

# Q.raxx XL F108

## Optical Gage Amplifier

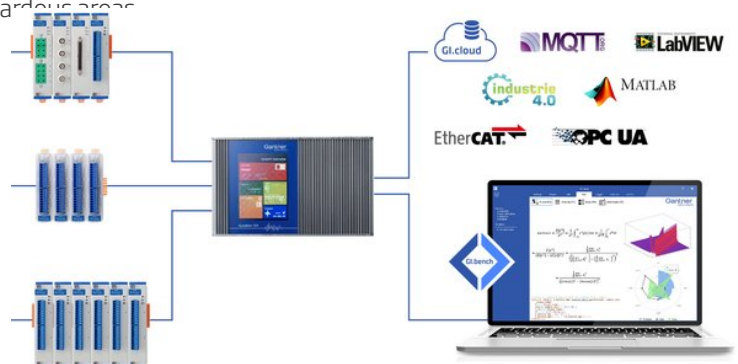
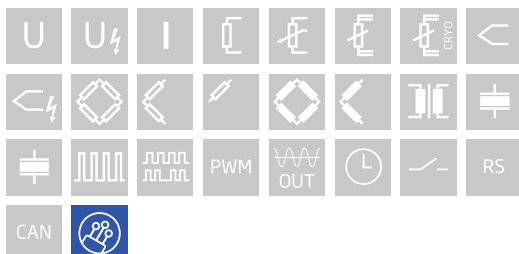
All the benefits of fiber optic measurement without the hassle. The F108 Optical Gage Amplifier seamlessly integrates with the Q.series-X data acquisition platform. Benefit from the modularity and versatility of the Q.series X product line to address any of your measurement challenges. Connect with Gl.bench 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

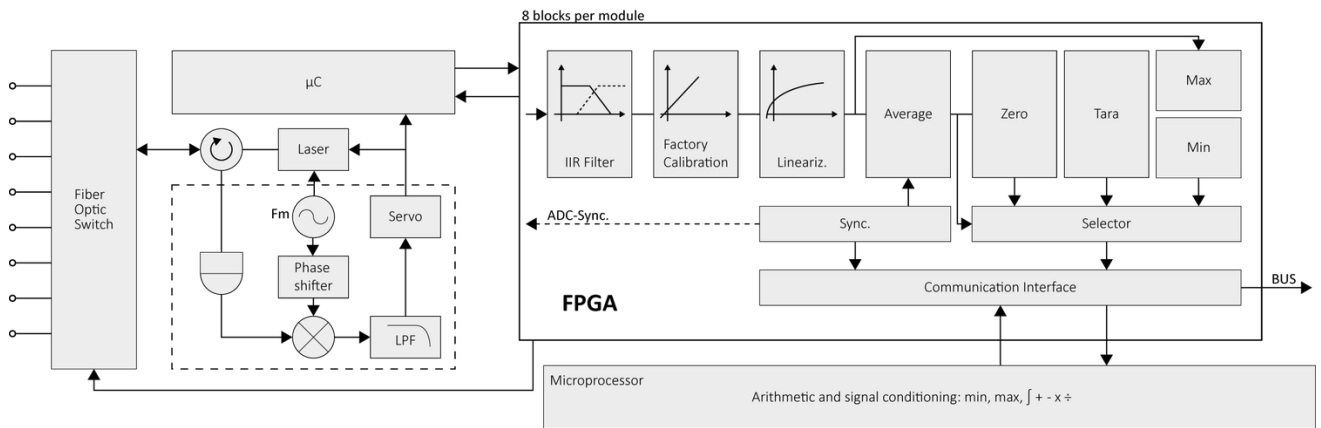
- **8 Universal optical input channels**  
Strain up to 1,100  $\mu\text{m}/\text{m}$   
Pressure up to 10,000 PSI  
Acceleration up to 1,000 g (peak)  
Temperature up to 1,000  $^{\circ}\text{C}$
- **High Sampling Speed**  
Measurement bandwidth up to 50 kS/s
- **Long transmission distance**  
up to 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  $200^{\circ}\text{C}$  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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