



# N-Connex

## High-Speed Modular Network

**Wi-Fi Communications /  
Tracking / AMS / Data**



- **Lowest cost per installed mile**
- **Plug n' play high-speed modular network supports all Wi-Fi and Ethernet devices**
- **Easy to update / expand**

N-Connex is a simple, modular high-speed network designed for harsh environments such as underground metal/non-metal mines, tunnels, prep-plants and other heavy industries.

N-Connex delivers gigabit throughput speed which allows users to run data-hungry apps such as teleops, autonomous vehicles and video.

N-Connex is easy to maintain, repair and expand, and it doesn't require specially trained employees. Matrix is an authorized sales and service distributor of NLT N-Connex in the United States and Africa.

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

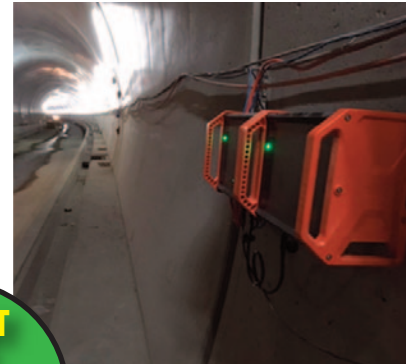


# N-Connex. High Speed. Highly Connected.

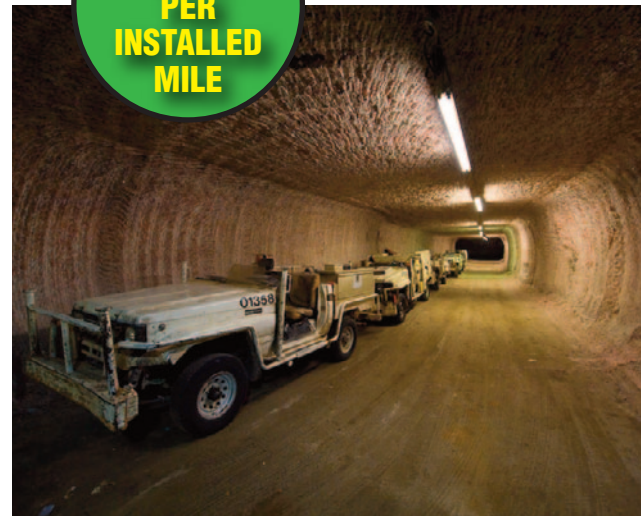
N-Connex (gigabit) uses a NLT mil-spec two-core fiber-optic cable for its high-speed network backbone. The system also works with other fiber combinations. Access to the network is provided by N-Connex Bolt access points and/or PoE ports on the core distribution module. The system is fully 802.11 compatible, so any Wi-Fi or Ethernet client can function over N-Connex.

N-Connex's IP67-rated modular system, featuring NLT's proprietary enclosures, is simple to install and maintain, and allows easy network expansion.

The N-Connex modules clip to the custom frame and connect via a Cat5 cable to the main distribution module. All devices support power over ethernet (PoE) connectivity.



**LOWEST  
COST  
PER  
INSTALLED  
MILE**



**N-Connex is the smart, integrated approach to industrial networking.**

- Voice Communications
- Personnel and Mobile Equipment Tracking
- Atmospheric / Environmental Monitoring
- Automation Control
- Data Networking
- Video



## NETWORK CONNECTIVITY

N-Connex is fully compatible with 802.3 and 802.11 standards and supports all Ethernet and Wi-Fi devices. NLT's modular solutions can be used over the N-Connex network, including:

- **Voice** – IP radio handsets and VoIP phones provide two-way voice communications.
- **Data** – Network connectivity allows access to intranets and the internet.
- **Video** – Critical areas can be visually monitored throughout your operation without slowing down your data flow.
- **Tracking** – Wi-Fi or RFID people and asset tracking.
- **Monitoring** – Observe ventilation, gas levels, environmental conditions and ground strata changes.
- **PLCs** – Ethernet connectivity fosters a nimble PLC network.



