

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 dozens of sensors per channel.



Description

This FBG interrogator has very low power consumption and high stability, it is compact and portable. The unit can be easily adapted to accept the power source in the field such as AC or 12 volt DC. Solar panels can be used to provide the necessary power and making this FBG interrogator very suitable to be deployed in the field for long term monitoring.

For operation, the FBG interrogator communicates with a computer (e.g., notebook or industrial computer) via USB interface. This allows real time wavelength computation, data logging/conversion and storage in the computer.

Figure 1 illustrates the system set up of the FBG interrogator for field monitoring. The data can be transmitted via Wi-Fi or 3G/4G to a remote server for backup. Warning messages can be transmitted to control center in case of abnormal conditions according to FBG readings.

FBG-Interrogator

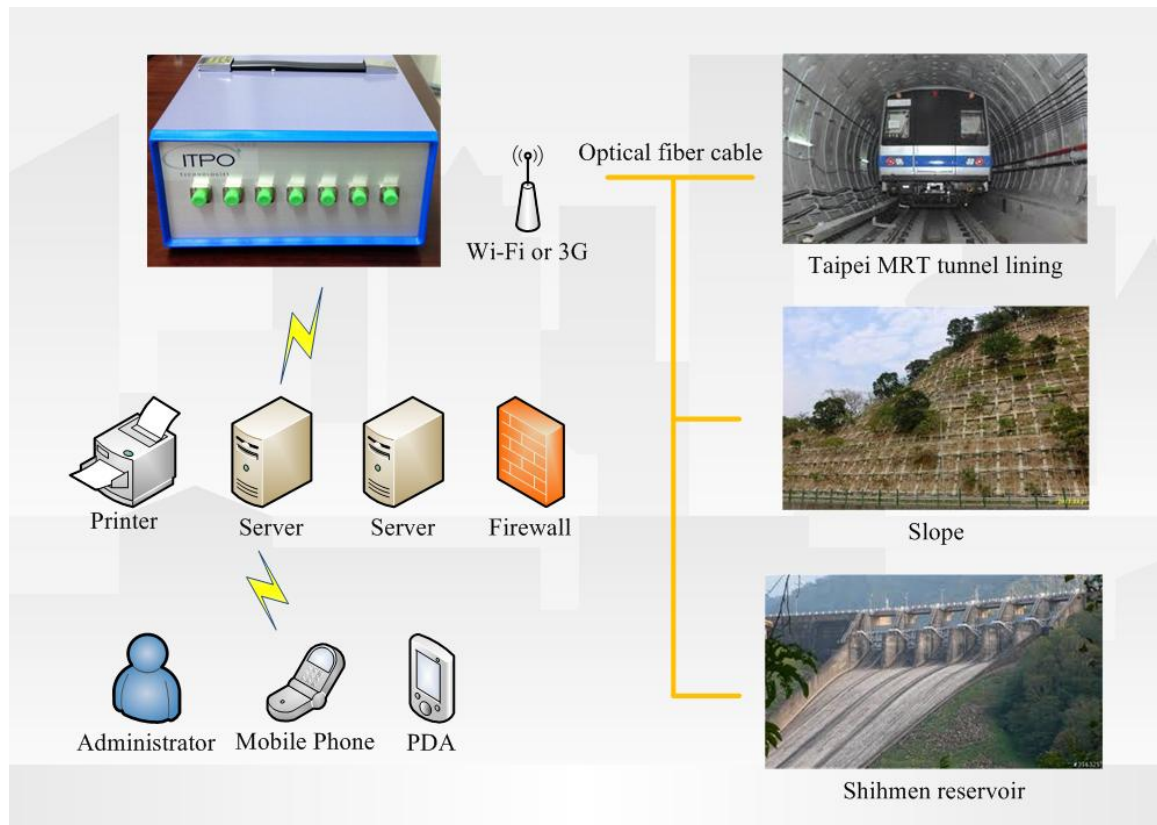


Figure 1. System set up of FBG-S308 in field monitoring.

FBG-Interrogator

Specifications	FBG-Interrogator
Physical Properties	
Number of Optical Channels	4 to 32
Wavelength Range	1528~1568 nm
Scan Period	1~2 sec
Wavelength Accuracy	2 pm
Wavelength Stability	1 pm
Optical Connectors	FC/APC, LC/APC, SC/APC, MPO
Dynamic Range	>40 dB
Laser Class ¹	3B
Mechanical, Environmental, and Electrical Properties	
Dimension (W×H×D)	300cm × 250cm × 210cm
Weight	~2 kg
Operating Temp.; Humidity	0 to 50°C; RH95%
Storage Temp.; Humidity	0 to 70°C; RH95%
EMC Certification	Directive 2004/108/EC; CISPR 22A+; FCC Class A EN 55022:2006+
Input Voltage	3.3 VDC/3A
Power Consumption	Max. 10 W
Comms Interfaces	USB2.0
Notes:	
1. According to IEC 60825-1(2001).	

Ordering Information

FBG-S3XX

XX: Number of Optical Channels

04 based; 32 max