



Bandweaver



# Advanced Fiber Optic Sensing Solutions



Monitored | Secured | Safe

# WHO WE ARE



Our vision is to be the first choice for integrated distributed fiber optic sensing solutions. Our systems are used to monitor, secure and keep personnel and critical assets safe.

Bandweaver has been providing advanced fiber optic monitoring sensors and integrated technologies for our customers since 2002.

We are committed to delivering reliable, innovative, client-centric and value added products and services, via our dedicated and talented team of people.

Bandweaver's market-leading technology is utilised in the following key sectors:

- > Security
- > Fire
- > Power
- > Pipeline

## THERE WHERE YOU NEED US

Bandweaver employs more than 300 personnel, supporting our customers across six continents.

With strategically located local offices, facilities and support teams around the globe, we ensure that we can support our customers exactly where and when they need us.

In addition, we have a worldwide network of trusted partners able to manage and support large scale projects. These carefully selected partners offer invaluable market knowledge, local support and technical expertise.



## HERE TO SUPPORT

Bandweaver has an extensive team of engineering and logistical support personnel to ensure projects are delivered to the highest standards. This includes:

- > Front End Engineering Design (FEED)
- > Project management
- > System installation and commissioning
- > Product training
- > Support and maintenance for independent approvals

## WORLD-CLASS FACILITIES

We have more than 30 dedicated R&D engineers worldwide, with extensive experience from dynamic start-ups through to prestigious blue-chip companies.

Our teams are centered in four main hubs across North America, Europe and Asia and form global partnerships with key customers, technology partners and academic institutions to push the boundaries of monitoring solutions.

To closely manage quality and reliability, Bandweaver is a vertically integrated manufacturer with complete control over all components, within our state of the art 10,000m<sup>2</sup> facility, complete with Class 100 cleanroom.

Production capabilities span from the individual optical component manufacture through to instrumentation assembly and system integration.



OVER 7,500  
SYSTEMS



ACROSS SIX  
CONTINENTS



OVER 60,000KM  
OF CABLE

# ADVANCED TECHNOLOGY

Bandweaver is proud to have one of the most advanced ranges of fiber optic monitoring systems available on the market today, including Distributed Temperature Sensors (DTS) and Distributed Acoustic sensors (DAS).

## WHY USE FIBER OPTIC TECHNOLOGY?

**Location Accuracy** - Advanced signal processing technology across configurable zones enables fast and accurate identification of the specific location of an event.

**Reduced Infrastructure** - Overall reduced cost of installation and maintenance compared with alternative technology.

**Robust** - Resistant to electromagnetic interference and intrinsically safe, with no power needed in the field.

**Early Detection** - Swift detection of potential malicious or accidental interference before escalation.

**Versatile** - Suitable for a range of applications in different environments without compromising location accuracy or event classification capability.

