Datasheet **A360**

Dual Fiber-Optic Loop Controller

Features

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- Compact and cost effective
- Standard Ethernet interface supporting TCP/IP and UDP.
- Allows up to 30 devices to be connected to a standard PC through a single Ethernet port
- PTC DiagnosticG2 host software allows PTC fiber-optic loop devices to be connected through the A360
- 24V power output allows convenient connection of a single Pyramid fiber-optic device.
- High performance on-board A60 processors and memory for data buffering and real-time calculations.
- Software interfaces available for various host systems.
- xml scripting allows coordinated data output and input across multiple devices
- Python scripting allows complex sequence control across multiple devices, for example to tune a beamline automatically.

Applications

- Applications that require real-time deterministic control of multiple distributed devices and/or real-time data processing.
- Data acquisition and control systems for noisy environments.
- Data acquisition and control systems that must communicate across high-voltage gaps.

Specifications

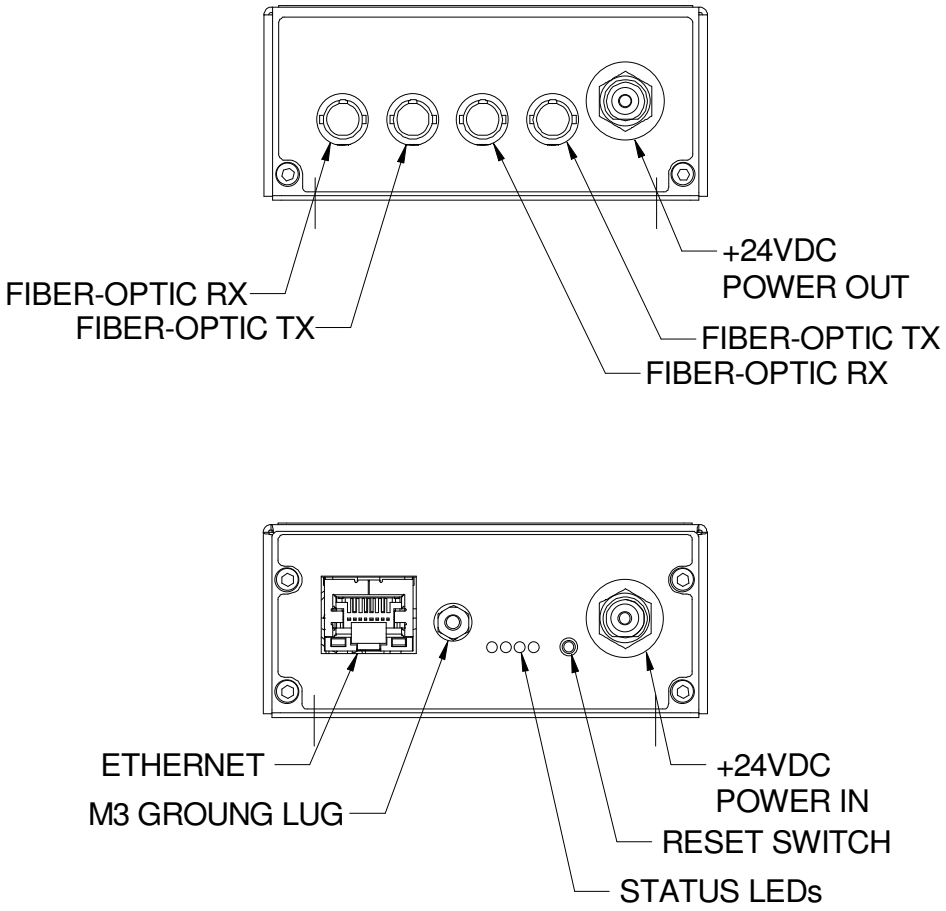
Processors	Ethernet processor NIOS II/f 110 MHz Fiber-optic loop processor NIOS II/f 100 MHz
Memory	32 MB of 32b x 110 MHz RAM for Ethernet processor 16 MB flash memory for Ethernet processor 1 MB 32b x 50 MHz RAM shared memory
Operating system	uCLinux 2.6 with high speed FPU instruction block in Ethernet processor. Embedded C (deterministic) with high speed FPU instruction block in fiber optic loop processor.
Ethernet	Fully transformer isolated. Auto negotiation 1000/100/10 Mbps, MDIX capability. TCP/IP and UDP. Static or DHCP IP4 address assignment.
Fiber-optic ports	Two loop ports, each a transmitter / receiver pair, rear panel. Up to fifteen devices per port.
Power input	+24V (+/- 2V) DC, 800 mA max. Fused with 1.1A PTC fuse. A360 internal circuitry fused with 200 mA PTC fuse.
Power output	+24V (+/- 2V) DC, 500 mA max.
Controls	Processor reset button.
Displays	Four LEDs green for power, device status and Ethernet baud rate.
Case	Stainless steel case, with mounting flanges.
Weight	0.8 kg (1.8 lb)
Operating environment	10 to 35C, < 80% humidity, non-condensing, vibration < 0.1g all axes, 1 to 100Hz
Storage environment	0 to 50C, < 80% humidity, non-condensing, vibration < 2g all axes, 1 to 100Hz

