Bandweaver

DATASHEET

Horizon-DAS - Distributed Acoustic Sensor

The Horizon-DAS series of distributed vibration sensors is an extremely versatile monitoring system, with the capability to monitor both buried installations (pipelines, borders..) and above ground fence and wall mounted systems. Each unit can coverage for up to 100km and has inbuilt intelligent classification engines for accurate location of intrusion events with minimal nuisance events and false alarms. The Horizon DAS range is an ideal solution both as a Perimeter Intrusion Detection System (PIDS) and a Third Party Interference (TPI) system

Features

Long distance monitoring – up to 100km per unit. Ability to monitor buried cable and fence/wall mounted

Location of intrusion event to within 5m over long distances

Intelligent classification engine with motion recognition

Based on single fiber optic sensing cable. No individual sensors, no metal or moving parts

Robust and reliable instrumentation with no moving parts (fan free) and utilising high reliability telecom components

Benefits

Simple to stall and low overall cost of ownership

Ability to react to precise location of event for rapid action and effective troubleshooting.

High detection rate of all intrusion events with low nuisance and false alarm rates

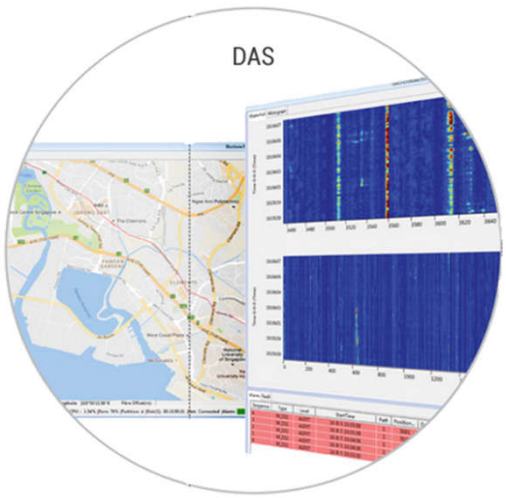
Easy to install and low cost of ownership with low ongoing maintenance costs

High percentage system uptime (mean time between failures > 19 years) giving complete coverage at all times

Horizon Model	DAS 20	DAS 40	DASF 50	DAS 100
Smart Zones	1000+ zone, fully configurable, independent of each other			
Intelligent Classification Engines	Fence related intrusion alerts. Environmental noise reduction			
Range (per unit)	20km	40km	50km	100km
Positional Accuracy	±5m			
Number of channels	1	2	1	2
Optical fiber type	G.652/ G.654 single mode optical fiber			
Frequency range	1Hz ~ 2.5kHz			
Response Time	2 to 10 seconds			
Voltage	100 ~ 240V (AC)			
Power consumption	75W			
Data Export	TCP/IP, RS232/RS485, Modbus, DCS (Honeywell, Siemens, ABB…….)			

User Interface

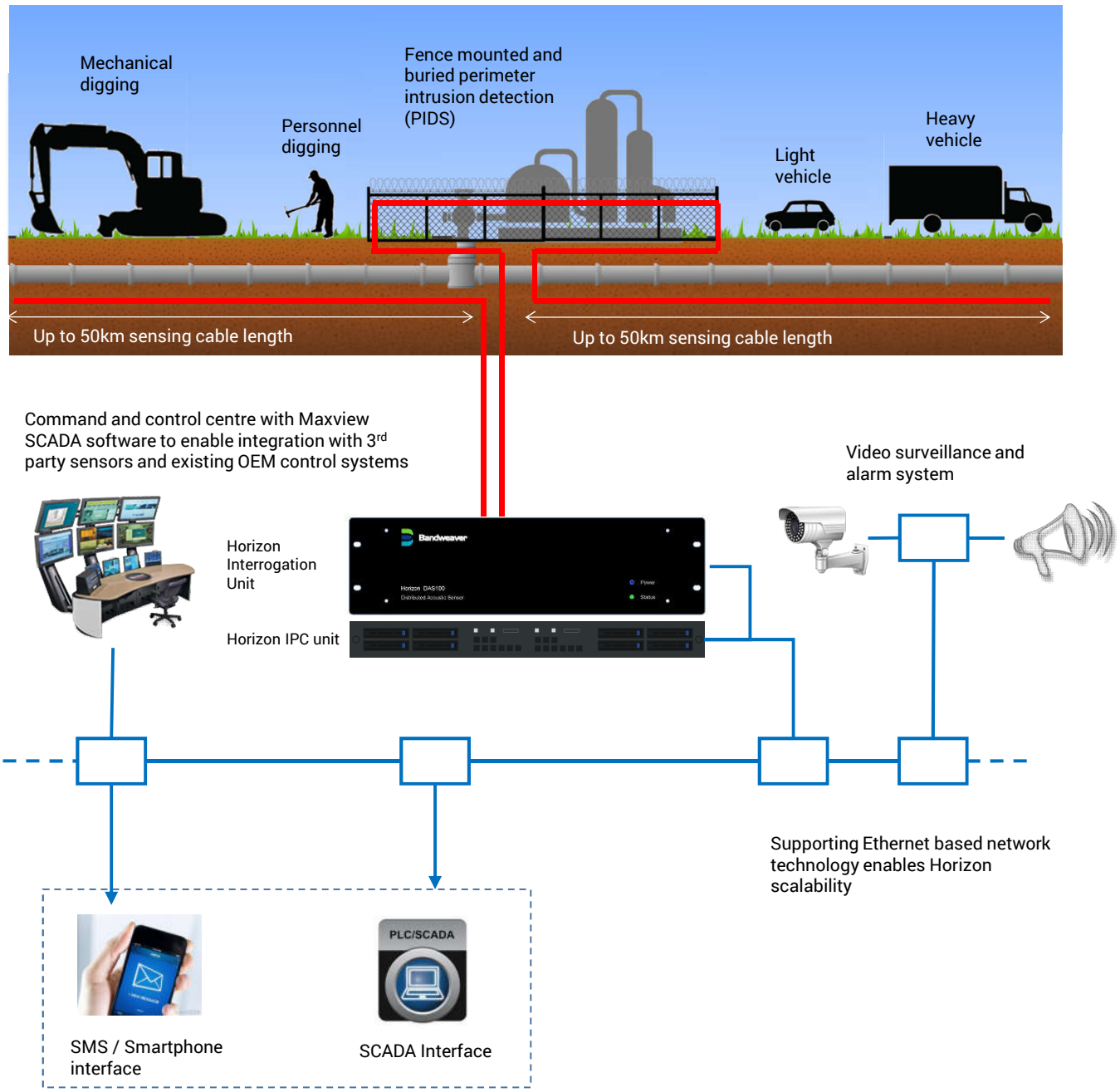
The Horizon system utilises in-built software with advanced data analytics and intelligent classification engine. With the GIS mapping interface, alarming functionality and waterfall data analytics this can be used as a standalone solution or with Bandweaver's power Maxview SCADA software



