

FiberPatrol® FP1150 Redundant Sensor Unit Configuration



The FiberPatrol® FP1150 fiber optic perimeter intrusion detection system provides highly effective security for critical infrastructure, correctional institutions, nuclear facilities, military bases, and sensitive government sites. To avoid leaving the perimeter unprotected in the event of a hardware failure, a redundant sensor unit (RSU) configuration is available. The RSU configuration includes a redundant sensor unit running in a hot standby mode. Combined with the FP1150's inherent cut-immune sensor cable configuration that continues to protect the full perimeter after a cable cut, Senstar's RSU configuration provides the highest system-level availability of any fiber optic detection system.

Sensor Unit Component Redundancies

Each FP1150 sensor unit is designed for long-term, reliable operation:

- Extended operating temperature range: 0 to 50 °C (32 to 122 °F)
- Solid-state, hot-swappable SSDs in a RAID1 configuration (ships with 2 drives, with space for a third)
- Redundant, hot-swappable power supplies (x2)



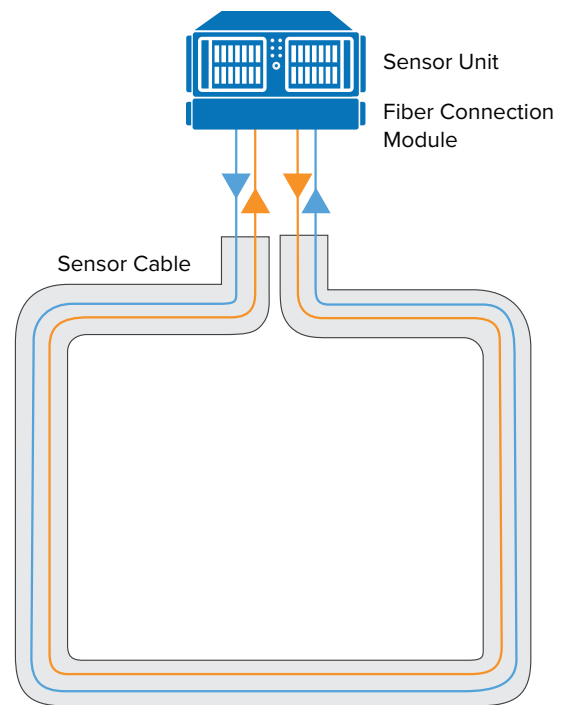
Hot-swappable SSDs (RAID1)



Two redundant, hot-swappable power supplies

Cut-Immune Sensor Configuration

When installed in the cut-immune configuration, the perimeter is protected by two fibers, each detecting in an opposite direction. In normal operation, the FP1150 correlates the disturbance signal from the two fibers and reports just one alarm. If the cable is cut, either accidentally or in an attempt to defeat the sensor, FiberPatrol FP1150 immediately reports the incident, including the exact cut location. Moreover, each of the two sensing fibers retains the ability to detect and localize intrusions up to the point of the cut, ensuring the sensor continues to provide detection on the full perimeter.



Cut-immune configuration
(two fibers activated within the same cable)

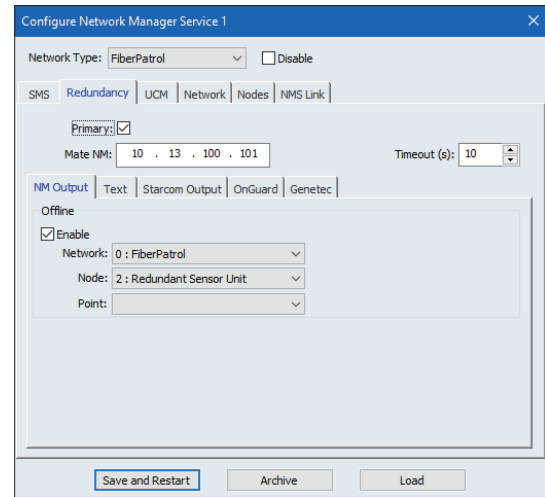
Sensor Unit Redundancy

The redundant sensor unit configuration maintains perimeter intrusion monitoring continuity in the case of a failure of one of the sensor units.

