Omnitron Systems

FlexPoint® Gx

User Manual

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Environmental Notices

The equipment covered by this manual must be disposed of or recycled in accordance with the Waste Electrical and Electronic Equipment Directive (WEEE Directive) of the European Community directive 2012/19/EU on waste electrical and electronic equipment (WEEE) which, together with the RoHS Directive 2015/863/EU, for electrical and electronic equipment sold in the EU after July 2019. Such disposal must follow national legislation for IT and Telecommunication equipment in accordance with the WEEE directive: (a) Do not dispose waste equipment with unsorted municipal and household waste. (b) Collect equipment waste separately. (c) Return equipment using collection method agreed with Omnitron.

The equipment is marked with the WEEE symbol shown to indicate that it must be collected separately from other types of waste. In case of small items the symbol may be printed only on the packaging or in the user manual. If you have questions regarding the correct disposal of equipment go to www.omnitron-systems.com/support or e-mail to Omnitron at intlinfo@omnitron-systems.com.

Safety Warnings and Cautions

ATTENTION: Observe precautions for handling electrostatic discharge sensitive devices.

WARNING: Potential damage to equipment and personal injury.

WARNING: Risk of electrical shock.

Technical Support:

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Description

The FlexPoint Gx is a 1000BASE-T copper to 1000BASE-X fiber media converter that provides reliable and cost-effective network connectivity and fiber extension.

The FlexPoint Gx features an auto-sensing RJ-45 port that adjusts to the duplex and pause mode of the attached device. A switch provides manual control over the Half/ Full-Duplex operation of RJ-45 port. The port features a crossover switch that facilitates connection to a workstation or switch.

See data sheet for supported models.

Power Adapter Notice

When used in a stand-alone configuration, this product should always be used with its enclosed Power Adapter.

WARNING

Before plugging the Power Adapter to any wall outlet or AC power source, verify that the power on the unit is appropriate for your AC line voltage source.

Switch Settings

Fiber Optic Auto/Manual Switch: AN/Man

Setting this DIP-Switch to the “AN” (factory default) setting enables the fiber optic port of the FlexPoint Gx to detect the Duplex and Pause modes of the connected fiber optic and UTP devices. The RJ-45 port of the Flexpoint Gx negotiates with the connected UTP device based on the modes detected by the fiber optic port. Both the FlexPoint Gx and the connected fiber optic device must have their fiber optic Auto-Negotiation enabled for this process to work.

Setting this DIP-switch to the Manual “Man” setting disables the fiber optic port’s ability to detect the Duplex and Pause modes of the connected fiber optic device. In this setting, the UTP port of FlexPoint Gx negotiates with the connected UTP device based on the modes configured by the UTP DIP-Switches. This setting allows the FlexPoint Gx to connect to Gigabit fiber devices that are not capable of Auto-Negotiation.

Note: In Auto-Negotiation mode, connecting the fiber optic cables before connecting the UTP cables causes the fiber optic LED to blink steadily. The blinking LED turns solid when the UTP Link is on.

Note: The UTP “FDX/HDX”, “Pause/No”, and “LS/LP” DIP-switches have no affect when the fiber optic port is set to Auto-Negotiation.

Note: When connecting a FlexPoint Gx revision “2.x” to a FlexPoint Gx revision “1.x”, the Fiber Optic Auto/Manual DIP-switch of the“2.x” module must be set to the “Man” setting.

UTP Duplex Switch: Full-Duplex/Half-Duplex

Setting the DIP-switch to “Full-Duplex” (factory default) allows the UTP port to Auto-Negotiate to Full-Duplex or Half-Duplex. Setting the DIP-switch to “Half-Duplex” forces the UTP port to Auto-Negotiate only to Half-Duplex.

UTP Pause Enable/Pause Disable “Pause/No”:

Setting this DIP-switch to “Pause Enable” (factory default) allows the UTP port to Auto-Negotiate to Symmetrical and Asymmetrical Pause. Setting the DIP-switch to “Pause Disable” forces the UTP port to Auto-Negotiate only to No Pause.

Link Mode Switch: LS/LP

Setting this DIP-switch to “LS” (factory default) configures the module for Link Segment (LS). In Link Segment, each port detects and displays link status independently of the status of the other port. For example, if there is a loss of a receive link on the fiber optic port, the RJ-45 port continues to transmit a link.

Setting this DIP-Switch to “LP” configures the module for Link Propagate (LP). In Link Propagate (LP), a loss of any link is propagated to the other port, causing the link on the other port to drop. For example, if there is a loss of a receive link on the fiber optic port, the RJ-45 port will not transmit its link due to the propagated fiber optic link state. This setting allows the loss of a link to be detected by SNMP or other managed network devices to which the FlexPoint Gx is connected.

Note: Only the first loss of a receive link detected by the FlexPoint Gx turns off the other port’s transmit link. An additional loss of a receive link on the other port has no affect on the FlexPoint Gx. The FlexPoint Gx returns to normal operation when the first loss of a receive link is restored.

