



Bandweaver



Advanced Fiber Optic Sensing Solutions:

ZoneSentry

The new ZoneSentry is a zonal based Perimeter Intrusion Detection System (PIDS) based on Bandweaver's leading edge fiber optic distributed acoustic sensing (DAS) technology. By attaching a single fiber optic sensing cable to the external perimeter of a site, or on key assets, ZoneSentry can detect and alert to the vibrations associated with intrusion events, enabling rapid action to prevent damage or theft.

Available with 4 or 8 zones, the ZoneSentry system can integrate with CCTV cameras at both a hardware or software level. When used with Bandweaver's MaxView integration software, the solution can interface with other security systems such as VMS or PSIM. The product addresses the growing demand for real-time monitoring and intruder detection at small and medium sized sites as well as residential settings.



Monitored | Secured | Safe

KEY FEATURES

Affordable fiber optic technology

Positioned as an entry-level solution, ZoneSentry offers real-time monitoring and detection along perimeters of up to 8km per unit.

Minimising Nuisance Alarms

Using AI technology, our market leading detection algorithms are able to develop an acoustic fingerprint of different events, enabling the distinction between genuine security risks and extraneous environmental noise.

Swift, cost effective installation

ZoneSentry is a straightforward, out-of-the-box solution that requires minimal set-up, configuration and maintenance. As a result, installation time and costs are reduced and the system is operational much quicker than with alternative technologies.



Integration capabilities

ZoneSentry can integrate with CCTV cameras at both a hardware or software level. When used with Bandweaver's MaxView integration software, the solution can also interface with other security systems such as VMS or PSIM.

Zone specific tuning and filtering

Each zones can be configured individually and so different sensitivities can be applied across the installation.

Ideal for small remote sites

The cost-effective design makes it ideal for use in a range of settings including renewable energy sites such as solar farms, remote telecoms sites, power, utilities and substations and Oil and Gas assets such as well heads, pumping stations and block valves.

