

Q.raxx XL F108

Optical Gage Amplifier

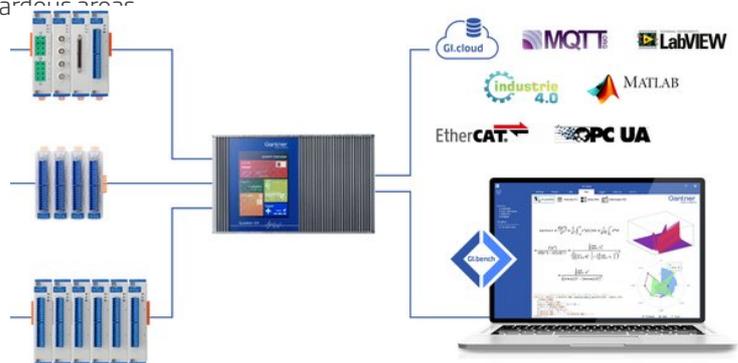
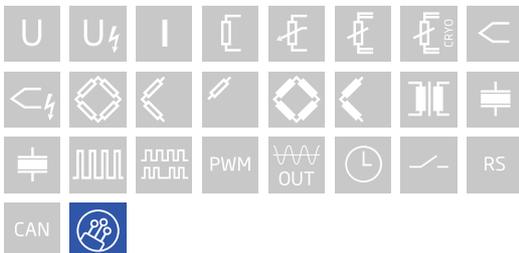
All the benefits of fiber optic measurement without the hassle. The F108 Optical Gage Amplifier seamlessly integrates with the Q.series-X data acquisition platform. Benefit from the modularity and versatility of the Q.series X product line to address any of your measurement challenges. Connect with Gl.bench software for the quick and easy setup for your multi-channel DAQ system for Gl.cloud-based storage and monitoring.

- High Density
up to 13 I/O modules per Q.raxx 3U chassis with up to 16 channels per I/O module
- User Friendly
front panel indicators for module status, power, and input range error
- Fully Customizable
multiple front panel termination options available
- Maximum Flexibility
parallel communication available in TCP/IP, CAN, PROFIBUS, Modbus, and EtherCAT
- Gantner's Quality Standard
integrated filtering, galvanic isolation & signal/sensor conditioning per channel



Key Features

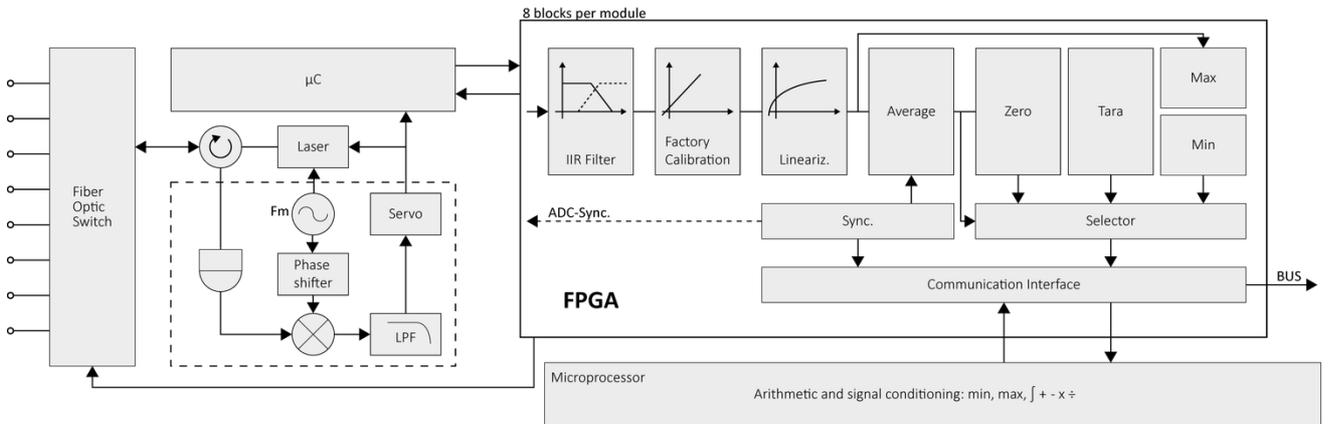
- 8 Universal optical input channels
Strain up to 1,100 $\mu\text{m}/\text{m}$
Pressure up to 10,000 PSI
Acceleration up to 1,000 g (peak)
Temperature up to 1,000 $^{\circ}\text{C}$
- High Sampling Speed
Measurement bandwidth up to 50 kS/s
- Long transmission distance
up to 25 km
- Electrical Noise Immunity & Complete Isolation
- Low measurement uncertainty
Complete measurement chain capable of achieving a maximum uncertainty of $\pm 0.5\%$ FSO from transducer to digitization. For temperature, this equates to $\pm 0.5^{\circ}\text{C}$ over a 200°C range.
- Typical operating environments
Cryogenic and ultra-high temperature
Electromagnetic radiation
High-voltage
Ionizing (gamma) radiation
Hazardous areas



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Block diagram



Technical Data

Optical Inputs

Channels	1 to 8
Supported transducer types	Temperature, strain, pressure, acceleration, vibration, displacement
Single channel sampling rate	10 k samples per second (kS/s)
Multi channel sampling rate	5 sample per second (S/s)
Connector	E2000 APC
Wavelength-range	1548 nm - 1552 nm
Wavelength resolution	0.1 pm
Uncertainty	± 5 pm
Repeatability	± 1 pm
Laser specification	Class 1 laser

Communication Interface

Protocols	proprietary Localbus (115200 bps to 48 Mbps, latency <100 ns) ASCII (19200 bps to 115200 bps) Modbus RTU
Data format	8E1
Electrical standard	ANSI/TIA/EIA-485-A, 2-wire

Input Power

Input voltage	10 to 30 VDC, overvoltage and overcurrent protection
Power consumption	approx. 15 W

Environmental Specifications

Electromagnetic compatibility (EMC)	IEC 61326-1
Operating temperature	0 °C to 50 °C
Storage temperature	-40 °C to 85 °C
Relative humidity	5 % to 95 % at 50°C, non-condensing

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Remarks

Warm-up time	Validity of all listed specifications are subject to a warm-up period of at least 45 minutes
	Specifications subject to change without notice

Mechanical information

Material	Aluminum
Measurements (W x H x D)	60x 128 x 120mm
Weight	approx. 300 g

Ordering Information

Article number	607324
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