

FOC-USFP-USFP

OPTICAL ETHERNET MEDIA CONVERTERS FAST/GIGABIT ETHERNET FIBER/FIBER CONVERSION

FEATURES

Fiber/fiber Ethernet /Gigabit
Universal automatic media con-
verters

FOC-USFP-USFP.

Supports 2 dual rate 100FX and
1000SX/LX/ZX SFP for the con-
version:

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 sup-
ply 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

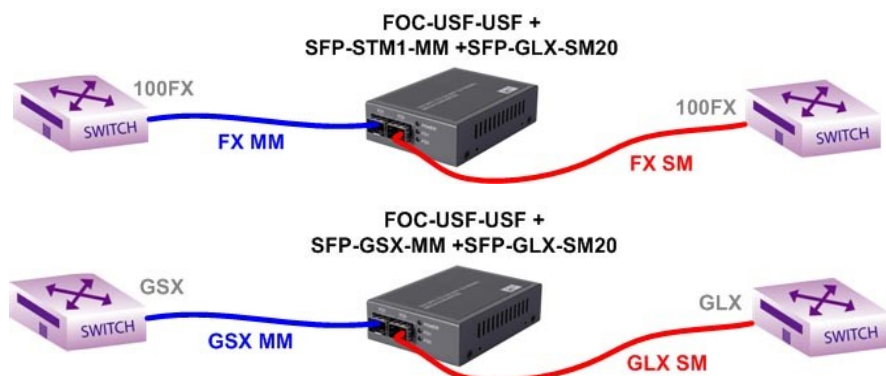
Please be ware: the FOC-USF-USF cannot inter connector a 100FX interface and a 1000FX.interface.

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

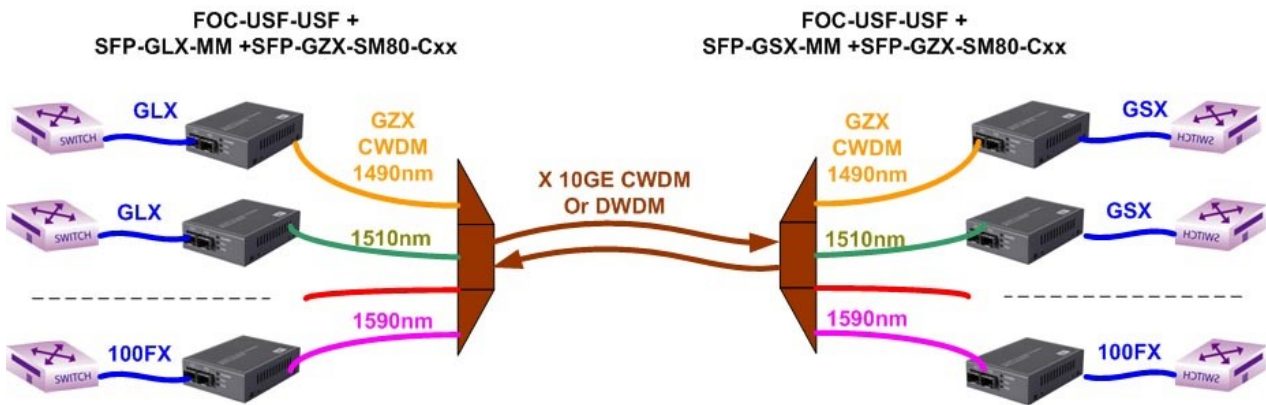
The **FOC-USF-USF** converter interconnect two fiber Ethernet equipments supporting the IEEE 802.3u and 3z standards. The LED shows the activity of both sides.



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.



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.

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 monting 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.



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	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	
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		
SETLING			
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		

Model Number

FOC-USFP-USFP	Media converter with 2 SFP slot support: 100FX to 100FX and 1000SX/LX to 1000SX/LX, delivered w/o 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 100GSX/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



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