KEY APPLICATIONS



Power, utilities and substations



Renewable energy



Telecoms



Well heads, block valves and pumping stations

KEY SPECIFICATIONS

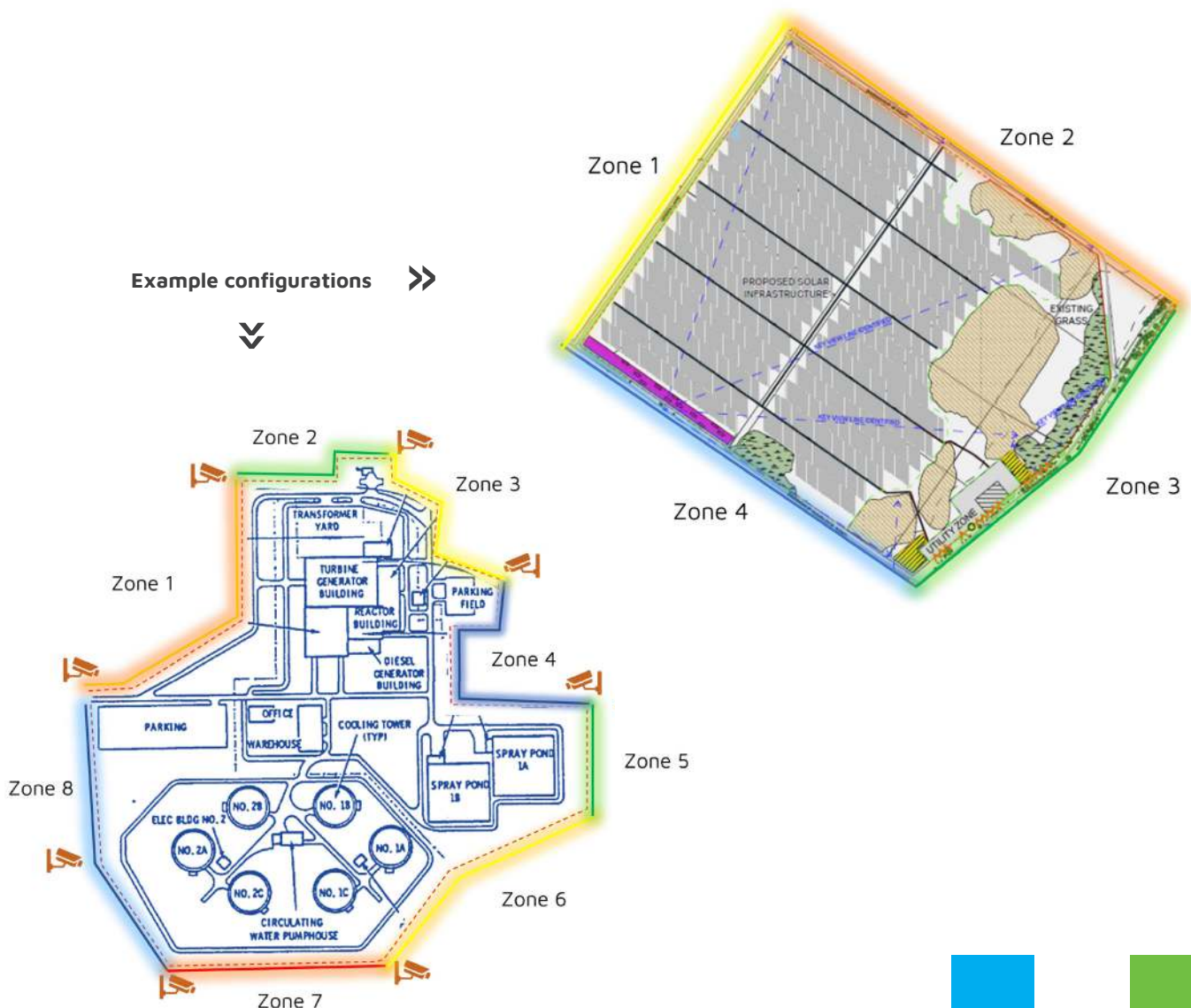
- > Number of channels: 4 or 8
- > Range per channel: 1km
- > Number of alarm logs - 8,000 events
- > Cable type: Single mode fiber compliant to ITU-T G.652
- > Laser safety classification: Class 1M
- > Relays: 11/22 total
- > Dimensions: 88 x 384 x 430 mm
- > Operating temperature: -20° to +70°C

See datasheet for full specification.

ZONE CONFIGURATION

Up to 8 zones can be configured per unit and depending on the specific requirements of the site these may be setup according to a number of different methodologies:

- > Match geography of site (e.g. one zone per perimeter edge)
- > Match fence/wall type (e.g. different zone for different fence types)
- > Match other security systems (e.g. one zone per camera)
- > Match security risk classifications (e.g. zone according to risks)

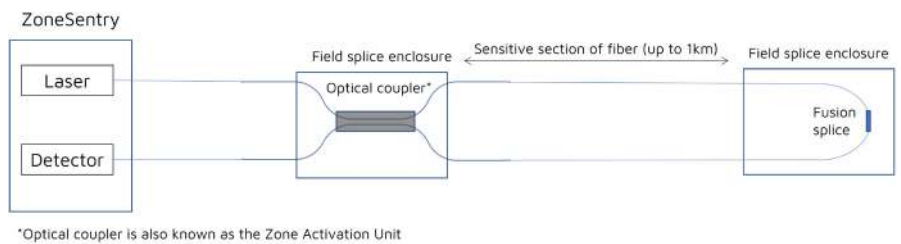


HOW IT WORKS

The ZoneSentry system is based on the principle of the Sagnac interferometer. Fiber-based Sagnac loop sensors, as opposed to all other types of common interferometers, have the unique advantage of providing the same physical path for the two counter-propagating light waves that create the optical interference, hence eliminating signal fading problems due to path instabilities caused by environmental disturbances.

This technology has a number of benefits including:

- > High stability
- > Self-balancing characteristics
- > Compact structure
- > Simplicity: single zone activation unit and otherwise standard fiber optic cable.

