



# **HIVE-MESH Overview**

February 2022



#### Who we are



SIMBIO IOT

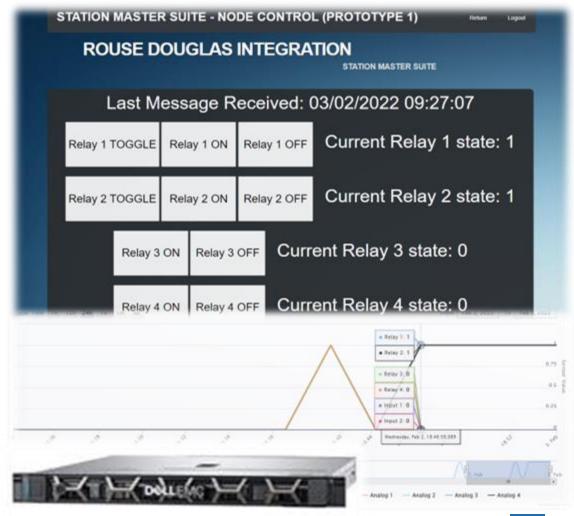
- We are a spin-up not a start-up
- Mining industry practical expertise with software development skills
- Long term team (internal and external) together for over six years
- Network Infrastructure for Underground mining operations to allow monitoring, control and connectivity
- Product development can now be ramped up as other customers come on board

### **HIVE-MASTER**



DIGITAL T E R R A I N

- Master Node for communication to the HIVE-MESH Network
- RDI-SMS (Station Master Suite with HIVE-MASTER addition)
- Real time Node monitoring and Control through Web Interface
- Capable of Automation control based on events
- Capable of Modbus integration for Node control and monitoring
- Logging of Node input and relay state for analytics



### **HIVE-NODE Network**





- Self Meshing and Self Healing network
- Real-time monitoring and control of connected Node devices
- Easy to install Plug and Play to existing Fan Starters and Pump Starters
- Integration with RDI-SMS HIVE-MASTER
- Long range meshing capabilities 5KM LOS between Nodes for LR Variant, 500M LOS between WiFi Nodes with Local Hotspot for web control
- Integration to Modbus via RDI-SMS HIVE Master
- Competitively priced per unit



#### **HIVE-NODE Features**



Internet



- 12-72VDC (7-40VAC) Input Voltage
- Up to 4 Isolated relay contacts (NO/NC or Both)
- Up to 4 Analog Inputs (up to 33V DC or 24V AC)
- Up to 4 Digital Inputs (up to 50V DC or 24V AC)
- IP66 Enclosure
- 5KM LR LOS Meshing (500M LOS for WiFi **Hotspot Nodes**)
- Plug and Play
- Self Healing Mesh Network
- Ability to turn most Fan Starters/Pump Starters and more into Automated and Networked devices



## **HIVE-NODE Road Map**





- Temperature and Humidity HIVE-NODE for remote sensors
- Gas Sensor HIVE-NODE for remote sensors
- Dust Particulate HIVE-NODE for remote sensors
- Analog Output and Digital Output HIVE-NODE for control of Ventilation Louvers
- SIMBIO IoT direct Integration in 2022
- WiFi NAT Internet Access Hotspot on each HIVE-NODE



