SENTINEL FOCUS^{NX}™ and SENTINEL FOCUS^{LX}™ represent the latest evolution of Perimeter Intrusion Detection Systems (PIDS) from Network Integrity Systems (NIS). These advanced systems feature state-of-the-art long-range fiber optic sensors powered by Distributed Acoustic Sensing (DAS), enabling them to detect, classify, and pinpoint the exact location of perimeter intrusions with unmatched accuracy.
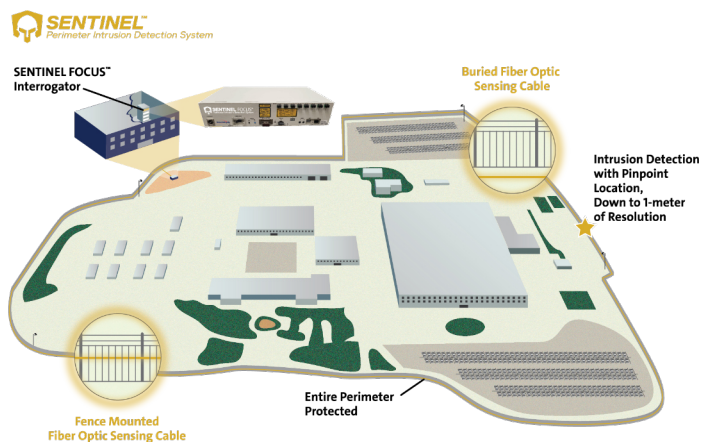
Proven in the most demanding environments, SENTINEL FOCUS solutions are actively deployed to safeguard highly classified U.S. Government facilities as well as critical infrastructure sites. By leveraging the unique properties of optical fiber, they provide an invisible, tamper-resistant sensing medium that offers full perimeter protection without introducing blind spots.

At the core of the system, a centrally located SENTINEL FOCUS interrogator transmits and receives light through optical fibers that can be covertly buried, fence-mounted, or wall-mounted along facility borders and perimeters. When physical disturbances occur—such as digging, climbing, cutting, or tampering—the resulting vibrations alter the light patterns within the fiber. The interrogator detects these changes and, through machine learning-based AI analytics, instantly classifies the event type while accurately identifying its location in real time. This allows security teams to respond quickly and decisively, minimizing risk and potential damage.

Two models are available to meet varying mission requirements:

- SENTINEL FOCUS^{LX} – Optimized for shorter distances, this cost-effective solution requires less processing power and is ideal for protecting smaller sites or facilities where perimeter lengths are more limited.

- SENTINEL FOCUS^{NX} – Designed for longer distances, this model provides greater processing power and expanded coverage, making it the preferred choice for large-scale installations where uninterrupted monitoring across extended perimeters is critical.

Together, FOCUS^{NX} and FOCUS^{LX} provide a scalable, flexible platform that enables organizations to select the right balance of coverage, performance, and cost for their specific security needs.

SENTINEL™
Perimeter Intrusion Detection System

SENTINEL FOCUS™ Interrogator

Buried Fiber Optic Sensing Cable

Intrusion Detection with Pinpoint Location, Down to 1-meter of Resolution

Entire Perimeter Protected

Fence Mounted Fiber Optic Sensing Cable

Network Integrity SYSTEMS

SENTINEL FOCUS™ Technical Specifications

	SENTINEL FOCUS[NX]	SENTINEL FOCUS[LX]
OPTICAL SPECIFICATIONS		
Optical Sensing Ports	E2000-PS APC	SC/APC
Optical Range (@6.4m gauge length)*	Up to 150km per port[1]	Up to 20km per port
Fiber Type	Single-mode - ITU-T G.652, G.654, or G.65 Multimode: ITU-T G.651.1, et al. (Range limited: ~8km)	
Optical Connection	E2000-PS APC	
Ports	1 or 2	
Maximum Loss Budget	32 dB	10 dB
Maximum back reflection	< 3%	
Maximum Attenuation	0.2 dB per km	
Operating Wavelength	1550.12 nm | 193,400 Ghz | ITU CH34	

ELECTRICAL		
Power Input	100-230 AC, 50/60 Hz or 24/48V DC	100-240V AC w/ 65W AC/DC Converter or 24 or 48V DC
Power Supplies	Dual Redundant	External
Operating Power (Typical)	110 Watts Nominal	40 Watts Nominal

ENVIRONMENTAL		
Operating Temperature	-5°C – +50°C	
Storage Temperature	-40°C – +70°C	
Operating Humidity	95% Non-Condensing	

PHYSICAL		
Rack Installation	19" x 3 Rack Units	19" x 1 Rack Unit
Dimensions (in - HxWxD)	5.22 x 19 x 18.5	1.75 x 19 x 11.6
Dimensions (mm - HxWxD)	132.5 x 482.6 x 471	44.5 x 483 x 296
Weight (lbs)	37	13.2
Weight (kg)	17	6
Mounting	4 post rack w/ sliding rails	2 post rack

REMOTE MANAGEMENT		
Network	Ethernet Small Form-factor Pluggble (SFP)	
Protocols	ZeroMQ API	

INDUSTRY CERTIFICATIONS		
Laser Safety	Class 1 LASER PRODUCT (IEC 60825-2014, 21CFR1040.10/11)	
Safety (UL)	USA: UL 62368-1; EU: CE compliant - 2014/35/EU	
EMC Compliance	USA: FCC 47 CFR Part 15 B; EU: CE Compliant - 2014/30/EU	

*Note-Range is dependent upon quality of fiber, local environment and the specific activity detection required.

For specifications on all other products and the Warranty and Support Program, please refer to our website at www.networkintegritysystems.com

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