

FiberSensing

bringing light to measurement

FS 2500 – INDUSTRIAL BraggSCOPE
DYNAMIC MEASUREMENT MODULE FOR FBG SENSORS

BraggSCOPE

- : fast acquisition for dynamic measurements
- : modular industrial equipment
- : robust and compact design for 24/7 operation
- : fanless heat dissipation
- : up to 4 sensors
- : ASE erbium doped fiber source
- : real time data
- : compatible with iLog



FiberSensing Industrial BraggSCOPE measurement unit is specially designed to be used in industrial environments to interrogate FBG sensors without the need of any other external devices such as optical source or detection modules.

BraggSCOPE

The proprietary BraggSCOPE technology is based on well-established integrated add/drop WDM components that enable a cost-effective filtering solution for Bragg wavelength measurement within predefined bands. Up to four sensors can be connected in series to perform simultaneous measurements. The Industrial BraggSCOPE measurement unit also features an intrinsic compensation for optical power fluctuations.

DRIVER

FiberSensing Industrial BraggSCOPE measurement units have Ethernet interface, which allows them to be connected to any standard PC (optionally CAN interface can be supplied instead). The units are supplied with a LabView™ Driver permitting the user to directly access data from each FBG sensor (time stamp, Bragg wavelength). Optionally, the standard GUI application for FiberSensing's measurement units (iLog FS 9100) can be installed on the remote PC. This easy-to-use software interface features

built-in datalogger functions such as automated sampling, archiving and transmitting. A high-performance database manages both multiple sensor network configurations and large datasets. Acquired data can also be exported to analysis tools through Excel™ compatible files.

FiberSensing Industrial BraggSCOPE measurement units also have configurable analog outputs that can be used for direct interface with other systems.

ORDERING INFORMATION

FS 2500 – Industrial BraggSCOPE

Single optical channel, 2K S/s

p/n	
002 5xx 023 xxx	
	101 – 1 sensor
	102 – 2 sensor
	103 – 3 sensor
	104 – 4 sensor
	00 – Ethernet
	50 – CAN

SPECIFICATIONS

Wavelength Measurement	
operating range	C band (1530 to 1570 nm)
resolution	0.1 pm
absolute accuracy	±20 pm
repeatability	±10 pm
sensors per fiber	4 (maximum) at FiberSensing Bands: C - 1541.5 nm D - 1547.9 nm E - 1554.3 nm F - 1560.8 nm
optical channels	1
measurement range	3.2 nm per sensor
sample rate ¹	2K S/s per sensor
ASE Source	
optical output power	10 dBm
optical flatness	5 dB

Specifications may change without notice

Inputs / Outputs	
optical connectors	FC/APC
interface	Ethernet or CAN ¹ Analog Output (0-10 V)
Driver	
platform	LabVIEW™
Environmental	
operation temperature	0 to 50 °C
relative humidity	< 90% at 40 °C
Mechanical	
dimensions	175x105x60 mm
enclosure	black sink aluminum
mounting feet	4 places, M5 (110x140 mm)
Power	
voltage	7 to 36 VDC
power	< 20 W

¹Not compatible with iLog; sample rates will depend on the number of sensors: 1 – 1KS/s; 2 – 500S/s; 3 – 200S/s; 4 – 200S/s

■ ■ ■ ■ measurement units