System Architecture

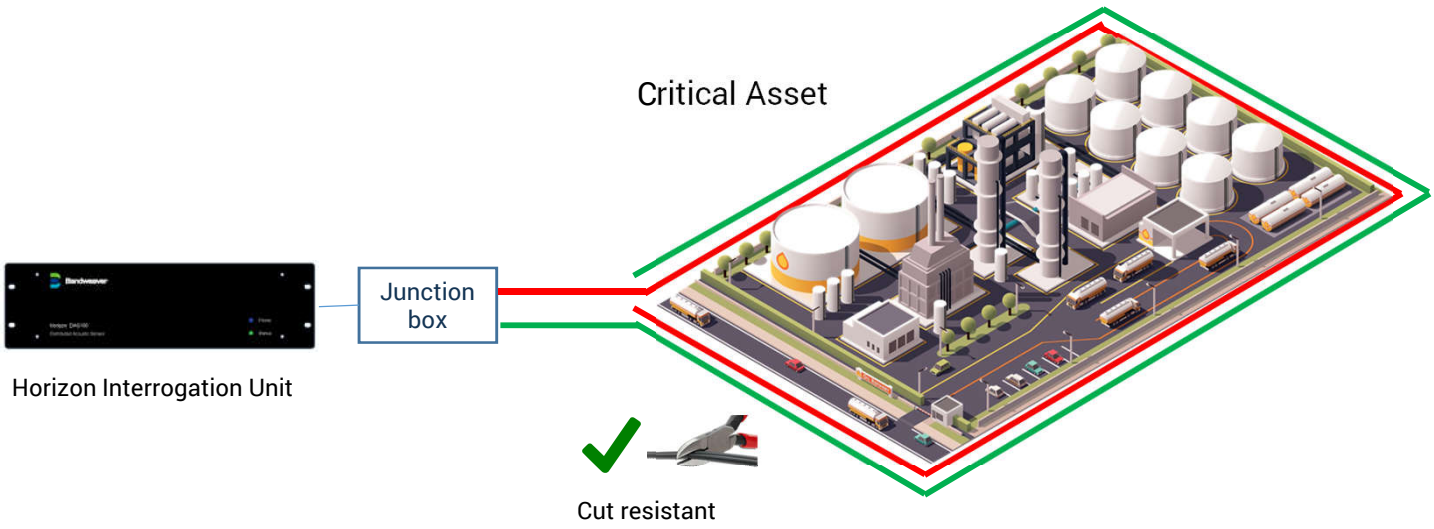
The Horizon system has an extremely flexible system architecture enabling it to integrate either with Bandweaver's Maxview SCADA software or with any 3rd party control systems.

With the loose coupling architecture of Maxview it can integrate multiple systems across multiple sites with one coherent, customisable, easy to install user friendly interface



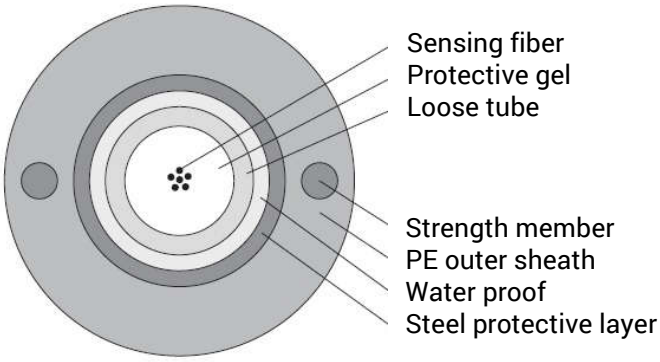
Robust Anti-Cut Loop Configuration

In 2 channel loop mode configuration the Horizon system can withstand accidental or malicious damage to the cable. The system will can continue with full functionality even with a cut to the cable



Cable Specifications

The Horizon system is optimised to work with the Bandweaver Fenceline cable. Fenceline is based on a loose tube cable design optimised to provide signal amplification and additional protection to the sensing cable. As standard comes with 4 fibers but can accommodate additional fibers on request



Cable OD	Fiber Type	Number of cores	Pressure rating	Strength rating	Bend radius
10.2mm	G.652 Single mode	4+	Short term 1000N Long term 3000N	Short term 600N Long term1500N	Static 10 x Dynamic 20x