

Introduction:

Fiberdyne Lab's FTX-250 series, of media converters, represent a revolutionary concept in media converters. This series, of Gigabit Ethernet converters, provides complete media flexibility, by utilizing industry-standard, Small Form-factor Pluggable (SFP), Gigabit-Ethernet modules. Each FTX-250 series converter includes two SFP modules -- selected at the time of purchase. As the name implies, the SFP modules simply plug into the two available ports on the converter. If your requirements change, you simply unplug your existing SFP module, and plug-in your new module. Fiberdyne Labs offers a wide variety of SFP modules (TX, SX, LX, ZX, CWDM and DWDM) to meet your Gigabit Ethernet requirements. This product family is available as a standalone device, and as a rack-card, which installs into Fiberdyne Lab's rack-mountable chassis.

Product Features:

- Complies with IEEE 802.3z (1000Base or "Gigabit Ethernet") standard
- Auto-negotiation on both ports, operating at "full wire-speed"
- Two hot-swappable, SFP ports for Gigabit-Ethernet SFP modules
- Five Status indicators
- External Power Brick (Standalone and Wall-mount versions)
- Compact packages: rack-mountable, standalone and wall-mount

Status Indicators:

- POWER – Media converter is receiving power
- LINK A – Valid signal detected by Fiber SFP module in Port A
- ACTIVITY A – Flashes to indicate activity on Fiber SFP module in Port A
- LINK B – Valid signal detected by Fiber SFP module in Port B
- ACTIVITY B – Flashes to indicate activity on Fiber SFP module in Port B

Special Consideration for RJ-45 (i.e. twisted-pair) SFPs

When a 1000Base-TX, (RJ-45 Twisted Pair) SFP is installed into the FTX-250, the status indicators for that port on the FTX-250 will always be in their active state -- regardless of state of the twisted-pair link (even if the networking cable is not plugged into the SFP). This is an industry-wide issue related to the design architecture of twisted pair SFP modules. This "false" status indication from twisted pair SFP's is completely normal, and in no way indicates inappropriate or incorrect device performance. The 1000Base-TX SFP provides Auto MDI/MDIX functionality. As such, it automatically corrects twisted pair interfaces that have the transmit and receive pair swapped (i.e. crossover cables are not required).

Product Specification:

<i>Item Description</i>	<i>Unit</i>	<i>Value</i>
Standard Compliance		IEEE 802.3z
SFP Port Properties		Hot-swappable Auto-negotiation Wire-speed transfer
Available SFP/Port Configurations * - 1000Base (Gigabit Ethernet) - Enhanced Gigabit Ethernet		T, SX, LX "ZX", CWDM, DWDM
Center Wavelength (fiber-optic SFPs) - SX - LX - "ZX" - CWDM - DWDM	nm	850 1310 1550 per ITU-T G.694.2 per ITU-T G.694.1
Power Requirements - Input (typical power pack uses 120 VAC)	V W	5 VDC (1.2 A, max.) < 5
Temperature – Operating	°C	0 to +70
Temperature – Storage	°C	-40 to +85
Package dimensions (W x D x H) - standalone - wall-mount	mm	107 x 67 x 20 127 x 102 x 22

*** Port Configurations:**

<i>Standard and "Enhanced"</i>	<i>Connector Type</i>	<i>Cable Type</i>	<i>Link Distance (meters)</i>	<i>Power Budget (dB)</i>
1000Base-T	RJ-45	UTP (Cat 5)	100	-
1000Base-SX **	LC	MMF (62.5/125) MMF (50/125)	275 500	7.5
1000Base-LX	LC	MMF (both) SMF (9/125)	550 10000	10.5
1000Base "ZX"	LC	SMF (9/125)	80000	24
1000Base "CWDM"	LC	SMF (9/125)	50000	19
1000Base "DWDM"	LC	SMF (9/125)	80000	28

Note: ** longer 1000Base-SX distances are possible, when using Fiberdyne "10-Gigabit" fiber-optic, cable assemblies.

Ordering Information: Part-Number Build Matrix

F	T	X	-	2	5	0	X	-	X	X	-	XXXX
1	2	3	-	4	5	6	7	-	8	9	-	10
F	T	X	-	2	5	0		-			-	

FTX-250 = Fiberdyne Labs “SFP Gigabit Converter”

Position #	Description	Options **
7 th	Type	R = Rack-card S = Standalone W = Wall-mount
8 th	Port A	T = 1000Base-T S = 1000Base-SX L = 1000Base-LX Z = 1000Base “ZX” (1550-nm) C = 1000Base “CWDM” *** D = 1000Base “DWDM” ***
9 th	Port B	T = 1000Base-T S = 1000Base-SX L = 1000Base-LX Z = 1000Base “ZX” (1550-nm) C = 1000Base “CWDM” *** D = 1000Base “DWDM” ***
10 th	*** Wavelength or Channel # (optional – use if port is “C” or “D”)	- If Port = C, then specify Coarse WDM Wavelength (e.g. “1470” = 1470 nm) - If Port = D, then specify Dense WDM Channel # (e.g. “CH23” = 1558.98 nm)

Note: ** for custom configurations, use “X” in the part number; then list details of the unique configuration as “Special Instructions.” For example: if both ports are 1610-nm CWDM-configured (i.e. a repeater), then list: “Special Instruction: Ports A and B are CWDM, wavelength 1610-nm.”

Example: Fiberdyne Labs SFP Gigabit Converter

FTX-250S-TS Standalone, 1000Base-T and 1000Base-SX

FTX-250R-SC-1470 Rack-mount, 1000Base-SX and 1000Base-CWDM (1470 nm)

FTX-250W-CC-X Wall-mount, 1000Base-CWDM in both ports. Special Instruction: Ports A and B are CWDM, wavelength 1610-nm.

Part Number Matrix for Replacement SFP's

F	G	E	-	S	F	P	-	X	-	XXXX
1	2	3	-	4	5	6	-	7	-	8
F	G	E	-	S	F	P	-		-	

FGE-SFP = Fiberdyne Labs "Gigabit Ethernet SFP"

Position	Description	Options
7 th	Interface	T = 1000Base-T S = 1000Base-SX L = 1000Base-LX Z = 1000Base "ZX" (1550-nm) C = 1000Base "CWDM" **** D = 1000Base "DWDM" ****
8 th	**** Wavelength or Channel # (optional – use for interfaces C or D)	- If Port = C, then specify Coarse WDM Wavelength (e.g. "1470" = 1470 nm) - If Port = D, then specify Dense WDM Channel # (e.g. "CH23" = 1558.98 nm)

Example: Fiberdyne Labs Gigabit Ethernet SFP

FGE-SFP-T 1000Base-T, RJ-45 connector

FGE-SFP-C-1470 1000Base, CWDM, 1470-nm, LC connector