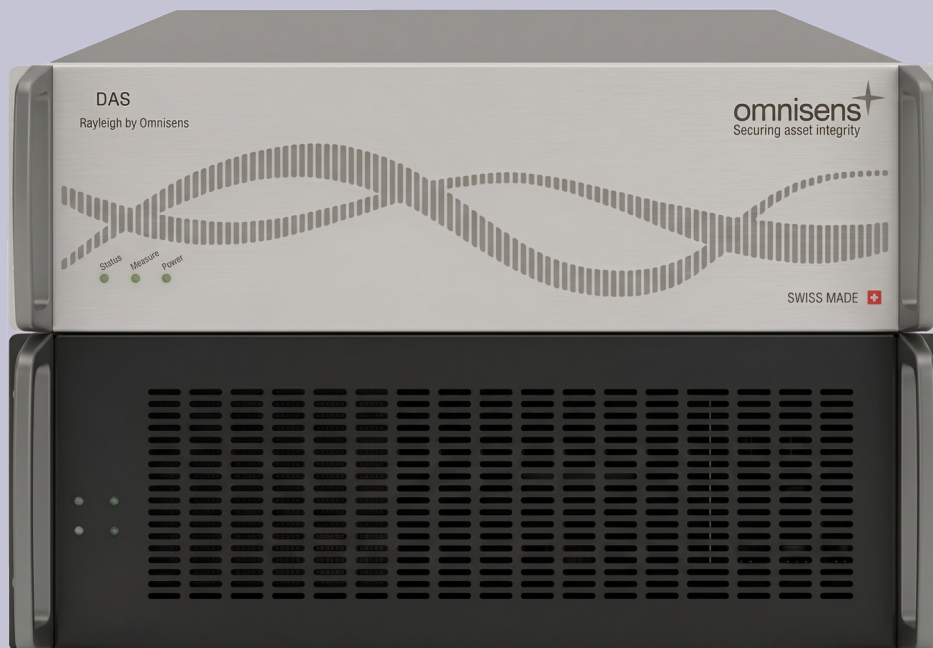


DAS

Distributed Acoustic Sensing Interrogator



The DAS for Critical Asset Monitoring

PRODUCT DESCRIPTION

DAS is a distributed acoustic sensing interrogator designed to perform distributed vibration measurements over long distances using telecommunication-grade single-mode fibers. It is based on chirped-pulse phase-sensitive OTDR architecture.

For critical asset monitoring, the DAS features advanced algorithms for accurate event/threat recognition in continuous monitoring scenarios.

APPLICATIONS

- Power cable monitoring (offshore / onshore)
- Pipeline
- Subsea oil & gas infrastructure
- Perimeter Security

KEY FEATURES

- Automatic detection of events and/or threats
- Measurement range up to 100 km
- Compatible with standard SM (ITU T G.652/654/655/657)
- Based on Chirped Pulse Phase-Sensitive OTDR
- 2 built-in simultaneous measurement channels
- Robust design for demanding environments with Linux operating system, proprietary database storage and solid-state drive (SSD)
- Integrated with EOSS Monitoring Platform

DAS INTERROGATOR'S FEATURES AND TECHNICAL SPECIFICATIONS

Sensing Performance	Technology/architecture	Phase-sensitive chirped-pulse
	Measured variables	Dynamic strain
	Distance range (per channel)	70 km (DAS, optical budget @1550 nm: 14 dB); 100 km (DAS-TL, optical budget @1550 nm: 19 dB)
	Optical channels (built-in)	DAS: 1 channel (2 optional); DAS-TL: 1 channel
	Sensor configuration	Single ended
	Compatible sensing fiber	Single-mode: ITU-T G.652 / G.654 / G.655 / G.657
	Spatial Resolution (setting)	2.5-30 m
	Location accuracy	From ± 2.5 m (specified on a project basis)
	Sampling rate	Up to 2 kHz (specified on a project basis)
	Acoustic sensing bandwidth	Up to 1 kHz (specified on a project basis)
Interfaces & Data	Communications Ports	2xEthernet (RJ45)
	Protocols (options)*	Modbus; DNP3; IEC-60870-5-104; IEC-61850
	Data format	HDF5 (open source)
	Data storage	HDD 10 TB RAID1 (default); HDD 20 TB RAID1 (optional)
	Data Size	Strain (raw): 50 MB/min/km/kHz @ 10 m; Energy (compressed): 25 kB/min/km
Mechanical & Electrical	Optical connectors	SC/APC (rear); optional E2000/APC
	Rack / form factor	19-inch rack: optical unit 3U + processing unit 4U
	Dimensions	Optical unit: 483 × 435 × 132 mm (W × D × H); Processing unit: 483 × 448 × 177 mm (W × D × H)
	Weight	Optical unit: 8 kg; Processing unit: 19 kg
	Power supply / consumption	100–240 V AC; optical unit: 40 W (max) (1 ch) / 70 W (max) (2 ch); processing: 230 W (typ.) / 700 W (max)
Environmental & Compliance	Operating / storage temperature	0 °C to +40 °C / -10 °C to +60 °C
	Relative humidity	5-95% (non-condensing)
	Protection rating	IP20 (indoor use)
	Laser classification	Class 1M (EN 60825-1:2014)
	Standards	EN 61326-1:2013; EN 61000-6-2:2005; EN 61010-1:2010
	Sustainability	Environmental Product Declaration In accordance with ISO14025:2006 and EN50693:2019

* via EOSS Monitoring Platform

ED_PD010 Datasheet DAS

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EOSS s.r.l.

Via Chiese, 6

20216, Milano, Italy

prismian.com