

Q.raxx XE F108

Optical Gage Amplifier

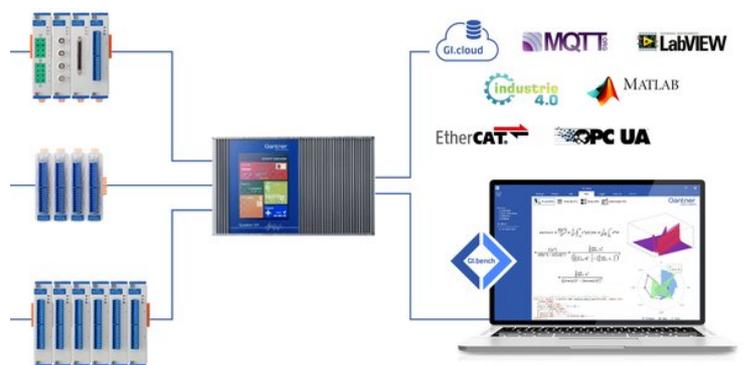
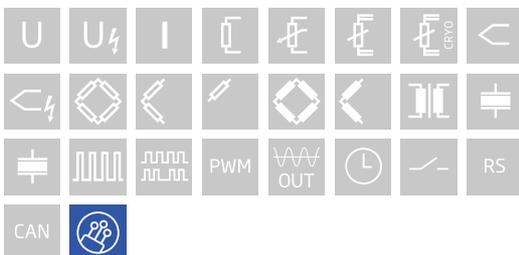
All the benefits of fiber optic measurement without the hassle. The F108 Optical Gage Amplifier seamlessly integrates with the Q.series-X data acquisition platform. Benefit from the modularity and versatility of the Q.series X product line to address any of your measurement challenges. Connect with Gt.bench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

- According 19"-standard IEC
- Electromagnetic Compatibility according to EN61000-4 and EN55011
- High density and flexibility with 13 modules in one system in any constellation
- FoE (file access over EtherCAT, ETG.1000.5) and CoE (CAN over EtherCAT, ETG.50001.1)



Key Features

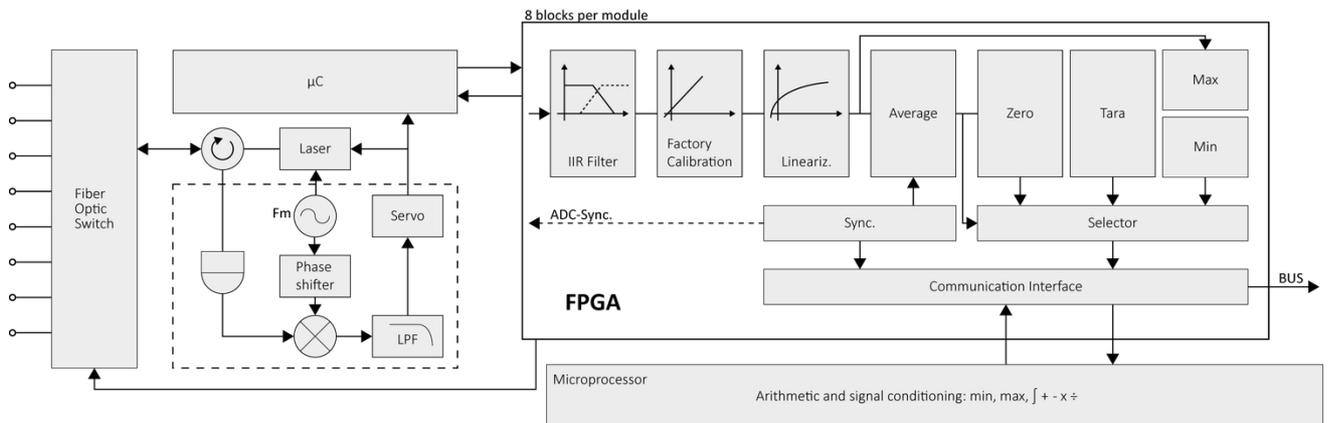
- **8 Universal optical input channels**
Strain up to 1,100 $\mu\text{m}/\text{m}$
Pressure up to 10,000 PSI
Acceleration up to 1,000 g (peak)
Temperature up to 1,000 °C
- **High Sampling Speed**
Measurement bandwidth up to 50 kS/s
- **Long transmission distance**
up to 25 km
- **Electrical Noise Immunity & 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 EtherCAT

Electrical standard	RS-485, 2-wire
Protocols	EtherCAT (LVDS)

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	607425
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