

## Wireless Mesh Modbus Extender

- Modbus RTU extender with sub-1 GHz long range wireless mesh communication (RIIM protocol)
- Long range (outdoor up to 6 km LOS, indoor typically 150-250 meters)
- Mesh functionality multiplies range up to 28x
- DIN rail housing for easy installation
- Connection to both Modbus client and Modbus server (Master/Slave)
- Support up to 32 servers (slaves)
- Connect up to 1000 sub-meters to Energy Manager with MQTT integration
- Support low-latency control for applications such as load control, grid feed-in, EV charging and solar applications
- FCC approved module option for integration

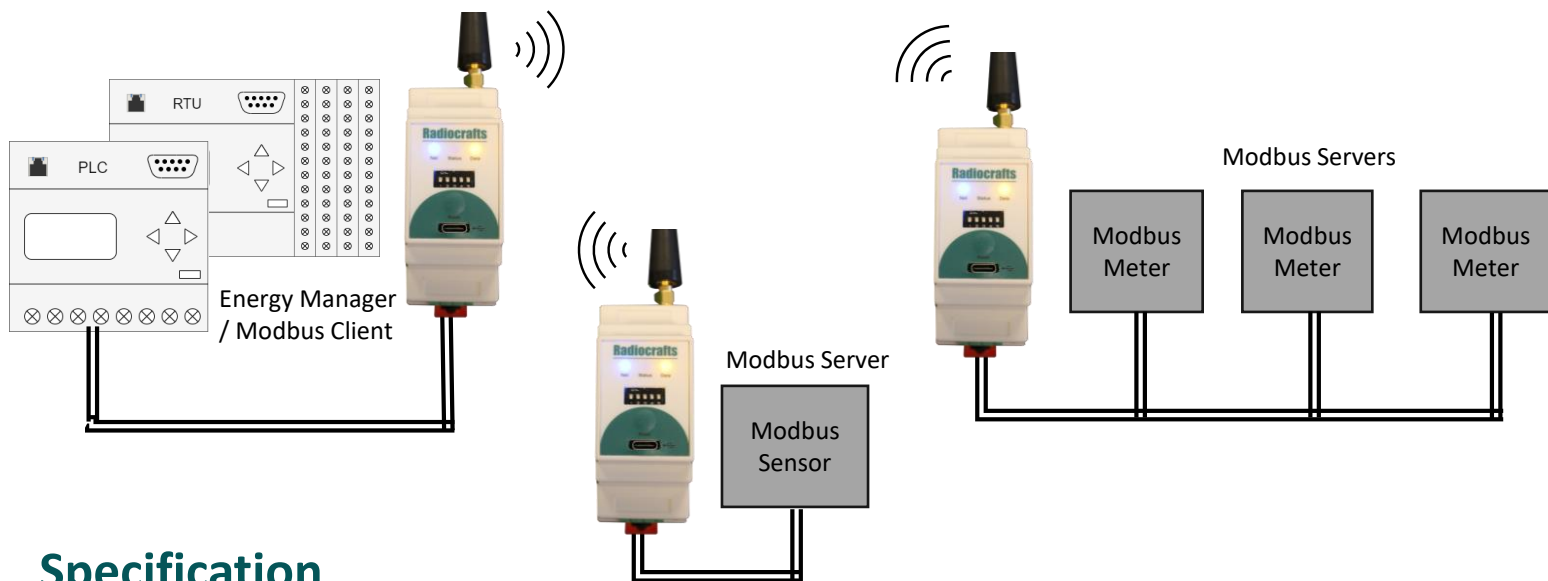


### Benefits

- Installation and commissioning in minutes
- Remove hours of cable installations
- Ultra-reliable low latency communication
- Customizable (firmware or hardware)
- Firmware upgrade and setup possible via USB
- Support over-the-air (OTA) firmware upgrades
- State-of-the-art sub-1 GHz wireless mesh protocol

### Future options

- Modbus to IPv6/MQTT
- Modbus to IPv6, UDP, CoAP
- Edge intelligence
  - Examples
    - Readout Modbus meter every minute and only report wirelessly with average per hour
    - Readout Modbus sensor every 10 seconds and only report to central unit if above/below threshold



## Specification

| Parameter                        | Min | Typ              | Max                  | Unit                | Comment                                |
|----------------------------------|-----|------------------|----------------------|---------------------|--|
| Power Supply DC                  | 12  |                  | 24                   | V                   |  |
| Power Supply AC                  |     | 24               |                      | V                   |  |
| Power Consumption                |     |                  | 3                    | W                   |  |
| Output Power                     |     | 14<br>27<br>27   |                      | dBm                 | RC2028<br>RC2038HP-915<br>RC2038HP-868 |
| Range (Line-of-Sight)            |     |                  | 1500<br>6000<br>6000 | meters              | RC2028<br>RC2038HP-915<br>RC2038HP-868 |
| Range (Indoor)                   |     | 60<br>250<br>250 |                      | meters              | RC2028<br>RC2038HP-915<br>RC2038HP-868 |
| Solid Cable Rating, Connector    | 0.2 |                  | 1.5                  | mm <sup>2</sup>     |  |
| Stranded Cable Rating, Connector | 0.2 |                  | 1.5                  | mm <sup>2</sup>     |  |
| Conductor Sizes (AWG)            | 16  |                  | 24                   |                     |  |
| IP Class                         |     |                  |                      | 20                  |  |
| Dimensions (W x H x D)           |     |                  |                      | 35.6 x 93 x 58.7 mm |  |

### Ordering numbers

- RC2038 Operates at both 868 MHz and 915 MHz
- RC2038HP-915 Operates at 915 MHz, Extended range with 500mW output power. US/FCC
- RC2038HP-868 Operates at 868 MHz, Extended range with 500mW output power. EU/CE