TENDEKA

Oryx+ DTS

Distributed Temperature Sensing System

The Tendeka Oryx+ DTS unit offers the most advanced and reliable solution for monitoring harsh and remote environments

DTS gives you the tool to continuously obtain measurements in real time along the entire length of your wellbore. The Oryx+ range of DTS units, lead the way in terms of performance in DTS technology with temperature resolutions better than 0.01°C achieved in the field, the fastest measurement speeds available and the greatest coverage of up to 30km from a single channel. Based on analysis of Raman back-scatter signals in an optical fiber, DTS systems use a combination of variations in back-scattered light intensity and time domain reflectometry to create temperature against distance profiles. The fiber acts as both sensing element and transmission medium. Many thousands of discrete measurement points can be achieved over distances up to 30km using a single fiber.

Surface Acquisition Unit

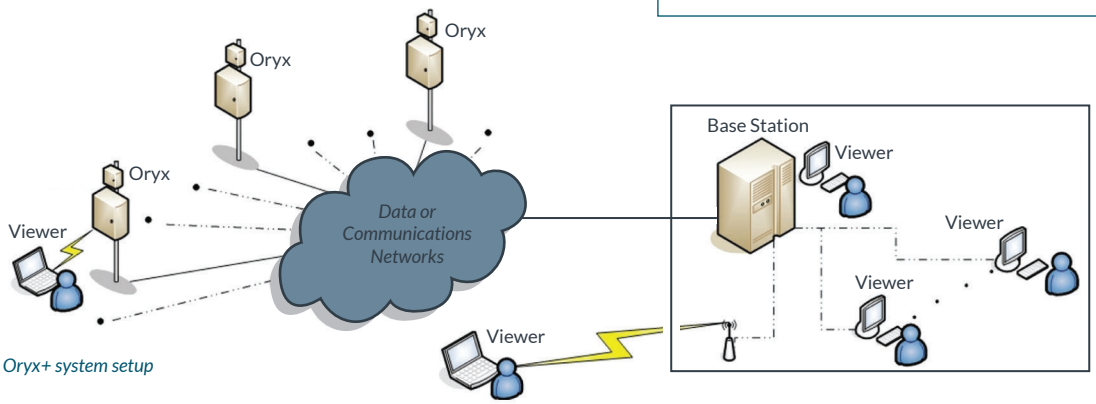
The self contained Oryx+ DTS is a compact Distributed Temperature Sensing (DTS) system designed for harsh environments ideal for monitoring applications from desert to sub-zero conditions. The Oryx is an autonomous, low-powered device allowing the system to be powered by solar or wind power. Combined with satellite, radio link, or fibre communications, the Oryx becomes a powerful remote logging DTS unit.

Features

- Designed for outdoor installation from desert to sub-zero conditions
- Data Management - fully compatable with the DataHub and Quest Software Suite
- Server-based data collector and processor - simple and intuitive user interface provides base-station set-up, communications options for multiple Oryx+ DTS installations and data visualisation. Proven industrial standard software ensures reliable and continuous operation

Benefits

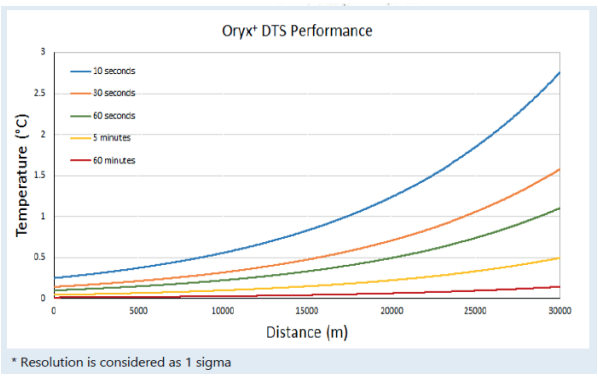
- High performance - industry leading temperature resolution enables accurate data collection
- Remote Operation - cost-effective as there is no need to be at DTS site for set-up, configuration, updates or data access
- Low power requirements (12-24V DC) - enables solar panel / wind power operation. Cost-effective performance



Oryx+ system setup

Tendeka offers the widest range of DTS to meet your every monitoring requirement, specific to any need, environment and challenge. You can rely on us to provide the full solution - from system engineering and design, to installation, data interpretation services and global support services. We'll take the time to fully understand your business goals and the unique context and physical circumstances of your asset to provide the best solution to you.

Coupled with the SureSight permanent cable range, the Oryx+ DTS gives you the tool to continuously obtain measurements in real time along the entire length of your wellbore. Laser light pulses generated within the Oryx+ DTS control unit are launched into the optical fiber. As the light pulse encounters temperature features along the fiber, the pattern of back-scattered light is analysed to provide a real time temperature footprint.



* Resolution is considered as 1 sigma

The graph illustrates the temperature resolution of each Oryx+ DTS with sensing range and measurement time*

Technical Specifications	Oryx+ DTS - XR15	Oryx+ DTS - XR30
Unit Description	Medium Range	Long Range
Range	0 - 15km	0 - 30km
No. of Channels	4	4
Spatial Resolution	1m	1m
Sampling Resolution	1m	1m
Operating Temperature	-5°C to 65°C	
Power Requirements	12 or 24 VDC	
Power Consumption	35W operating: 10W stand-by	
Dimensions	130 x 305 x 365mm / 5.1 x 12 x 14.4"	
Weight	8.2kg /18lb	
Communication Options	The Oryx+ DTS is compatible with a wide range of communications options: • Satellite / Wireless modem • GSM Modem • Radio Link • Direct link to PCs / Laptops • Serial RS-232 / 485 • Wired Ethernet • USB - 2 x USB 3.0	
Certification and Compliance	The Oryx+ DTS has been independently classified to BS EN 60825-1:2014 as a Class 1M laser product. Atex Compliance: The Oryx+ models are certified Cat.3 and are suitable for use in Potentially Explosive Atmospheres in accordance with the Directive 2014/34/EU Standards: EN 60079-0:2012, EN 60079-28:2015 EMC Compliance: Directives 2014/30/EU EN 61326:-1:2013Lab Equipment; EMC EN55022/2010 and National and EU Harmonised Standards FCC CFR47 Pt15 Class A; ICES-003; EN 61000-4-2:2009; EN 61000-4-3:2006; CE Compliance: Accordance with 89/336 EEC EMC Directive Accordance with LVD 2014/35/EU Directives, Standards EN 60825-1; EN 61010-1	