RadioBee R25

This RadioBee Wireless provides a common platform for a transparent conversion of automation protocols serial RS485 bus. It smoothly integrates into the existing field networks in Plant with both wired and wireless network standards.

RadioBee is configured and diagnosed by a dedicated configuration tool (XCTU) RadioBee. LED indicators reveal the status information for Power & Bus Communication. The protocol conversions are pre-programmed and loaded as dedicated firmware into the device. RadioBee delivers wireless connectivity to electronic devices through advanced mesh network. It provides wireless connectivity to replacing existing wired RS485 network of the sensors, controllers and other Serial devices. It works both as a Router and a Co-ordinator/Aggregator/Master.

FEATURES

- Number of Ports: 1 RS485 (Wired) & 1 ZigBee (Wireless)
- ZigBee Topology: Point-Point/Point-Multipoint/Mesh
  Router/Co-ordinator/Aggregator/Master/
  Slave configuration through (Co-ordinator/Master)
- Wireless range extension possible through router

APPLICATION

- Data sharing between PLC, DCS, Controllers, Inverters and other network devices
- Operator Interfaces
- Industrial / Factory / Process/Building Automation
- Intelligent Field Sensors and Actuators Communication
- Solar String / Environmental Monitoring

TECHNICAL SPECIFICATIONS

Function

RF Data Rate: 250 kbps
Indoor Range: 20 to 100 meter typically
Transmit Power: 63 mW (+18 dBm)
Receiver Sensitivity: -101 dBm
Outdoor Range: 3000 meter typically (Line of sight) without Obstacles

Wireless

Network Topologies: Point-to-point, Point-to-multipoint, Mesh
Operating Channels: 11 to 26
Protocol supported: DigiMesh
Spread Spectrum: Type Direct Sequence
Filtration Options: PAN ID, 64-bit MAC

Structural

Dimension (in mm): 70(L) x 45(B) x 20(H)
Enclosure material: ABS
Enclosure protection: IP20
Mounting: Wall mount

Features

Frequency Band: ISM 2.4 GHz
Working Mode: Can work as Router and Coordinator
Antenna: Dipole pluggable 2.1 dBi (3 meter Extension Antenna Cable can be provided optionally)
Serial Data Interface: RS485 (can connect to any third Party RS485 Network)

Power Supply

Voltage: 24 V DC
Power consumption: 3W

Sustainability

Ambient temperature: 0 to 60°C
Storage temperature: -10 to 70°C
Humidity: 30% to 95% RH (Non-Condensing)

NOMENCLATURE

Model	Input	Channel	Range (Km)	Extension Cable
R25-XX	**A-** Analog Input **D-** Digital Input **C-** Rs485 **I-** IO	**2-** 2Ch **4-** 4Ch **8-** 8Ch **0-** Communication	**1 -** <=1 **2 -** <=3 **3 -** <=5	**A -** 2 Meters **B -** 10 Meters **C -** 20 Meters

ARCHITECTURE

R25
Monitoring software
PC
RadioBee R25
RS485
RadioBee R25
RS485
AI
DI
PLC CONTROLLER
Analog / Digital
Input / Output Module