## MODULES OVERVIEW

**Distribution** Provides connectivity to a one-gigabyte fiber backbone via four fiber ports. Also includes eight managed PoE ports.

**Power** Converts 110/240 VAC to 48VDC which is used to power all other modules and remote PoE devices.

**Battery** Provides backup in the event of power failure with digital and analog input/output capability to control and monitor electrical equipment such as pumps or fans.

**Alarm** Siren and strobe combination also acts as an initiating point for emergency evacuation.

**Edge** Stand-alone network switch and access point eliminates the need for fiber, and can be used to provide fiber-free branches on the gigabit system. Edge provides 100mb backbone connectivity.

**Bolt** IP67 access point provides Wi-Fi connectivity throughout the mine, tunnel or industrial facility. The bolt also supports tracking firmware which enables personnel and asset tracking.

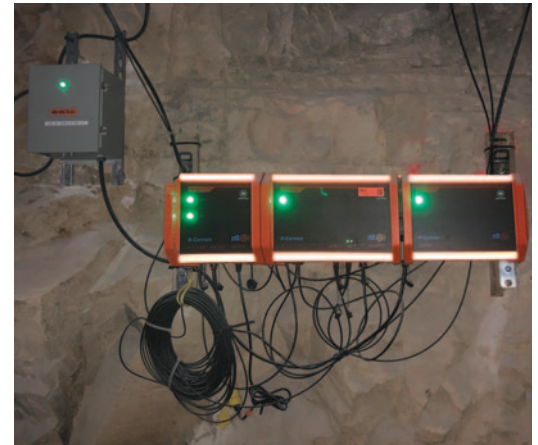
**Frame** Customized mounting frame supports all modules and allows easy installation and removal.



## N-Connex SPECIFICATIONS

Matrix is the safety and productivity technology leader for mining and heavy industrial applications.

Matrix is an ISO-certified manufacturer that specializes in delivering highly reliable, cost-effective fit-for-purpose products that deliver outstanding long-term value to our customers.



### STANDARDS

- IEEE 802.3 10Base-T Ethernet
- IEEE 802.3u 100Base-TX fast Ethernet
- IEEE 802.3ab 1000Base-T gigabit Ethernet
- IEEE 802.3z 1000Base-X gigabit Ethernet
- IEEE 802.3x flow control and back pressure

### INTERFACE

- 8 x 10/100/1000 Mbps RJ45 ports
- 4 x 1000/1000 Base SFP slots

### RJ45 PORTS

- Support straight or cross-wired cables
- 10/100/1000 Mbps speed auto-negotiation; full and half-duplex
- 1500 VRMS 1-minute Ethernet isolation

### ODC PORTS

- Support 100FX SFP transceiver
- Support 100/1000BaseT SFP transceiver
- ODC fiber bulkheads
- Typical 8 or 9/125 m for single mode (sm)

### OPERATING MODE

- Store and forward, L2 wire-speed/ non-blocking switching engine

### ENVIRONMENT

- Operating temperature: -20° to +55°
- Humidity: 5% to 95% RH (non-condensing)

### JUMBO FRAMES

- 9K Bytes

### FAST FAILOVER PROTECTION RINGS

- Link loss recovery <20ms
- Single & multipurpose rings supported

### SPANNING TREE PROTOCOL

- IEEE 802.1D STP, IEEE 802.1w RSTP, IEEE 802.1s MSTP

### MAX VLANS

- 256

### LLDP

- IEEE 802.1ab link layer discovery Protocol (LLDP)

### PRIORITY

- IEEE 802.1p QoS

### PoE MANAGEMENT

- Scheduling, power control, PoE PD power consumption

### INPUT VOLTAGE RANGE

- 46-57 VDC

### TOTAL PoE OUTPUT POWER

- 240W

### HOUSING

- IP67 protection

### DIMENSIONS

- 18"(L) x 10.2"(H) x 7.75"(D)

### WEIGHT

- 21.2lbs

### MAC ADDRESSES

- 8K

FOLLOW US!



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