC, must be used face to SFP-STM1-SM60-W13
SFP-STM1-SM50-Cxx	SFP module 100FX, STM1 - OC3 single mode CWDM for 50km, LC
SFP-STM1-SM80-Cxx	SFP module 100FX, STM1 - OC3 single mode CWDM for 80km, LC
	Dual Rate SFP 100FX and 1000GSX/GLX/GZX
SFP-GSX-MM	SFP module 1000SX /100FX w DD, multimode 850nm, budget 8,0dB for 550m, connector LC
SFP-GSX-MM-1310	SFP module 1000SX /100FX w DD, multimode 1310nm, budget 16,0dB for 2km, connector LC
SFP-GLX-SM20	SFP module 1000LX /100FX w DD, single-mode 1310nm, budget 17,0dB for 20km , connector LC
SFP-GZX-SM50	SFP module 1000ZX /100FX w DD, single-mode 1550nm, budget 19,0dB for 50km , connector LC
SFP-GZX-SM80	SFP module 1000ZX /100FX w DD single-mode 1550nm, budget 24,0dB for 80km , connector LC
SFP-GZX-SM120	SFP module 1000ZX /100FX w DD single-mode 1550nm, budget 31,0dB for 120km , connector LC
SFP-GLX-SM20W13	SFP module 1000LX /100FX w DD, single-mode 1310nm WDM single fiber, budget 12,0dB for 20km , connector LC
SFP-GLX-SM20W15	SFP module 1000LX /100FX w DD, single-mode 1550nm WDM single fiber, budget 12,0dB for 20km , connector LC
SFP-GZX-SM60W13	SFP module 1000LX /100FX w DD, single-mode 1310nm WDM single fiber, budget 24,0dB for 60km , connector LC
SFP-GZX-SM60W15	SFP module 1000LX /100FX w DD, single-mode 1550nm WDM single fiber, budget 24,0dB for 60km , connector LC
SFP-GZX-SM80W1490	SFP module 1000LX /100FX w DD, single-mode 1490nm WDM single fiber, budget 24,0dB for 80km , connector LC
SFP-GZX-SM80W1570	SFP module 1000LX /100FX w DD, single-mode 1570nm WDM single fiber, budget 24,0dB for 80km , connector LC
	CWDM & DWDM SFP
SFP-GLX-SM80-Cxx	SFP module 1000LX w DD, CWDM lambda au choix de 1430 to 1610nm, budget 24,0dB for 80km, connector LC
SFP-GLX-SM120-Cxx	SFP module 1000LX w DD, CWDM lambda, choice from 1430 to 1610nm, budget 32dB for 120km, connector LC
SFP-GLX-SM150-Cxx	SFP module 1000LX w DD, CWDM lambda, choice from 1430 to 1610nm, budget 37dB for 150km, connector LC
SFP-GLX-SM80-Dxx	SFP module 1000LX w DD, DWDM lambda au choix de 1430 to 1610nm, budget 24,0dB for 80km, connector LC
SFP-GLX-SM120-Dxx	SFP module 1000LX w DD, DWDM lambda, choice from 1430 to 1610nm, budget 32dB for 120km, connector LC

Optical Ethernet converter

RACK-MEDIA16N

Chassis for 16 FOC/FOC w 2 modular AC or DC redundant power supplies, 3 FANS



RACK-MEDIA16S

Chassis for 16 FOC/FOC 1 AC power supply et 3 FANS



RACK19-1FOCx

19" 1U mounting for one FOC, FOC, FOCF or FOCI



RACK19-1U-DIN-RAIL

19" 1U chassis with DIN-Rail Up to 5 FOCx with DIN-FOC can be fixed



Q-FOC

Tray to mount 4 FOC. Supply with a common Power supply Wall fixing.



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