

FOR METERING, SMART STREET LIGHTING AND OTHER APPLICATIONS

Tinymesh

CONNECT · COMMUNICATE · CONTROL

Tinymesh Radiocrafts India (TMRCI) is a global supplier of wireless modules, protocol stack and cloud services for Smart Metering, Smart Street Lighting & Smart Cities. With field-proven technology and more than 8 years of experience, we are the market leader in low-power embedded wireless communication for Industrial IoT applications.

APPLICATIONS

Strategic Focus Areas

- ▶ Smart Energy Meters
- ▶ Smart Street Lights
- ▶ Smart Water Meters
- ▶ Smart Gas Meters
- ▶ Smart Buildings
- ▶ Industrial M2M
- ▶ Wireless Sensor Network
- ▶ Surveillance Applications
- ▶ Smart City Applications

Smart Energy Meters



Smart Energy Meters are electronic devices that record consumption of electric energy and communicate the information to the electricity supplier for monitoring, control, billing and data analysis.

Smart Street Lighting



Smart Street Lighting is designed for energy efficiency; which includes high efficiency fixtures, continuous monitoring, dimming and automated controls.

Tinymesh



Why Choose Us?

- ▶ Uncomplicated: Shortest possible in-design time
- ▶ Easy to integrate with long range connectivity
- ▶ Manufactured in India; INR billing support
- ▶ Support by local technical design & field team
- ▶ Operate anywhere in license free band
- ▶ Proven at scale: more than 1 million Tinymesh based energy meters deployed in India
- ▶ Option to customize plug-in board

TM4070 Mesh Plug-in Board

TM4070-000 -Size: 33x55mm (21-pin Through Hole)

TM4070-210 -Size: 22x35mm (12-pin Through Hole)

TM4070-310 -Size: 19x36mm (16-pin SMT)

- ▶ Supports Tinymesh networking and application stack
- ▶ Self-forming, self-healing and self-optimizing
- ▶ Supports broadcast as well as individual addressing
- ▶ Selectable mode: gateway, router or end point
- ▶ Mesh - RPL type routing with multiple gateway support
- ▶ Up to 8 GPIOs; Analog, digital and pulse counter inputs; dimmer and digital output
- ▶ Power Supply Tx: 37 mA, Rx: 24 mA, sleep: 0.3 uA
- ▶ Supply voltage 2.0V- 3.6V
- ▶ Tx Power: Up to 11dBm
- ▶ Listen before talk (EN 300 220-2)
- ▶ Provision for RSSI and connect LED for deployment assistance; AES 128 encryption
- ▶ Serial Port, 256-byte buffer, hardware or software handshake
- ▶ IEEE 802.15.4.g compatible PHY mode

Tinymesh Cloud

- ▶ Open source, REST API for application development
- ▶ Mesh connectors for GPRS, Ethernet, UNIX, Windows, Apple
- ▶ On-line workbench for remote configuration and support
- ▶ Supports redundancy, retry, buffering and data storage
- ▶ Built in end-to-end security



TM4170 Point-to-Point Plug-in Board

TM4170-000 -Size: 33x55mm (21-pin Through Hole)

TM4170-210 -Size: 22x35mm (12-pin Through Hole)

TM4170-310 -Size: 19x36mm (16-pin SMT)

- ▶ Supports Tinymesh Point-to-Point & application stack
- ▶ Up to 8 GPIOs; Analog, digital and pulse counter inputs; dimmer and digital output
- ▶ Power Supply Tx: 37 mA, Rx: 24 mA, sleep: 0.3 uA
- ▶ Supply voltage 2.0V - 3.6V
- ▶ Tx Power: Up to 11dBm
- ▶ Serial Port, 256-byte buffer, hardware or software handshake
- ▶ 802.15.4.g compatible PHY mode

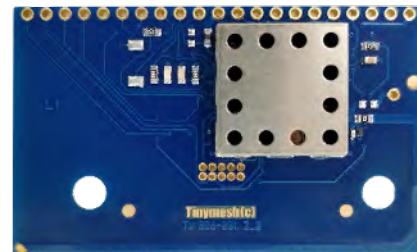
Unique Technology Features

- ▶ Ready to use plug-in board
- ▶ Performance optimized on-board PCB antenna
- ▶ RF frequency - License free 865-867, 868-870 or 902-927 MHz
- ▶ No external components required
- ▶ Clustered node detection
- ▶ Network congestion avoidance
- ▶ RF tamper detection and alarm
- ▶ Network busy detection for ad-hoc Gateways (CMRI)
- ▶ Immunity support for 35kV and jammer test
- ▶ Wireless OTA configuration
- ▶ AES 128 encryption
- ▶ Link level and application level acknowledgement

TM4670 TinySix Plug-in Board

TM4670-210 -Size: 22x35mm (14-pin Through Hole)

- ▶ Supports TinySix 6LoWPAN stack
- ▶ IS16444 compliant network communication board
- ▶ Power Supply Tx: 24 mA, Rx: 5.4mA,
- ▶ AES 128 Encryption, supports multiple keys
- ▶ Supply voltage 1.8V-3.8V and Tx Power is Upto 14 dBm
- ▶ Upcoming variant with FOTA and CoAP support



Tinymesh RF Plug-in Board

Tinymesh

EASIER & SMARTER

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