

DigitalBRIDGE™

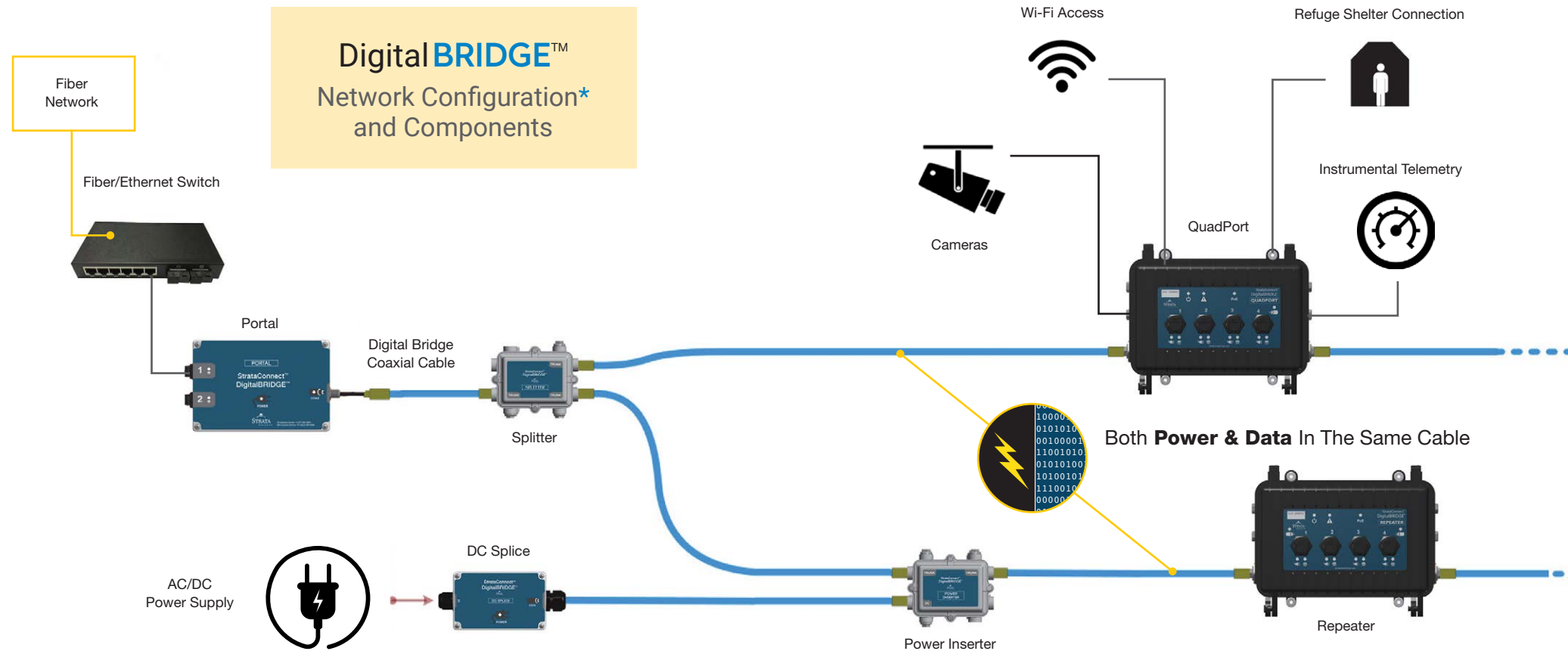
Bridging Power & Data to the Edges of your Mine



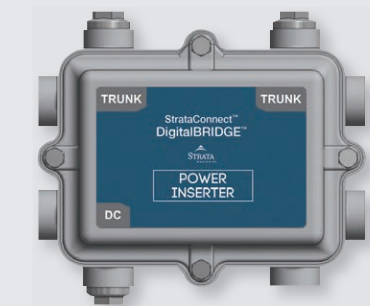
POINT-TO-MULTIPOINT PoE DISTRIBUTION



SPEEDS AND FUNCTIONALITY OF FIBER WITH THE SIMPLICITY OF COAX



*This network diagram is for illustrative purposes only. Networks can be configured many ways and are completely customizable.



COMPONENTS:

- **Portal** - Bridge between the existing network and DigitalBRIDGE.
- **QuadPort** - Four (4) Power-over-Ethernet (PoE) ports to supply power and data backhaul for the inclusion of PoE field devices.
- **Power Inserter** - Places DC power onto the coaxial cable for operation of system components and field devices.
- **Repeater** - Digitally regenerates the data signal enabling cable segments to be extended indefinitely.
- **DC Splice** - Adapts regular DC power cable to coaxial cable format. Protects the power supply from short circuits and excessive voltage.
- **Splitter** - Evenly divides the coaxial cable so the system can proceed down multiple headings.

SPECIFICATIONS:

PoE Cable:

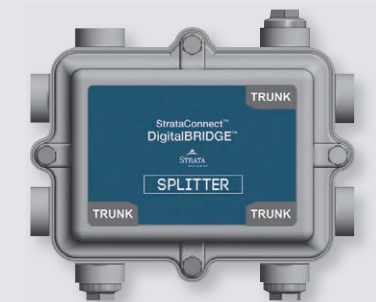
- Low Smoke Zero Halogen (LSZH) sheathing designed for underground applications
- Flooded cable for reliable long term operation in wet or in humid environments
- Ultra-low resistance cable (ULR)
- Transient protection

Connectivity 10/100/1000 Ethernet

- VLAN & QoS Support
- LLDP / CDP
- AVB / PTP Support

Power

- PoE & PoE+
- Direct Current (DC): 24 to 60 volts DC



POINT-TO-MULTIPOINT PoE DISTRIBUTION

StrataConnect DigitalBRIDGE™ is a point-to-multipoint Power-over-Ethernet (PoE) network for transmitting large amounts of data underground quickly.

It delivers both power and Ethernet data over a single coaxial cable and is an ideal solution for extending fiber or splitting the network into multiple directions.

Power and Connectivity where you need it, when you need it.

DigitalBRIDGE™ can be used for Internet-of-Things (IoT) networking, Voice-over-IP (VoIP) communications, Wi-Fi access, video, tracking, tele-remote and more.

It is simple to install and maintain, and network management can be completed by on-site personnel, without the need for specialized technicians. Utilizing off-the-shelf tools and standard procedures, personnel can cut and splice the coax cable to install or remove PoE field devices anywhere along the network.

DC Power is inserted into the cable and travels in both directions to power all devices connected to the network.

CAPABILITIES	BENEFITS
<ul style="list-style-type: none"> • Wi-Fi access • Voice communication • Environmental monitoring and remote control (pumps, fans, sensors) • Gas detection • Video surveillance • Tele-remote operation • Fleet management and health monitoring • Refuge shelter connectivity for real-time monitoring and communication • Cisco Discovery Protocol (CDP) Support 	<ul style="list-style-type: none"> • Power and data in single cable • Fiber speeds with the simplicity of coax* • Flexible and changeable cable lengths – no premium for short runs • Up to 6500 feet (2000m) without a repeater or dedicated power source • Power injected at any point and travels in both directions • Flexible placement of end-point devices along the cable • Simple to reconfigure layout and change end-point device locations • Not proprietary to specific brands of field devices • No need for specialized technicians – fully manageable by on-site personnel • Save time in basic planning, easy installation and low maintenance • Fully recoverable <p><small>* Up to 1 Gbps physical layer speed; typical end-to-end TCP throughput = 400-700 Mbps</small></p>



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