TELEMETRY

COMMUNICATION TRACKING

SENSORS

WIRELESS ACCESS

STRATACONNECT WIRELESS
Miner Communicator
Second Generation
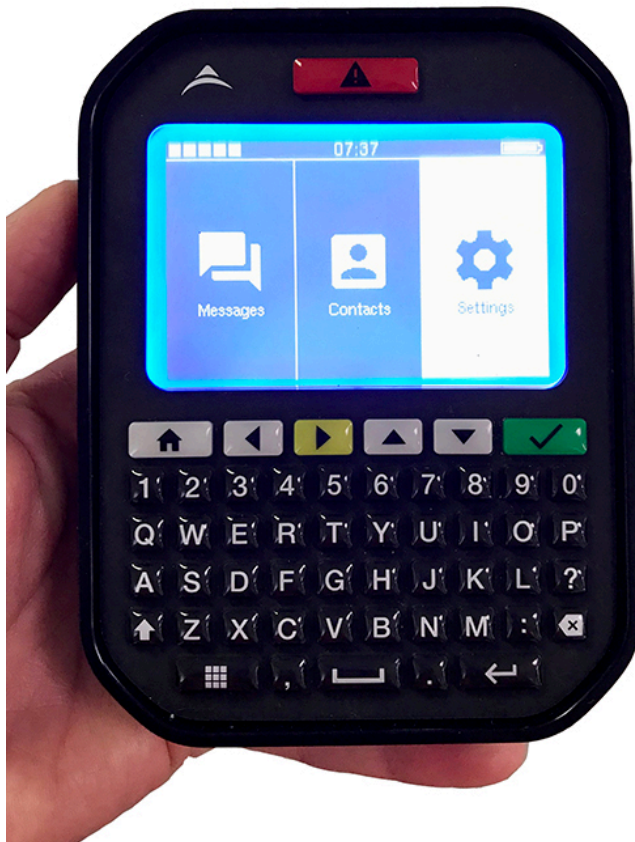
STRATA
WORLDWIDE

StrataConnect™ WIRELESS

Simple. Versatile. Cost Effective.

Wireless and Battery-Powered Communications, Tracking, Remote Monitoring and Control

- **Tracking & Alerts –** Miner Communicator (MC2), hardhat Tracking Tag and Asset Tracker
  - Personnel Tracking
  - Equipment Tracking
- **Wireless Monitoring -** Strata supplied and third-party devices
  - Atmospheric monitoring - air flow, temperatures, humidity, pressure
  - Gas detection – Choice range of gas sensors. CO detection along belt lines
  - Belt drive and belt-line monitoring
- **Remote Control/Command:**
  - Ability to remotely control underground sensors, devices and PLC units.
    - Fans, pumps, floats, gas detectors and belt controllers

The StrataConnect™ MC2 is an Intrinsically Safe, rechargeable battery-powered communication and tracking device that operates on Strata's wireless mesh network.

- Peer-to-peer and group text messaging

- Broadcast alerts

- Access to a full and automatically updating contact list

- Data storage for up to 500 messages

- The ability to reference the location of other individuals underground

Personnel tracking is accurate to within 60m / 200ft whenever in the network coverage area.

Critical alert and response capabilities enable workers to notify others in the event of an emergency, as well as send updates on their own personal status.

- Designed to bridge the gap between StrataConnect Wireless and networked systems that offer Voice

- With the age demographic shifting in mining, text messaging is the preferred platform for communication. Most people communicate via text messaging on cell phones in daily life

- Noise levels underground can make it difficult to hear incoming calls and voice conversations

- Moving to a quieter location takes time and interrupts workflow.

- Dead spots in voice coverage are common and moving locations takes time and interrupts workflow

Tracking Performance	Location within 60m / 200ft mine-wide
Latency	Less than 5 seconds
Range	Approx. 455m / 1,500ft from node
Weight	400 grams / 14.1oz
Dimensions	125 x 96 x 29mm / 4.92 x 3.78 x 1.14in
Housing Material	Copolyester
Wireless Frequency	915MHz (configured from 902-928MHz)
Alarm Output	Green & Red LEDs + Sounder
Temperature Range	-10°C to +40°C / -4°F to 104°F
Supply Voltage	3.7V Li-Ion rechargeable battery
Battery Duration	30 Hours – typical
Charge Time	6 hours
Battery Life Expectancy	Recommended replacement every 2-3 years
Transmit Power	+27dBm
IP Rating	IP67

Press
Home
Twice

Press
OK or
Return

Highlight conversation
Press OK or Return

- When a normal text message is received the MC2:
  - Flashes Green LEDs and beep sounder 3 times
  - 3 Green LED flashes repeat every 7 seconds without sounder
  - Flash Green LEDs and beep sounder 3 times every 5 minutes

- When emergency broadcast is received the MC2:
  - Flashed Red LEDs 3 times and beep sounder while LEDs flash
  - LED flashing and beeping of sounder repeats every 7 seconds until miner responds to message
- Green, Yellow, and Red keys used to respond to message

The MC2 features a contact list of all employees, similar to Contacts on a cellular phone.

- List can be automatically updated/synchronized with the server when placed in the charging dock
- List can be manually loaded and updated via the serial port

To locate username in Contact list,
use navigation keys to
Highlight magnify glass
Press Ok or Return

Search by typing first letters of contact name
Use navigation arrows to select
Press Ok or Return

- The Last Location function under Contacts triggers an automated location search of the contact underground
  - Formatted text message sent to server
  - Server looks up location of miner
  - Server sends text message back to MC2 with name of strongest CommNode from last location message
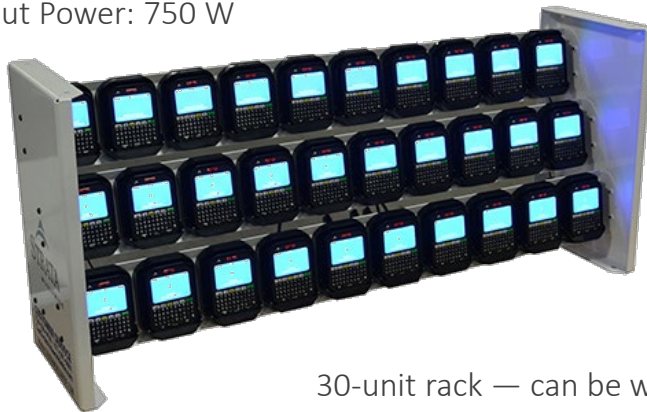
- MC2 displays miner name on charging screen
- Lightning bolt indicates when battery is charging
- Message displayed if MC2 detected in charging cup but battery not charging

MC2 Smart Chargers

- Support synchronization of time, contacts, configuration and firmware via Wi-Fi
- Automatic shut-off when individual units are fully charged
- Optimized for Lithium-ion batteries — Extends useful life of the batteries
- Provides fast charge time — 4 to 6 hours
- AC Input Voltage: 100 – 240 VAC
- Max Input Power: 750 W

30-unit rack — can be wall mounted or free-standing with base

100-unit rack — free-standing with base

Thank you.

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