Interfacing

Interfaces	To host system: Ethernet 1000/100/10baseT, TCP/IP and UDP messaging. To front-end devices: Fiber-optic loop, 10 Mbit/sec serial, 9 bit asynchronous binary.
Host computer	PTC DiagnosticG2 host software provided. Libraries available for Win32 and Linux.
User programming	User scripting environment provided for real-time processing (output map processing and data gathering) via xml files. User scripting environment provided for decision-based asynchronous processing (such as beamline tuning) via Python coding.

Connectors

Ethernet	RJ-45 socket, suitable for standard Ethernet 8-way plug and CAT5 or higher cable.
Fiber optics	Two pairs, 1mm Avago HFBR ST bayonet.
Power in	2.1 mm threaded jack. Mates with Switchcraft S761K or equivalent.
Power out	2.1 mm threaded jack. Mates with Switchcraft S761K or equivalent.
Ground connection	M3 threaded stud



Ordering information

A360	A360 with two fiber-optic loop ports.

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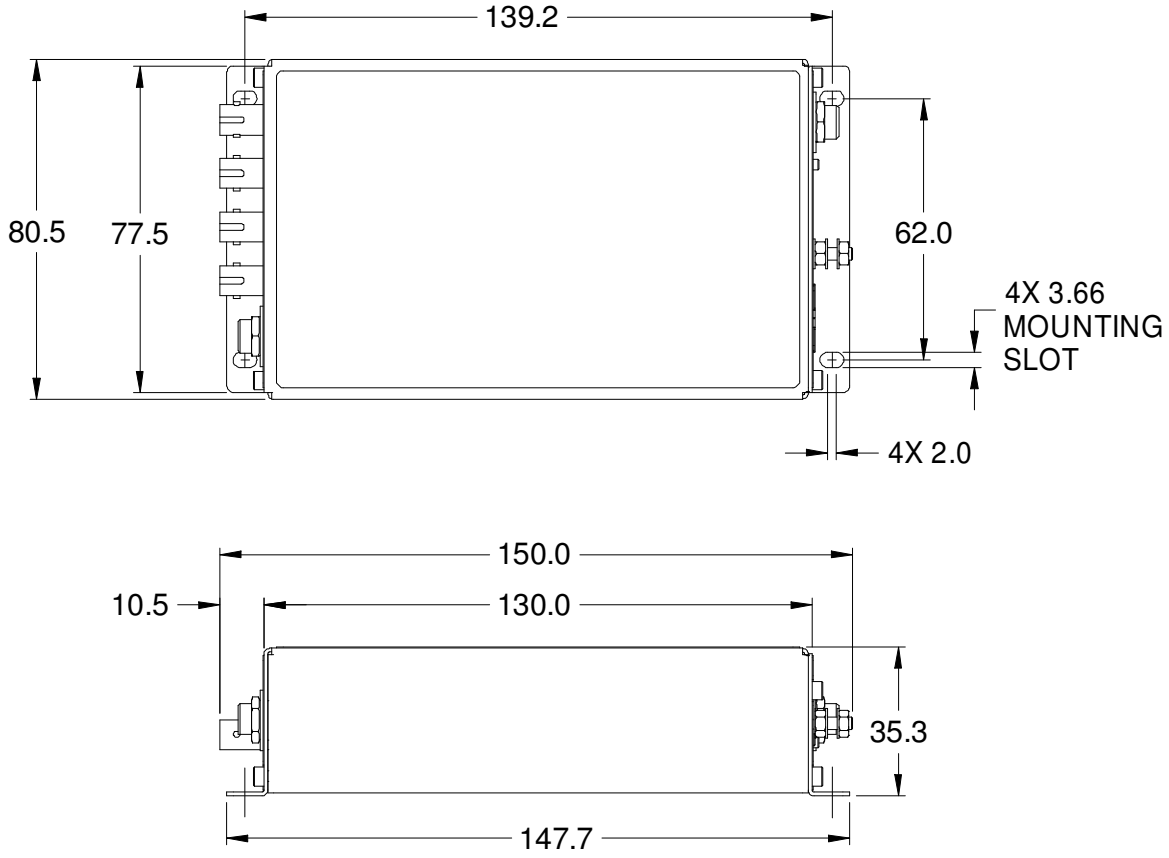
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80.5
77.5
62.0
4X 3.66
MOUNTING
SLOT
4X 2.0
150.0
10.5
130.0
35.3
147.7

Dims mm