MINE SITE TECHNOLOGIES

ImPact

The FUTURE of mining communications

Intrinsically Safe
Wireless Network Switch

Productivity and Safety through Mine-Spec digital applications

Remote monitoring and equipment control
Handeld and portable device data transfer
IP Telephony
Remote video, fixed and mobile

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I.S. Wireless Network Switch Specifications

The Mine Site Technologies 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.

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:
  - i AP
  - ii Bridge
  - iii 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	**Certificate No.s**
IEC - Exia	IECEx TSA 10.0022X †
MSHA - Exia	23-A100003-0

IEC Entities †

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

Mine Site Technologies PTY Limited.
www.minesite.com.au

SYDNEY
25 - 27 Whiting Street
Artarmon
NSW 2064 Australia
PO Box 156 Artarmon 1570
Tel: +61 2 9437 4399
Fax: +61 2 9437 5688
mst@minesite.com.au

PERTH
5/30 Adams Drive
Welshpool
WA 6106 Australia
Tel: +61 8 9472 1710
Fax: +61 8 9022 2311
mstwa@minesite.com.au

KALGOORLIE
17 Darcy Lane
West Kalgoorlie
WA 6430 Australia
PO Box 4200, Kalgoorlie 6430
Tel: +61 8 9022 2300
Fax: +61 8 9022 2311
mstwa@minesite.com.au

MOUNT ISA
15 Duke Street
Mt Isa
QLD 4825 Australia
PO Box 2436 Mt Isa 4825
Tel: +61 7 4749 4922
Fax: +61 7 4749 4933
mstisa@minesite.com.au

MACKAY
Unit 2
Terminus Business Park
20 Caterpillar Drive
Paget QLD 4740
Tel: +61 0447 230180
mst@minesite.com.au

MST offices also located in Sudbury, Canada and Denver, Pittsburg, Elko and Washington USA

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