



Modular SmartScan 16-80

- 8, 12 or 16 optical channels
- 40 or 80 nm bandwidth
- Solid State
- Rack mount enclosure
- Robust optics
- Multiple interface options

Building on the success of the SmartScan FBG interrogator, the SmartScan 16-80 offers increased channel capacity for applications requiring higher FBG sensor or channels than the current 4 channel version offers.

The SmartScan 16-80 has been developed in response to demand from many clients seeking the same SmartScan performance and value for money but with greater capacity. For example, clients in the marine sector requiring more optical channels for hull monitoring, and Oil & Gas clients wishing to monitor large structures such as riser pipes.

The SmartScan 16-80 is offered in a 19 inch rack format with all connections rear mounted for easy inclusion in instrumentation racks.

Specifications

Measurement and Processing		Modular SmartScan			Modular SmartScan Lite		
Wavelength Range		40 nm (1528 – 1568 nm) or 80 nm (1528 – 1608 nm)					
Number of Optical Channels		8, 12 or 16					
Maximum Number of Sensors / Channel		16					
Scan Frequency (all sensors simultaneously)		2.5 kHz (40 nm models) 1.25 kHz (80 nm models)			250 Hz		
Repeatability ¹		< 1 pm					
Wavelength Stability		< +/- 5 pm over operating temperature range, +/- 20 pm over 25 years					
Dynamic Range by variant ²	Model	08-40	12-40	16-40	08-80	12-80	16-80
	DR	28 dB	25 dB	25 dB	27 dB	24 dB	24 dB
	Model	08-40 XR	12-40 XR	16-40 XR	08-80 XR	12-80 XR	16-80 XR
	DR	29 dB	29 dB	29 dB	29 dB	28 dB	28 dB
Gain Control		9 levels, per channel or per sensor, automatic or user controlled					

Mechanical, Environmental and Electrical	
Dimensions (W x H x D)	19" rack mount x 3U x 11" deep
Weight	3 kg / 6.6 lb
Operating Temperature	0 to +50 °C / 32 to 122 °F
Comms Interfaces ³	Ethernet (UDP-IP), Options for Profibus and Modbus RTU
Data Connector	RJ45 and 9 way D type serial for Modbus/Profibus
Optical Connector ⁴	FC/APC
Input Voltage	100~250 V AC 50/60 Hz with mains adaptor supplied (+9 to +36 VDC option)
Power Consumption	Typ. 20 W, max 25 W using mains adaptor

¹ Measured over 1 minute, standard uncertainty (1 σ distribution)

² Total tolerable optical attenuation without loss of performance

³ Serial data rates limited by protocol and client hardware

⁴ Connector required to be fitted on cable to mate with unit

Specifications are subject to change without notice