ACKCIO REPEATER NODE

Code : N635



- The Ackcio BEAM-RN is a wireless repeater node designed to extend and strengthen the communication coverage within Ackcio's Mesh Network for remote monitoring systems.
- It acts as a non-sensing relay unit that retransmits data between Ackcio nodes and gateways, ensuring uninterrupted and stable network connectivity across large or obstructed monitoring sites.
- The BEAM-RN is built around Ackcio's proprietary low-power Ackcio Mesh protocol, which enables long-range, self-healing, and encrypted wireless communication across up to 12 hops and 50 nodes.
- Featuring high RF performance and up to 1 W (30 dBm) transmit power, the node provides line-of-sight communication up to 5 km, urban coverage up to 1 km, and underground range up to 500 m.
- Constructed with a die-cast aluminium IP67-rated enclosure, the BEAM-RN is engineered for durability and continuous operation in harsh environmental conditions.
- The device operates on two high-capacity Li-$SOCl_2$ D-cell batteries, providing up to 24 months of autonomous service with minimal maintenance.

- Configuration and monitoring are managed through the Ackcio Nimbus Android app, which allows rapid setup, signal diagnostics, and network management.
- The BEAM-RN includes comprehensive surge, short-circuit, and reverse-polarity protection to ensure reliable long-term performance in demanding field applications.
- A small multi-purpose mounting bracket is provided for easy installation on vertical, horizontal, or pole-mounted surfaces.

TECHNICAL SPECIFICATIONS

g;C, resolution 0.01 °C, accuracy ±1.8 °C

- Barometer: 300 – 1100 hPa, resolution 0.18 Pa, accuracy ±1.7 hPa
- Radio Band: ISM 863–870 MHz / 902–928 MHz
- Transmit Power: Up to 1 W (30 dBm)
- Modulation: 2-GFSK
- Data Rate: 50 kbps
- Network Capacity: Up to 50 nodes, 12 hops
- Range: 5 km (line-of-sight), 1 km (urban), 500 m (underground)
- Supply Voltage: 2.7–4 V DC
- Internal Batteries: 2 × D-cell Li-$SOCl_2$ 3.6 V, 19 Ah each
- Typical Battery Life: 24 months
- Typical Current Drain: <20 µA (idle), <100 mA (RX), <300 mA (TX)
- Operating Temperature: −40 °C to +80 °C
- Enclosure: Die-cast aluminium, IP67 rated
- Circuit Protection: Surge (60 V DC breakdown), impulse (500 V typical), reverse polarity, short-circuit, ESD 15 kV
- Interfaces: USB 2.0 (Micro B, 5 V, 500 mA), LEDs (SYS), buttons (TEST, RESET)
- Firmware: Ackcio Mesh low-power networking firmware
- Software: Ackcio Nimbus Android setup and monitoring app

ORDERING INFORMATION

To be added soon ...

OTHER PHOTOS



