A multi-frequency and multi-protocol application platform

Designed for system integrators and manufacturers, Honeywell LPWAN Platform represents the latest generation of wireless OEM platforms, offering a simple and cost-effective solution to integrate standard protocol Wireless M-Bus, ultra-long range protocol LoRaWAN™, Wavenis and Sigfox™, with low-power reliability into your innovative applications in record time.

This enables Honeywell LPWAN Platform to serve numerous market sectors, covering everything from home automation to smart buildings and telemetry. Implemented as a smart Wireless modem, Honeywell LPWAN Platform is able to be controlled by your own host and provides a seamless wireless and GPIO interface for your applications. It could also work in an autonomous mode to directly control your electronics and sensor devices.

Features

- Compact Module: 15 mm x 27 mm x 4 mm

- Use as SMT component

- Multi-band : 169 – 429 – 433 – 868 – 915 MHz

- True 3 RF multi-band port

- Multi-protocol: Wavenis™, Wavenis™ LoRa®, LoRaWAN™, Wireless M-Bus, Sigfox™

- Ultra-low operating consumption and long life time

- RoHS compliant

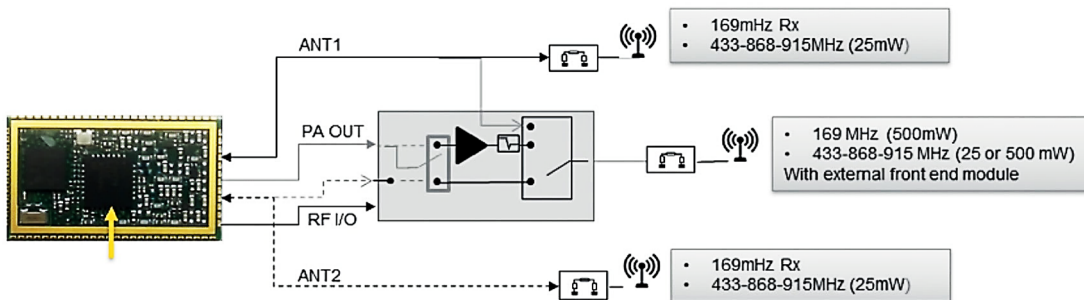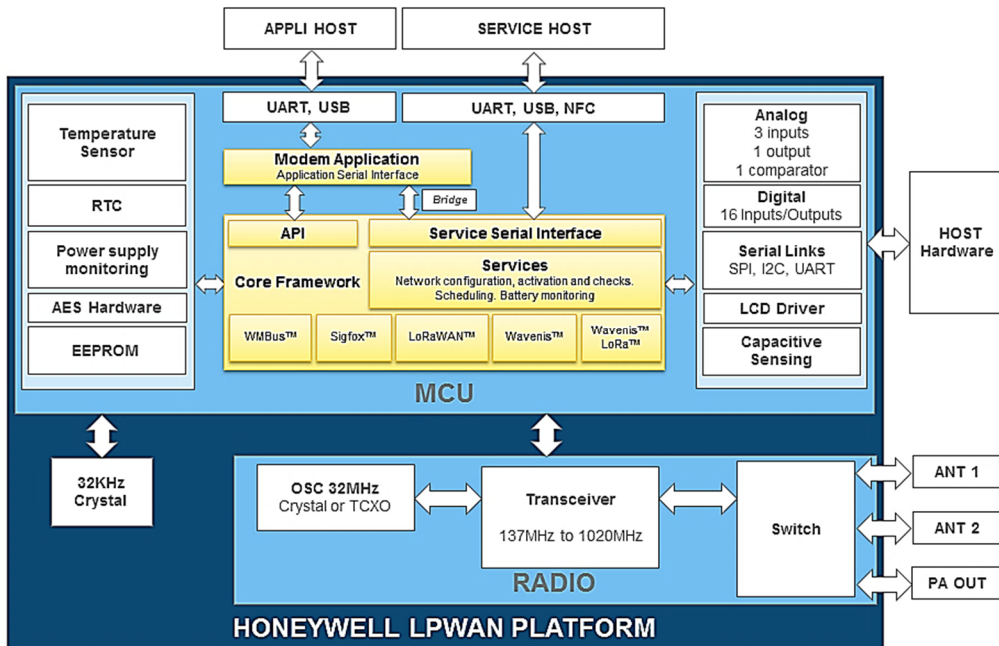- Globally pre-certified: EN300-220, ARIB STD T67/T108, FCC 15.247/249

Application

- Smart Metering

- IoT / IIoT / M2M

- Smart Building / Home

Operational Description

- Single operating voltage: 1.8V to 3.7V

- Radio power output up to +20dBm (+27dBm with power extension)

- Ultra Low Power: 1.5 µA sleep, 12mA Rx, 37mA Tx @ 14dBm (conducted)

- Ultra Long Range: more than 15km with standard antenna

- Antenna diversity

- Operating temperature range: -20° to +70° C (extended -40° to +85° C)

- Up to 31 GPIO (5V tolerant)

- ARM® 32-bit Cortex® M0+

- Up to 192kB Flash
  - 20KB RAM
  - 6KB EEPROM

- USART, SPI, I2C, USB

- ADC, DAC, COMPARATOR, TOUCH SENSING

- LCD DRIVER, AES HW, T° SENSOR, SVS

Bloc Diagram

→ ANT 1/2 for bi-band antenna or 2 single band antennas (diversity or internal/external)
→ PA OUT 169, 433, 868, 915MHz 100mW (for external power amplifier)

Modem Application over Core Framework

By embedding the Modem Application, Honeywell LPWAN Platform brings the user a host control system through UART interface or USB COM port.

Available commands allow, among others, to select the running stack and to send transparent requests or messages.

The core framework embeds a service manager accessible through a bridge by the modem application or through an independent serial link.

Service manager is in charge of handling network parameters, executing actions like installation and managing low level features.

Honeywell