



Driving Digital Transformation in Mining

AXONⁱ digital ecosystem



BUILT FOR UNDERGROUND

OPTIMISED POWER DISTRIBUTION

MODULAR, SCALABLE & FUTURE-READY

HIGH-BANDWIDTH EXTENDABLE NETWORK

SIMPLE & COST-EFFECTIVE TO DEPLOY

DESIGNED FOR AUTOMATION AND REMOTE CONTROL

MST's **AXON** platform is the foundation for building your **digital mine**

Built for harsh mining and tunnelling environments and developed with flexibility in mind, AXON is a modular, multifunctional platform designed to support existing and future wireless communication, tracking and automation technologies through high-bandwidth fibre.



AXONi core

MST's AXON core is one of the highest performing network platforms with speeds of up to 1Gbps enabling simultaneous voice, video, and data transmissions; and IoT, Cloud and Edge Computing applications to operate at maximum functionality at any scale.



AXONi air

MST's AXON air is a Wi-Fi access point designed with power and coverage in mind. It can be daisy-chained via its 1Gbps PoE+ port to provide dual-frequency Wi-Fi coverage in hard to access locations such as declines, work shops and last mile connectivity. The most simple and affordable way to connect your mine using Ethernet cable.

AXONi: Building your **digital ecosystem**

Connecting your mine to the **future**

MST's innovative, all-in-one AXON solution comprising both hardware and software optimally supports your productivity and safety initiatives delivering a higher return on investment than any other system.

AXON provides the two-way connectivity needed to acquire and leverage the power of big data and software management systems to enable the optimization of underground operations in real-time.

The AXON range includes the option to add specialized distributed edge computing modules. These modules, accompanied by Control and Automation software, provide seamlessly integrated solutions for controlling processes, such as activating pumps, ventilation or traffic management.

The modules are also designed to manage and integrate IoT sensors for next generation SCADA-like applications.

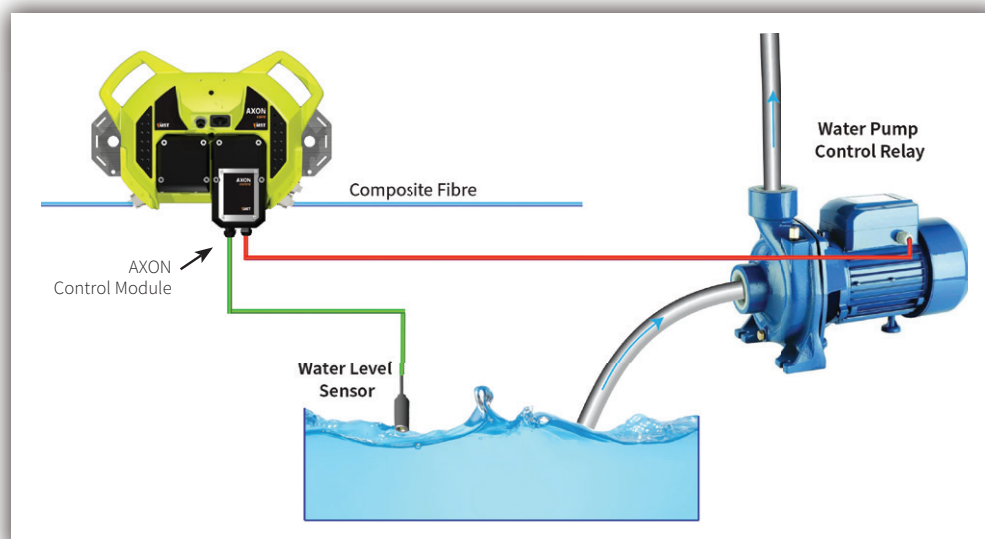
AXON core allows for future wireless communication and tracking technologies to be adopted as they mature or become available. For example LTE/4G/5G, LORA or other 3rd party proprietary technologies.

The capability of the AXON platform is further enhanced by the powerful and versatile Microsoft Azure which allows a variety of MST and IoT applications to operate.

Applications

- Traffic Management Systems
- Tag Reading & Geo-location
- Personnel & Asset Tracking
- LTE/5G Connectivity
- Fleet & Asset Management
- Secure VoIP Communication
- Remote IP Video & Data Transfer
- Control Automation

AXON Modules - An example of a control and automation pump solution with simple set up using MST's plug in Control module. Edge computing made easy.



Designed for communications, tracking & automation



AXON infrastructure - A platform designed for supporting the many devices and applications required in the digital mine.

AXON CORE - NETWORK PLATFORM

- Operates from 20 - 60 Volts DC
- 3 x 1Gbps Optic Fibre + Power ports
- 4 x 1Gbps PoE+ ports
- IP65 rated
- Combined PoE+ power output 120W
- Semi-skilled labor installation
- Support for VLANs, SNMP, RSTP, MSTP, LLDP & QoS management
- LED indicators for power, and PoE, fibre, and radio port status



AXON AIR - ACCESS POINT

- Easily deployable PoE+ wireless access point
- 1 x 802.11 a/b/g/n Wi-Fi 4 radio, with 802.11s meshing
- IP65 rated
- Up to 3 units can be daisy chained via 100m CAT5 cable with 1Gbps data
- Multiple antenna options
- Semi-skilled labour installation
- Low power consumption
- 2x2 MIMO



COMPOSITE CABLE

- Composite fibre and power cable
- 2 core single mode fibre cable, 2 core power
- Pre-terminated (no underground termination required)



AXON EXPANSION MODULES

- Independent modules for power management, control automation and other edge computing capabilities including digital and analogue I/O.
- Lora, Bluetooth, LTE technologies ready
- Easily installed and maintained
- Cost-effective solution



Connecting your mine to the future.

Contact your local office today.

www.mstglobal.com
solutions@mstglobal.com

Australia
Sydney
Tel: +61 (0)2 9491 6500

United States
Denver
Tel: +1 303 951 0570

United States
Tucson
Tel: +1 520 495 0185

Chile
Santiago
Tel: +56 9 7772 3819

Russia
Moscow
Tel: +7 (499) 978 72 11

South Africa
Centurion
Tel: +27 (0) 12 345 6100

China
Hangzhou
Tel: +86 571 8580 3320 Ext 206