



**INSTRUCTION MANUAL**

**FMX-GE-1000**

**ETHERNET TO OPTICAL MEDIA CONVERTER**

191 FOREST AVENUE  
LOCUST VALLEY, NY 11560-2132 USA  
(800)-488-8378 / (516)-671-7278 FAX (516)-671-3362  
[sales@multidyne.com](mailto:sales@multidyne.com)  
[www.multidyne.com](http://www.multidyne.com)

## Chapter 1 Introduction

### 1.0 Product Description

**FMX-GE-1000** is an electrical to optical media converter for Gigabit Ethernet. There are two models, one with fixed optical transceiver (**1000M**) and one supporting pluggable SFP transceiver (**1000**). These converters sport embedded stand-alone Web based management over IP networks as well as IEEE802.3ah OAM for remote in-band management.

**FMX-GE-1000** is an IEEE802.3ah OAM compliant copper to fiber Gigabit Ethernet solution designed to make conversion between 10/100/1000Base-TX and 100/1000Base-FX with SFP LC connector. When deployed as a stand-alone solution, this media converter incorporates an easy to use Web user interface for operation, administration and maintenance of both local and remotely connected **FMX-GE-1000** converters. By offering 802.3ah OAM compliance, this converter can be linked to any 802.3ah compliant fiber switch and support loop back and dying gasp functions. All functions of this converter and the remotely connected converter can be configured and monitored via in-band management, including band-width control, duplex, speed, VLAN configuration and more.

## 2.0 Product Features

- Auto-Cross over for MDI/MDIX at UTP port
- Auto-Negotiation or Forced Manual mode for UTP port
- Supports Dual Rate (100/1000) SFP for selectable Fast or Gigabit speed on fiber
- Supports 802.3X flow control Enable or Disable
- Supports Jumbo Frames up to 9K bytes
- Supports 16 Tag VLAN Groups
- Supports 802.1Q tagging and 802.1ad double VLAN tag (Q-in-Q)
- Ingress/Egress Bandwidth control with 64K granularity
- Supports 802.3ah-OAM loop back and dying gasp (remote power failure detection)
- Supports firmware upgrade via Web
- Supports Digital Diagnostics (DOM) for supported SFP
- Provides product information for management
- Includes RMON counters (stand-alone only)
- Supports password setting for authentication
- Supports Link Fault Pass Through (LFP) Function
- Supports Auto Laser Shutdown (ALS) Function
- Supports DHCP client for automatic TCP/IP configuration

**FMX-GE-1000** SFP socket supports a wide range of standard SFP modules to address any network situation.

Single-mode, Multi-mode, Multi-rate, Dual Rate (100/1000), Single fiber bi-directional, Coarse and Dense Wave Division Multiplexing (CWDM and DWDM) and Copper media

**WARNING:** Fiber optic equipment may emit laser or infrared light that can injure your eyes. Never look into an optical fiber or connector port. Always assume that fiber optic cables are connected to an active laser light source.

## 1.4 Specifications

- Optical Interface
  - Connector SFP cage
  - Data rate 100/1000Base-FX (125Mbps/1.25Gbps optical rate) Dual Rate Support
  - Duplex mode Full duplex on fiber
  - Fiber Depends on SFP
  - Distance Depends on SFP
  - Wavelength Depends on SFP
- Electrical Interface
  - Connector RJ-45, shielded
  - Data rate auto, 10Mbps (10Base), 100Mbps (100Base), or 1000Mbps (1000Base)
  - Duplex mode auto, Full or Half
  - Cable Cat 5e or better
  - Distance 100Meters maximum
- Indications LED (PWR, FX Link, LAN Link, LAN Speed, FX Speed)
- Power
  - Input 12VDC in
  - Consumption <5W
- Dimensions 155 x 88 x 23mm (D x W x H)
- Weight 110g
- Temperature 0 ~ 60°C (Operating), -10 ~ 70°C (Storage)
- Humidity 10 ~ 90% non-condensing
- Certification CE (EMI/LVD), FCC, RoHS Compliant
- MTBF 75000 hrs

## 1.6 Panel

The LAN Speed and FX Speed LEDs use dual color to indicate speed. Green indicates Fast Ethernet (100M). Yellow indicates Gigabit Speed. When off, the LAN Speed LED indicates a 10M speed.