**Low Maintenance** - Passive, corrosion free solution with no apertures, joints or moving parts.

**Improved Decision Making** - Providing precise, real-time and actionable information.

**Resistance to Cable Cut & Sabotage** - Uninterrupted detection, even if the cable is cut or damaged.

**Minimising Nuisance Alarms** - Using AI technology, distinguish genuine events and environmental noise

>95%

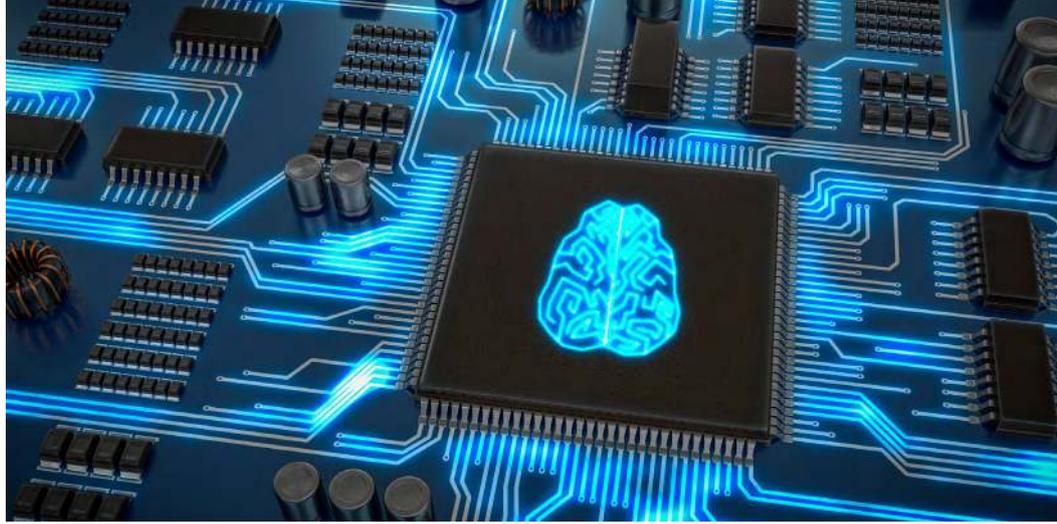
PROBABILITY OF  
DETECTION

>100  
KM

DETECTION  
RANGE

>10  
YEARS

MEAN TIME  
BETWEEN FAILURE



## ADVANCED MACHINE LEARNING

Bandweaver is a leader in artificial intelligence (AI). Using deep neural networks (DNN) our systems improve system performance, providing a multitude of benefits for our customers.

- > Improved detection capability
- > Reduced nuisance alarms
- > Reduced installation time

## QUALITY YOU CAN TRUST

Bandweaver is ISO 9001 certified and undergoes a rigorous continuous improvement program and tests all of its products to leading international standards.

As well as extensive in-house environmental testing facilities, Bandweaver also utilizes leading 3<sup>rd</sup> party testing houses for independent verification and approvals.

Furthermore, Bandweaver is also a leading supplier into the telecoms industry, which has some of the most stringent quality and reliability requirements.



# OUR SOLUTIONS



## POWER

### INTELLIGENT CONDITION MONITORING

Bandweaver has worked together with customers and technology partners for more than 10 years to develop condition monitoring solutions for the intelligent grid.

When used alongside a proactive maintenance approach, our state of the art sensing systems and intelligent software provide the operator with the right information at the right time to make decisions that help you to reduce planned and unplanned maintenance, to avoid catastrophic failure and to effectively manage your risk.

## PIPELINE

### MONITORING AND TPI PREVENTION

To protect vital infrastructure that is particularly vulnerable to disruption, it is critical to keep assets such as pipelines secure. Whether the threats arise from accidental damage such as from 3<sup>rd</sup> party construction or deliberate interference, including terrorism, tapping or other malicious attack, there is a need to deploy a reliable and accurate solution.

Such solutions also aid the reduction of environmental pollution or maximisation of uptime through smart maintenance programs. Whether it is a remote long distance pipeline, an inner city pipe at risk of accidental damage or a process facility with condition monitoring requirements, Bandweaver's unique and versatile range of systems can help.

Our pipeline protection solutions includes both condition monitoring and leak detection systems based on Distributed Temperature Sensing (DTS) and Distributed Acoustic Sensing (DAS) systems, providing Third Party Interference (TPI) prevention.





## FIRE

### LINEAR HEAT DETECTION

Bandweaver's range of fiber optic monitoring systems are designed specifically to enhance the safety of critical infrastructure and personnel.

We provide solutions for fire detection utilising linear heat detection technology, monitoring environments over a long range distance (linear assets), typically in special hazard environments.

Linear heat detection systems can detect a fire anywhere along the length of the linear heat sensing cable, over a distance of several kilometers. Bandweaver utilises fiber optic distributed temperature sensing, one of the key technologies available within this field.

Combined with our smart software and services, this solution provides operators with the right information at the right time.

Whether the asset is in a remote location or a busy inner city, Bandweaver's solutions enable swift decision making and help to minimize damage, avoid catastrophic failure and to reduce financial, environmental and reputational risk.

## SECURITY

### PERIMETER INTRUSION DETECTION SYSTEM (PIDS)

Perimeter Intrusion Detection Systems (PIDS) are systems used in an external environment to detect the presence of an intruder attempting to breach a perimeter.

Fiber optic technology is fast becoming the technology of choice for those looking for a reliable, accurate solution with minimal infrastructure requirements.

Bandweaver's fiber optic intrusion detection can detect both vehicle and person movement, enabling swift deployment of security teams to multiple incidents.

The fiber can be attached to a fence or buried underground, enabling the solution to be utilised for a wide range of applications. The system is fully scalable for small sites through to perimeters and borders greater than 100km.





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[info@bandweaver.com](mailto:info@bandweaver.com)

[www.bandweaver.com](http://www.bandweaver.com)