

# KONA Mobile IoT Gateway

## LoRaWAN® Gateway for Mobile Applications

The KONA Mobile IoT Gateway provides solution providers with a carrier grade product for the deployment of LoRaWAN® Internet of Things networks. The Gateway enables massive scalability in a compact form factor by supporting up to 12 million messages per day.

- Smart Utilities
- Shipping Containers
- Railcar Monitoring
- Transport Trucks
- Commercial Railway
- Airplanes



## Key Features

- » Time Division Duplex 64 Rx / 2 Tx
- » High Linearity LNA/Receiver
- » Optimized for Mobile Deployments
- » Precise Network Synchronization (GPS)
- » Integrated GPS Holdover
- » 1 Watt (30 dBm) Tx Power
- » Geolocalization Support
- » Hardened Carrier Grade Enclosure
- » Optional Cellular 3G/4G Modem
- » Copper and Optical Ethernet Backhaul
- » Rated IP67 Enclosure
- » NA 915, EU 868 MHz ISM Bands

## Key Product Differentiators

- » High availability carrier grade design with support of in-service configuration and software updates.
- » Environmentally hardened aluminium enclosure fully tested to withstand extreme temperature conditions.
- » Excellent isolation between the Tx and Rx bands as well as out of band rejection of Cellular and Paging networks.
- » Day-One scalability with support of up to 12 million received messages per day.
- » Easy to deploy supporting different backhaul and power options.
- » Leverages the HFC network in a LoRaWAN® solution.
- » Fully integrated with the broader eco-system of LoRa network servers and sensors.

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### Technical and Functional System Specifications

#### Mechanical Parameters

|                         |                        |
|-------------------------|------------------------|
| MTBF                    | 450,000 hours          |
| DC Power Consumption    | < 40W                  |
| Operational Temperature | -40°C to +70°C         |
| Operational Humidity    | 10% to 100% Condensing |
| Ingress Protection      | IP67                   |
| Size                    | 219 x 304 x 72 mm      |
| Weight                  | 5 kg                   |
| Volume                  | 5.5 L                  |

#### LoRa Radio Parameters

|                    |                               |
|--------------------|-------------------------------|
| ISM Band           | NA 915MHz, EU 868MHz          |
| Tx Power           | 1W (30 dBm)                   |
| Rx Sensitivity     | -142 dBm (SF12, 293 bits/sec) |
| Rx Noise Figure    | 3.5 dB                        |
| Rx Linearity       | -10 dBm                       |
| Rx Dynamic Range   | 70 dB Analog, 100+ dB Digital |
| Tx to Rx Isolation | 75 dB                         |

#### Software and Management

|            |                                     |
|------------|-------------------------------------|
| Tools      | Access Control List management      |
|            | 3G/4G Parameter Configuration       |
|            | System Health Monitor               |
|            | Flight Recorder                     |
|            | Radio Configuration and Control     |
|            | Remote Software Upgrade             |
|            | Active and Passive image management |
|            | Factory image provisioning          |
| Networking | DHCPv4 client                       |
|            | TFTP server                         |
|            | HTTP server                         |
|            | Firewall and Access Lists           |

#### Interfaces

|                           |                |
|---------------------------|----------------|
| Ethernet Backhaul         | RJ-45          |
| GPS                       | N-Type         |
| Cellular Backhaul (3G/4G) | USB (Optional) |
| LoRa Antenna              | N-Type         |
| Power                     | 12 VDC         |

#### Regulatory Compliance

|               |                                  |
|---------------|----------------------------------|
| Safety        | UL 60950-1 (US/C)                |
| Environmental | ETSI EN 300 019-2-1, 300 019-2-2 |
|               | ETSI EN 300 019-2-3, 300 019-2-4 |
| Regulatory    | FCC Part 15.247, 109, 209        |