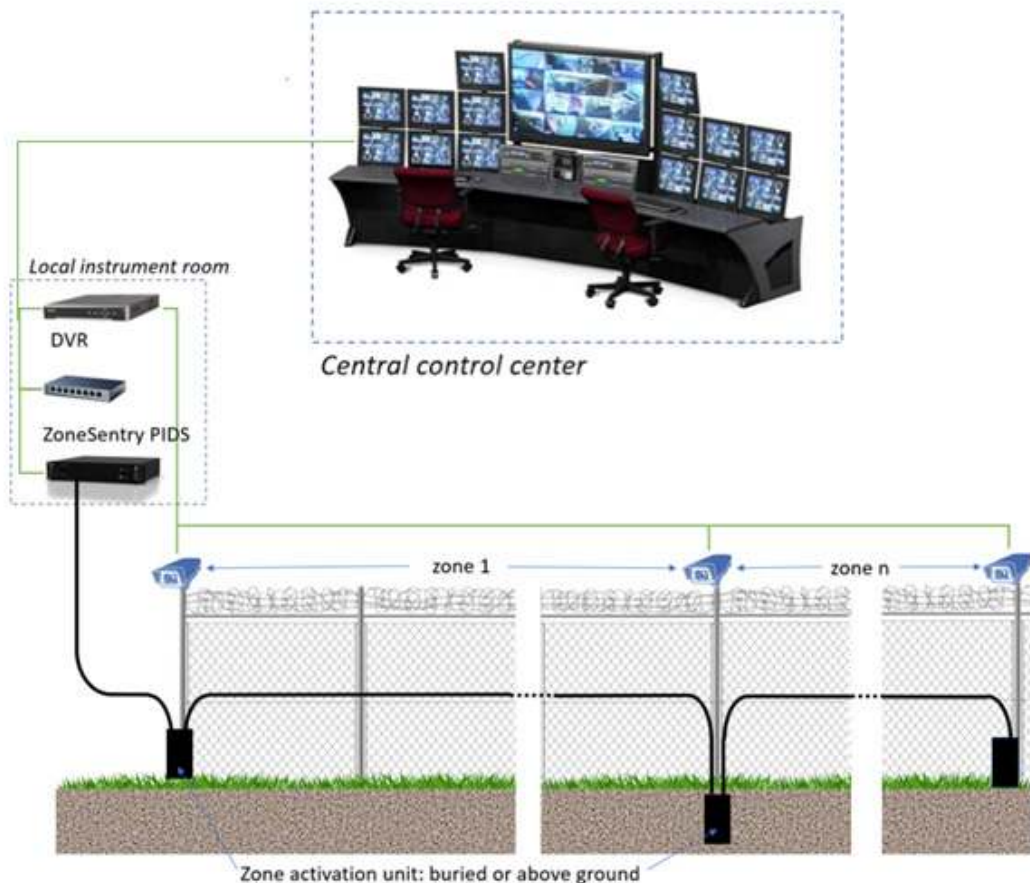


Principle of Sagnac interferometer

SYSTEM INTEGRATION

The ZoneSentry has a very open architecture where it can easily integrate with PSIM, VMS and BMS software platforms and integrate seamlessly. As standard this is achieved with the electrical relays or Modbus protocol.

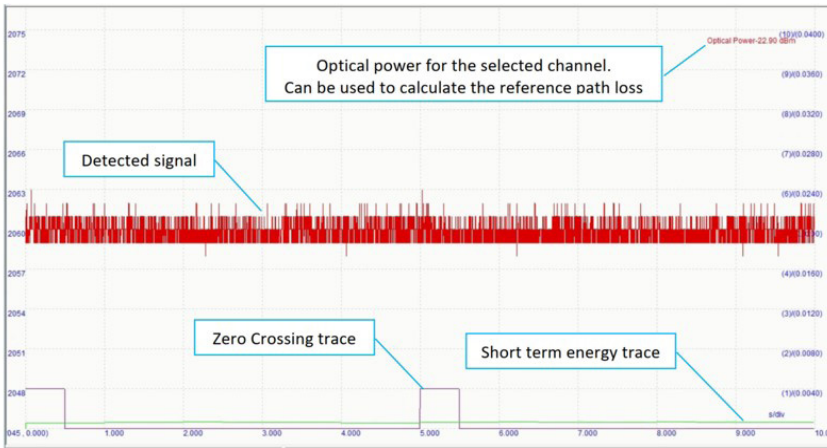
Below is a schematic detailing a typical integration with CCTV cameras.



SOFTWARE CONFIGURATION

OFSS1000CM is the system configuration and monitoring software for the ZoneSentry product. The software is used to configure the system at the time of commissioning.