### Factory reset procedure

Apply power to unit .  
Allow 30 seconds to fully boot.  
Using a pencil or ball-point pen, press the 'DEFAULT' recessed push-button switch (located on the face plate) and hold for 6 seconds. The unit will be restored to factory default almost immediately. The defaults are:

IP=10.1.1.1  
netmask=255.255.255.0  
GW=10.1.1.254  
password reset to 'admin'

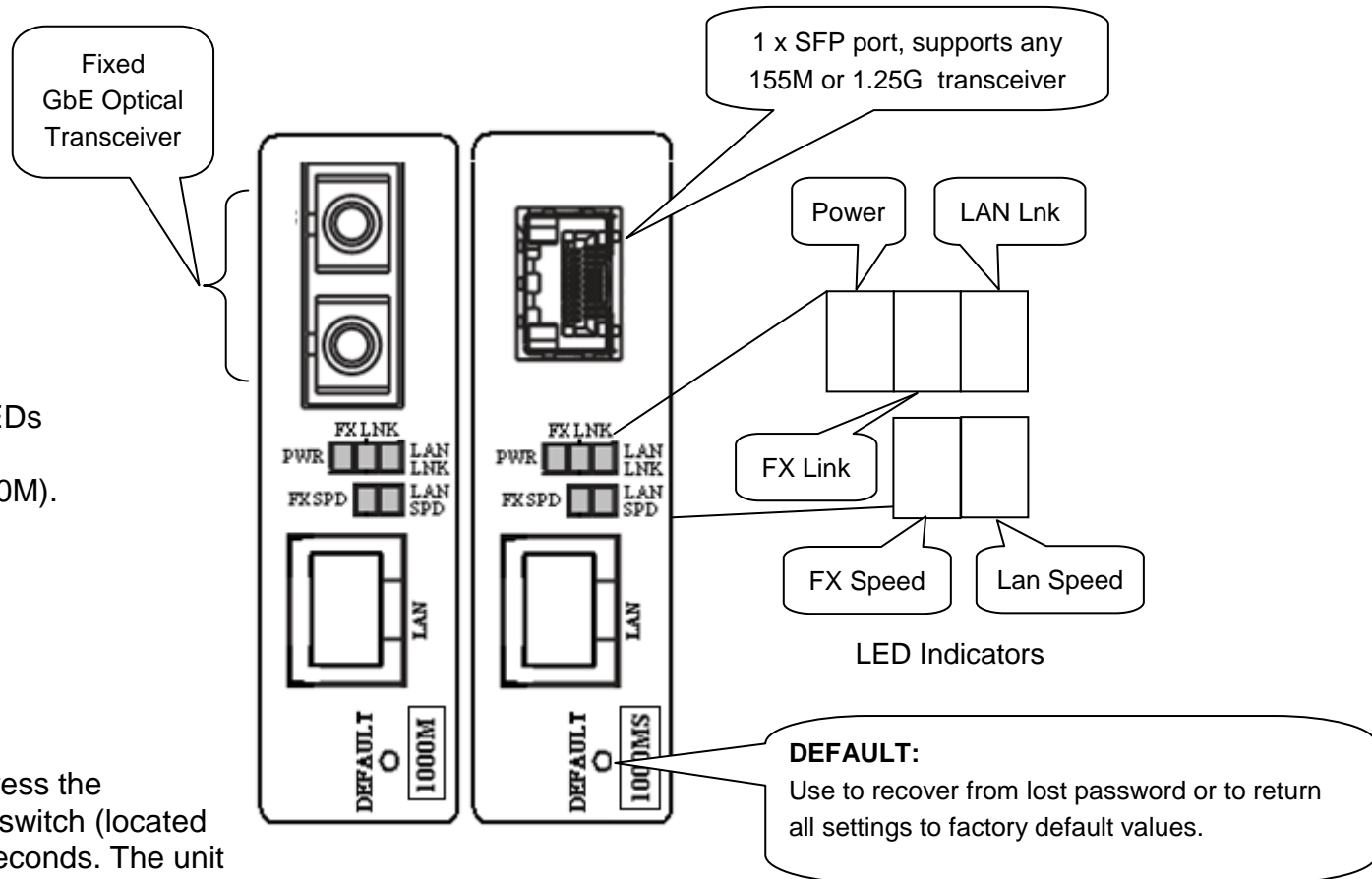


Figure 1. Panel Graphics