

FBG-Interrogator

Applications

- Continuous long-term health monitoring of bridges, dams, buildings, tunnels, ships, slopes, trains, and other complex structures.
- Development of fiber sensors and transducers.

Features

- High accuracy absolute measurements of strain, temperature, displacement, pressure and other sensors.
- Wide wavelength swept laser supporting multiple sensors per channel.



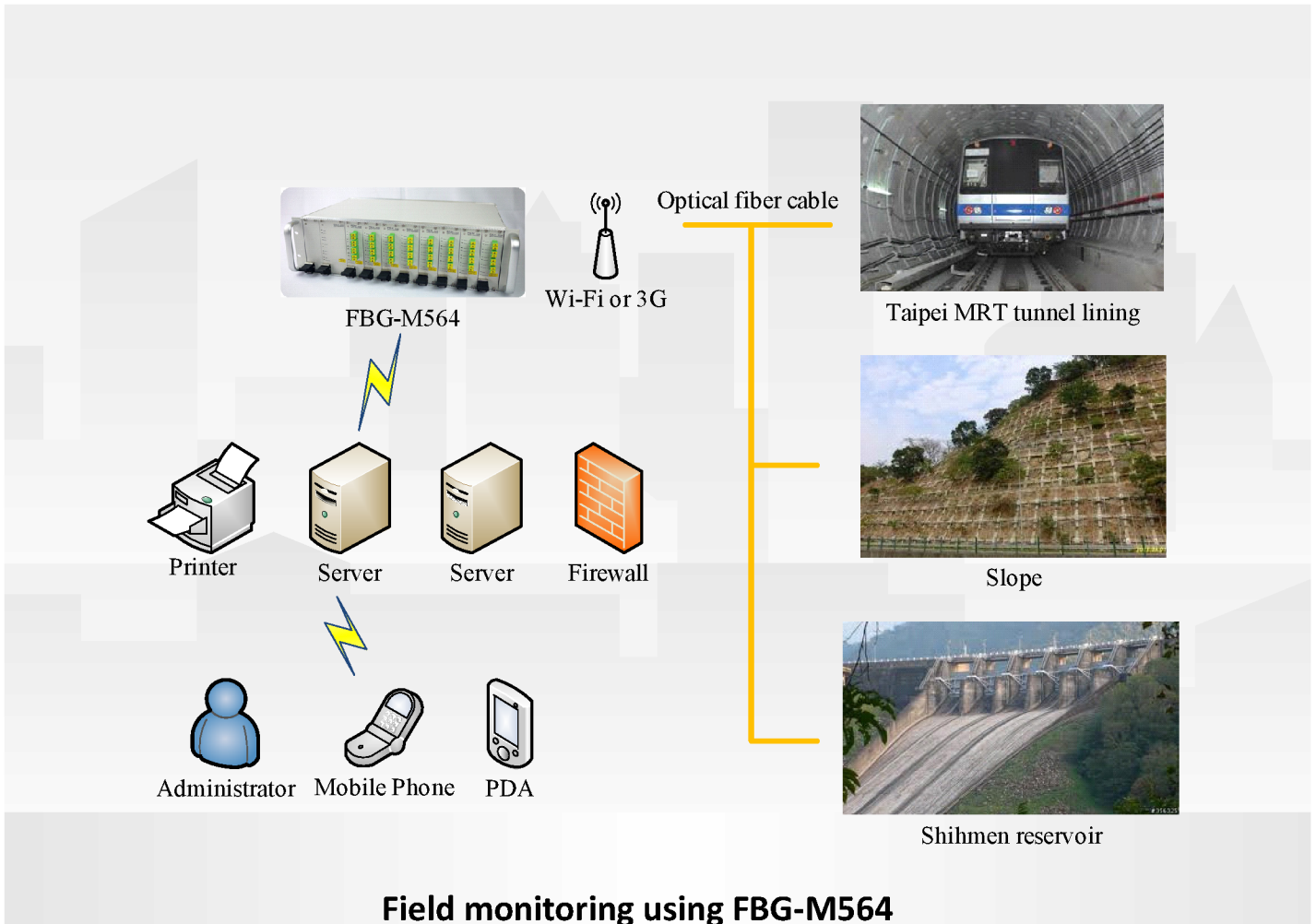
Description

The M500 is a complete solution to FBG interrogator applications that require high channel density, automated spectrum processing, repeatable accuracy, and ease of field maintenance.

The system is self-contained and comprised of a tuned solid state Laser, a set of optical distribution paths, power detectors, a simultaneous data acquisition sub-system, and a digital signal processing logic. The measurement results, including peak location and full spectrum logging, can be remotely accessed via abundant communication interfaces.

The chassis accepts eight plug-in modules, each accommodating 8 channels of optical fiber.

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Specifications	FBG-Interrogator
Physical Properties	
Number of Optical Channels	8, 16, 24, 32, 40, 48, 56, 64
Wavelength Range	1510~1590 nm
Scan Frequency	4 Hz
Wavelength Accuracy	2.5 pm
Wavelength Stability	1 pm
Optical Connectors	LC/APC
Dynamic Range	>40 dB
Number of Bragg sensors ¹	40
Laser Class ²	3B
Mechanical, Environmental, and Electrical Properties	
Dimension (W×H×D)	19" rack mount × 3U × 11"
Weight	~8.6 kg
Operating Temp.; Humidity	-10 to 60°C; RH95%, non-condensing
Storage Temp.; Humidity	-40 to 85°C; RH95%, non-condensing
EMC Certification	Directive 2004/108/EC; CISPR 22A+; FCC Class A EN 55022:2006+
Input Voltage	Universal, 100 to 240 VAC
Power Consumption	Max. 65 W
Comms Interfaces	RS-485, Ethernet, USB2.0, Bluetooth
Protocols	Modbus RTU, Modbus TCP, Ethernet
Notes:	
1. Assuming nominal wavelength range of ±2nm per FBG sensor.	
2. According to IEC 60825-1(2001).	

Ordering Information

FBG-M5XX

XX: Number of Optical Channels
08 based; 16; 24; 32; 40; 48; 56; 64

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