Mounting

The FlexPoint Gx can be wall mounted using a wall mounting kit (4380), rack-mounted using a 5-Module shelf (4392) or inserted in a 14-Module FlexPoint Powered Chassis. See Chassis and Mounting Option product page.

To power the module using the AC power adapter, connect the barrel connector at the end of the wire on the power adapter to the barrel connector on the module. Connect the power adapter to the AC outlet. Confirm that the module has powered up properly by checking the Power LED.

Attach the fiber cables to the FlexPoint Gx fiber connector. The FlexPoint transmit (Tx) must attach to the receive side on the device at the far end of the fiber and the receive (Rx) must attach to the transmit side.

Connect a UTP cable (Category 5 or better) to the RJ-45 port on the module and connect the other end to a 1000M capable device.

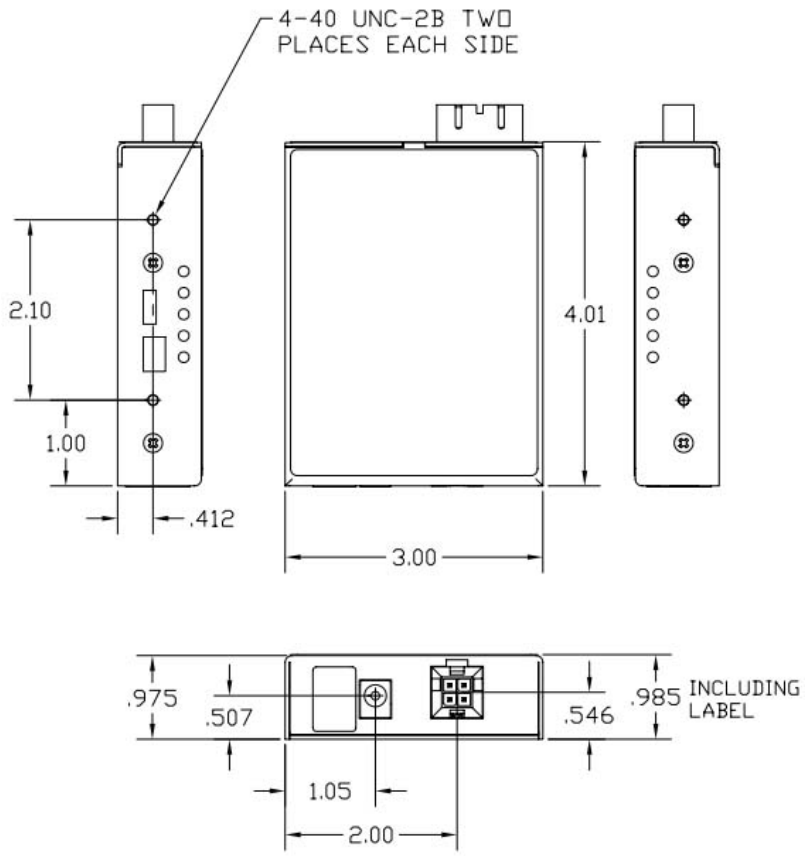
LED Indicators

LED Function	Color	Description
Power	Amber	OFF: No power ON: Module has power
FDX / HDX	Amber	OFF: Half Duplex ON: Full Duplex
F/O Link / Rx	Green	OFF: No fiber link ON: Port linked at 1000M Blinking (10Hz): Data activity Blinking (1Hz): Detected but cannot complete AN
UTP Link / Rx	Green	OFF: No copper link ON: Port linked at 1000M Blinking (10Hz): Data activity Blinking (1Hz): Fiber in Manual Mode w/ LP. UTP cable connected but RJ-45 link is disabled

Specifications

Standard Compliances	IEEE 802.3	
Regulatory Compliances	Safety: EMI: ACT:	UL, cUL, CE, UKCA FCC Class A TAA, BAA, NDAA
Environmental	RoHS, REACH, WEEE	
Port Types	Copper: Fiber:	1000BASE-T (RJ-45) 1000BASE-X (ST, SC, LC, MT-RJ)
Cable Types	Copper: Fiber:	EIA/TIA 568A/B, Cat 5 and higher Multimode: 50/125µm, 62.5/125µm Single-mode: 9/125µm
AC Power Requirements	AC Adapter:	100 - 240VAC/50 - 60Hz 0.04A @ 120VAC (max)
DC Power Requirements	DC Input: (AC Adapter or Terminal)	+6.0 to +15VDC 0.4A @ 9VDC 2.5mm Barrel or Terminal
	DC Input: (Molex Connector)	+4.75 to +5.25VDC, 0.6A @ 5VDC
Dimensions W x D X H	3.0” x 4.0” x 1.0” (76.2 mm x 101.6 mm x 25.4 mm)	
Weight	6 oz. (170.1 grams)	
Temperature	Commercial: Wide:	0 to 50°C -40 to 60°C
Humidity	5 to 95% (non-condensing)	
Altitude	-100m to 4,000m	
MTBF (hrs)	Module: AC Adapter (-1): AC Adapter (-2):	990,000 250,000 100,000
Warranty	Lifetime warranty with 24/7/365 free Technical Support	

Mechanical



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