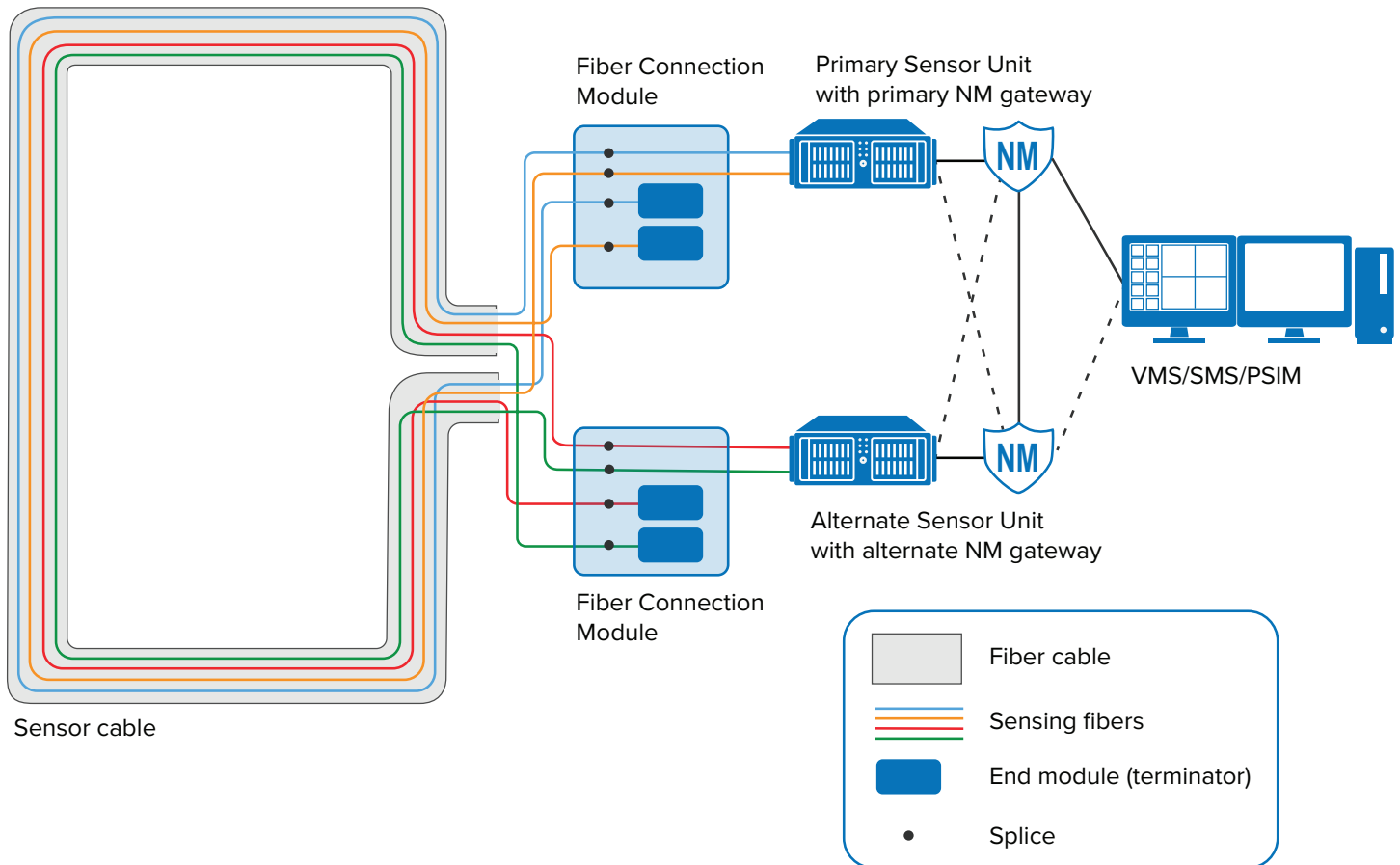
The redundant sensor unit configuration consists of two FP1150 sensor units, each running its own Network Manager software and sharing the same sensor cable (2 fibers per unit).

The Network Manager software supports redundant operation, so that any given time one instance is active while the other is in standby. If the active instance fails (for any reason), the standby instance becomes active.

To manage alarms from the sensor units, the Network Manager gateway software includes a virtual device (Redundant Sensor Unit, or RSU). The RSU virtual device consolidates alarms from the two sensor units and communicates with the Security Management System (SMS). The selection of alarm source (primary or alternate) is done on a zone-by-zone basis so that even a partially disabled FP1150 sensor unit will still contribute to overall system availability.



RSU configuration in Network Manager



Redundant sensor unit (RSU) configuration