



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 

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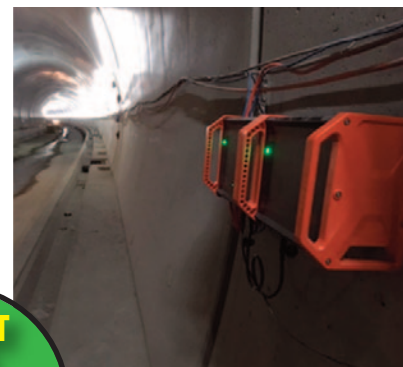


N-Connex. High Speed. Highly Connected.

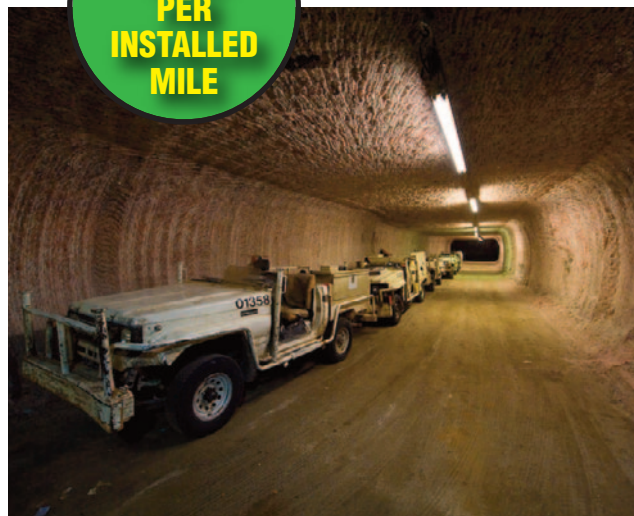
N-Connex (gigabit) uses a NLT mil-spec two-core fiber-optic cable for its high-speed network backbone. The system also works with other fiber combinations. Access to the network is provided by N-Connex Bolt access points and/or PoE ports on the core distribution module. The system is fully 802.11 compatible,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

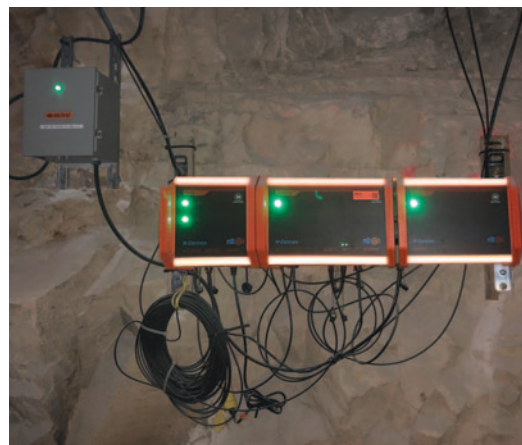
Frame Customized mounting frame supports all modules and allows easy installation and removal.



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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