


# High performance long distance pipeline protection



Pinpointing the location of  
TPI or illegal activities on  
high risk oil, gas, chemical  
or water pipelines



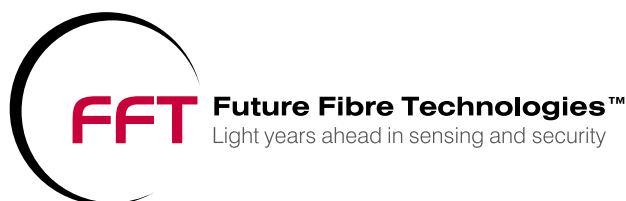
FFT Secure Pipe™ detects and locates intrusions and Third Party Interference anywhere along thousands of kilometers of buried pipeline, in real-time, before actual pipeline damage occurs.

Secure Pipe™ uses a fiber optic cable installed above the pipeline as the sensor, detecting and pinpointing the location of an intrusion to within 150 meters (500 feet) regardless of the pipeline length.

FFT's ARaD advanced signal processing reduces nuisance alarms, without compromising the sensitivity of the system.

**Only from FFT – The ultimate force in fiber optic intrusion detection**

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



**FFT Secure Pipe™ is the most proven early warning pipeline security monitoring system available, detecting Third Party Interference (TPI), tampering, and illegal tapping attempts to within 150 meters (500 feet) along buried pipelines from just a few miles to thousands of miles in length.**

**The simple installation, reliability and maintenance free operation delivers the lowest Total Cost of Ownership (TCO) of any pipeline TPI detection solution in the market.**

## Key Benefits

- » Know the exact location where TPI or interference occurs and where to dispatch security or maintenance staff to ensure a rapid response.
- » Significant up-front cost savings as only one system is required for pipeline sensor cables up to 40km (25 miles) long. Secure Pipe™ delivers the lowest \$ per meter.
- » Lowest ongoing Total Cost of Ownership (TCO) as there are no electronics in the field, no power in the field and it is easy and economical to install or expand. There is no field maintenance, and the fiber optic cable is intrinsically safe.
- » Security staff can have faith in the system as Secure Pipe™ delivers high levels of TPI detection simultaneously with a low Nuisance Alarm Rate due to the intelligent event discrimination and analysis utilized.
- » The Secure Pipe™ system is simple for security staff to understand, and easy for them to use.
- » Subject to approval, it may be possible to use an existing fiber optic cable as the sensor.

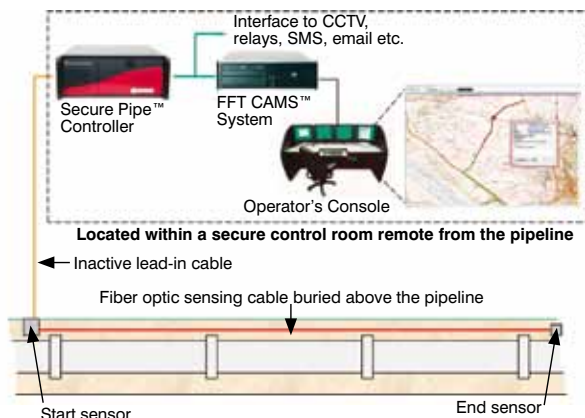
## How It Works

Simple to install and operate, the FFT Secure Pipe™ system delivers truly outstanding levels of detection and location combined with a low Nuisance Alarm Rate. It is maintenance free; operating easily and reliably under a wide range of pipeline operational and environmental conditions—day after day, year after year.

At the heart of the system is the intelligence built into the Sensing Controller. A laser beam is transmitted along the fiber optic cable buried above the pipeline, and the returned signal is automatically monitored and analyzed for disturbances. This same signal is then digitally processed to identify and eliminate environmental nuisance alarms. Only real intrusion events are identified and security staff alerted.

Simple and intuitive to use, Secure Pipe™ delivers the precise information your security staff need, combined with the ability to interface and activate CCTV systems, lighting, MODBUS, email, plus a broad range of external devices and systems.

The area or zone where alarms are triggered along with the GPS co-ordinates is instantly displayed onto a sitemap, and the event is automatically logged into a secure database. A signal can then be sent via Ethernet directly to a high level command and control system, CCTV camera system, email, Android mobile device, or other external monitoring.



