



HR-DAS – High-Resolution Distributed Acoustic Sensing System

Sensing Capabilities

Number of Sensing nodes	+ 1000
Spatial Resolution	20 cm (or more) ¹
Frequency Range	0.01 Hz – 500 kHz ²
Sample Rate	Up to 1 GSa/sec
Strain accuracy	5 nε
Strain measurement range	5 nε ~ 10 mε

System Specification

Operating Wavelength	1530 nm – 1560 nm ³
Laser Safety Class	Class 1 / Output power <10 mW
Supply Voltage	100 – 240 V, 50 – 60 Hz
Optical Interface	SC-APC (alternatives upon request)
External Connectors	USB (2 x type-A and 2 x type-C), 1 x SD Card Reader 2 x Ethernet (1ea 1Gb/s, 1ea 10Gb/s) 1 x Display Port, 1 x Serial Port, 1 x Audio Jack
Dimension	Rackmount 4U Chassis H x W x D: 178 x 482 x 590 mm ³
Weight	35 kg (Standalone),
Power Consumption	120 W typical, 250 W max

- The system offers a real-time data visualisation capability and low-level data analysis.
- A 10Gb/s ethernet communication port on the unit allows data streaming to an external storage server for long-term data acquisition and safekeeping.

Data storage can be carried out in RAID1, RAID5, or RAID10 formats based on end-user preference.



¹ HR-DAS operation relies on speciality optical fibre that needs to be acquired separately.

² The frequency range depends on the sensing range. Higher sampling frequencies are feasible only in Burst Mode.

³ The operating wavelength is a fixed value between 1530 nm ~ 1560 nm.