



Productivity and Safety through
Mine-Spec digital applications

IMPACT

NS40 **intrinsically safe**
wireless network switch



Intrinsically Safe certified for underground coal mines

High bandwidth, low latency network backbone

Open standards for wired and wireless integration

Integrated VLAN and QoS for multi service applications

Rugged and mine-hardened enclosure

NS40 intrinsically safe wireless network switch

The Mine Site Technologies' (MST) intrinsically safe Wireless Network Switch is the heart of a scalable, high-speed, communications system for both underground and surface operations. Designed to cope with time-sensitive, high-bandwidth applications and enabling functionality such as VoIP, IP video streaming, control system management, mobile data acquisition, real-time vehicle diagnostics, and asset / personnel tracking right to the coal face. The IMPACT Wireless Network Switch provides a quantum leap forward from traditional technologies by delivering improvements in reliability, bandwidth, data quality, system capacity and support for open standards. It also addresses the challenge of power distribution in an underground environment.

SPECIFICATIONS

FIBRE PORTS

- 4 x 100BASE-FX single mode transceivers
- IP65 connectors

WIRELESS RADIO PORTS

- 2 x IEEE 802.11 b/g wireless access points
- Support for 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54 Mbps modes

Wireless Modulation

- CCK (802.11b)
- DSSS/OFDM (802.11g)

Transmit Power

- Max Approved 24dBm (251mW)

Receive Sensitivity

- 802.11b: 1 Mbps: -95dBm
11 Mbps: -90dBm
- 802.11g: 6 Mbps: -90dBm
54 Mbps: -74dBm

Wireless Security

- WEP (64/128 bit encryption)
- WPA
- WPA2

SWITCH PROCESSOR

- Wire speed switching
- Quality of Service (QoS) support with four traffic classes
- VLAN support

QoS Support

- IEEE 802.1p tagged Frames
- Automatic 802.1p tagging based on 802.1Q VLAN ID

Redundancy

- Spanning Tree Protocol

REMOTE MANAGEMENT

- Remote monitoring via SNMP
- NTP time synchronisation
- Device modes:
 - AP
 - Bridge
 - Repeater
- MAC Filter
- Web based device configuration
- Remote firmware upgrades via LAN
- MST device discovery protocol

CONNECTORS

- All connectors are IP65

I.S. APPROVED OPERATING PARAMETERS

- Input voltage: 8 - 15.1V DC
- Max input current: 1.5A DC
- Operating temperature: 0°C - 40°C
- Max operating humidity: 90%
- Dimensions: 410mm x 380mm x 80mm
- IP rating: IP65

CERTIFICATIONS

- IEC - Exia
- MSHA - Exia

CERTIFICATE NO.S

- IECEx TSA 10.0022X †
- 23-A100003-0

IEC ENTITIES †

Input Parameters		RF Output Parameters		Optical Output Parameters
Ui=15.1V	Ii=1.5A	Po=251mW		Po=0.158mW
Ci=0µF	Li=0µH	Uo=4.67V	Io=10A	
		Co=5µF	Lo=5µH	



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