## 10 Key Reasons Why You Can Depend On FFT

**Experience** – Thousands of kilometers installed at hundreds of major sites around the world

**Independently Tested** – FFT systems consistently deliver quality solutions, backed by independent testing

**Stability** – The world's most experienced fiber optic security sensing company

**Value Proposition** – Secure Pipe™ delivers outstanding price and performance benefits

**Technology** – FFT's R&D and product development programs ensure you always have the very latest and most powerful technology, and systems are easily updated with the latest algorithms and signatures

**Quality** – Certified ISO 9001:2008

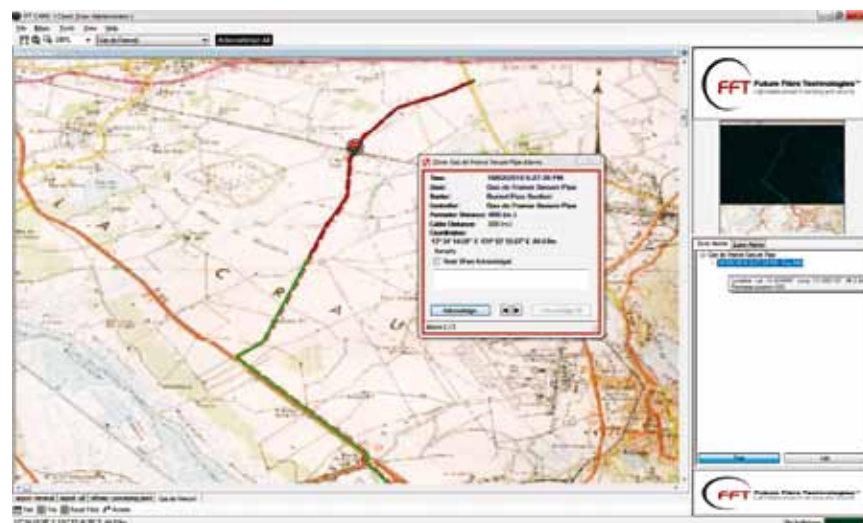
**The Right Products** – Designed and developed by FFT specifically for military and industrial applications

**Reliability** – All FFT systems come with a two year hardware and software warranty

**Support** – FFT has global support capability through our international offices

**Availability** – FFT has partners located around the world

**FFT Secure Pipe™ is the ultimate fiber optic pipeline intrusion detection and location system**



The operator interface is available in a range of languages including English, Arabic, French, Russian, Spanish, Japanese and Chinese.

## About FFT

With hundreds of major installations in some of the most hostile environments on the planet, FFT has the proven real-world experience to deliver highly reliable yet cost-effective intrusion detection and location solutions.

Future Fibre Technologies' business is totally focused on the security industry, and FFT is the world leader in the design and development of fiber optic sensing technologies for security applications.

FFT is the technology of choice for perimeter intrusion detection, network protection, and buried pipeline monitoring for TPI.





## Features

- Provides valuable real-time early warning of TPI activities
- A single system protects up to 40km (25 miles) of sensor cable
- Locate intrusions to within 150 meters or 500 feet
- Simple to understand, easy to use
- Low total cost of ownership (TCO)
- Two year warranty
- No electronics or power in the field
- Intrinsically safe

## FFT Secure Pipe™ Specifications

<b>Fiber Optic Sensor</b>	Can use existing dark single mode fibers if suitable, or FFT's custom direct burial single mode fiber optic sensor cable. Expected life > 20 years
<b>Sensing Configuration</b>	Distributed sensor with up to 40km or 25 miles of sensor cable protected per controller, total power budget of 25dB. Multiple systems can be networked to protect longer pipelines—up to thousands of kilometers
<b>Location Accuracy</b>	To within 150 meters (500ft) anywhere along the pipeline
<b>Operating Temperature Range</b>	FFT Sensor Cables: -30°C to +70°C (-22°F to +160°F)
<b>Controller Dimensions/Weight</b>	177mmH x 482mmW x 497mmD (7.0"H x 19.0"W x 19.6"D) Weight 24kg (53lbs), 19" rack mounted, 4U high
<b>Electrical Specifications</b>	Input voltage 110–240V AC, 50–60Hz, auto ranging, 160 watts consumption, redundant supplies. Optional 48V DC available Note: All field-installed components are passive and require no power, communications, or electronics on the pipeline
<b>System Interface</b>	TCP/IP via FFT CAMS™ (Central Alarm Monitoring System) software <ul style="list-style-type: none"><li>• Optional dry contacts</li><li>• Optional software development kit available to interface to a range of security management systems and devices including Lenel, Indigo Vision, Site IQ, Pelco, P2000 and more</li></ul>
<b>Alarm Monitoring</b>	Real-time distributed monitoring—provides an intuitive map-based operator GUI, and interfaces to CCTV systems, MODBUS, email systems, external SMS systems, lighting etc via TCP/IP
<b>Warranty</b>	Comprehensive two year warranty on hardware and software with on-going warranty extension program available for the life of the product
<b>Seasonal Calibration</b>	No seasonal calibration or adjustments required
<b>Zone Length &amp; Number</b>	Infinitely variable 'Virtual Zones' are created in the FFT CAMS™ software to suit specific site requirements



## ► Contact FFT

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