Each zone can be configured separately in order to tune the environment to balance maximum sensitivity with the minimum number of nuisance alerts



MAXVIEW INTEGRATION

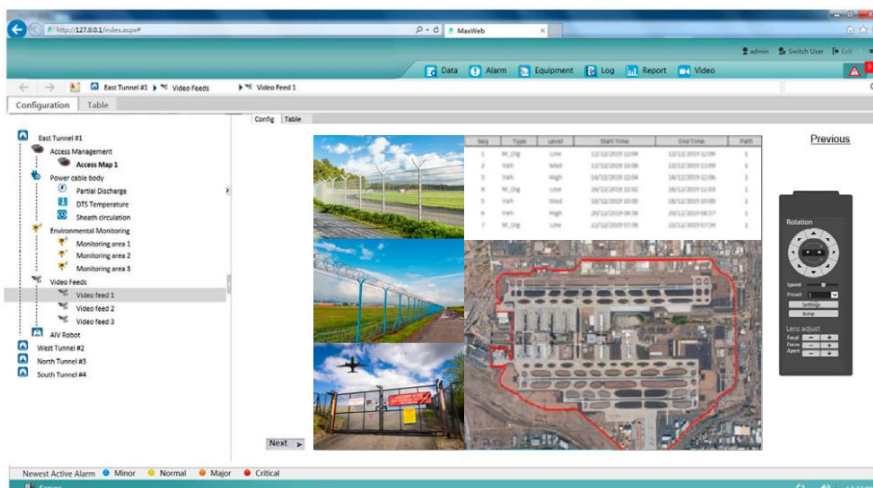
If there is no VMS, PSIM or BMS, Bandweaver can supply its MaxView software, which can provide the integration with other systems and required visualisation.

For more advanced/complex applications, MaxView can also integrate additional security sensors and also interface either with Security packages (PSIM, VMS, BMS) and/or SCADA or industrial process systems.



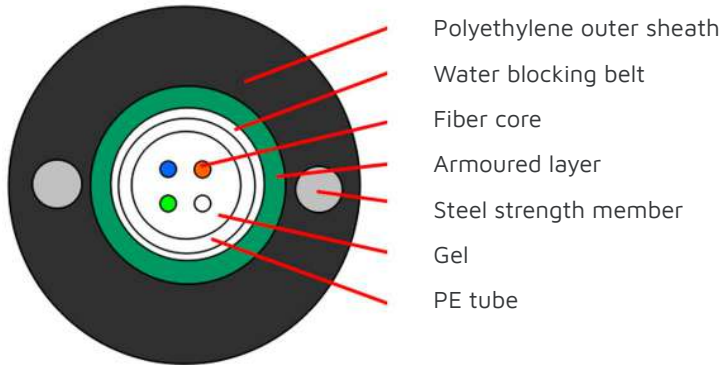
Example screenshots >>>

Typical MaxView page layout



CABLES

The Bandweaver FenceLine cable is optimised for fence or wall mounted Perimeter Intrusion Detection System (PIDS) applications. The rugged yet lightweight design provides the optimum balance between mechanical protection and prevention of fluid ingress, while maintaining flexibility and ease of installation.



FenceLine has a protective tube construction for water ingress protection, a steel protective layer for impact resistance and strength members to enhance longitudinal strength. The cable contains single mode sensing fibers, which are optimised for use with Bandweaver DAS systems.

FENCELINE KEY SPECIFICATIONS

- > Number of fibers: 8-16
- > Colour: Black
- > Outer sheath: MDPE 2mm thickness
- > Fiber type: 9/125 (G.652 or similar)
- > Attenuation: 0.21 dB (@ 1550 nm)
- > Temperature range: -40 to 70°C

See datasheet for full specification.

ZONESENTRY ORDERING INFORMATION

Product

Zone activation unit
Buried field splice enclosure
Rackmount splice tray (4 loop or 8 loop variant)
FenceLine Sensing cable

Part Code

FID-ZS-ZAU-01
FIDS-ZS-JB-01
FID-ZS-ST-04 Kit / FID-ZS-ST-08 Kit
CAB-SM9_FS-08 / CAB-SM9_FS-16