KONA Mega IoT Gateway
High Capacity LoRaWAN® for Wide Area Deployments

The **KONA Mega IoT Gateway** provides network operators 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.

- Region Wide Network Coverage
- High Density Networks
- Smart Utilities
- Smart Cities
- Industrial Oil & Gas
- Commercial Farming
- Remote Monitoring
- Remote Asset Tracking

Key Product Differentiators

» High availability carrier-grade design with support of in-service configuration and software updates.

» Environmentally hardened aluminum enclosure fully tested to withstand extreme temperature conditions.

» Full duplex operation makes all receive and transmit channels available simultaneously.

» 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.

» Fully integrated with the broader eco-system of LoRa™ network servers and sensors.

Key Features

» US915 ISM Band

» Frequency Duplex 64+8 Rx / 4 Tx

» Dual Antenna Support for Rx Diversity

» Double Simultaneous Tx Channels

» Integrated Cellular 3G/4G Modem

» Copper and Optical Ethernet Backhaul

» IP67 Design

» Hardened Carrier Grade Enclosure

» 1 Watt (2 x 27 dBm) Tx Power

» High Linearity LNA/Receiver

» Integrated Cavity Filter

» Precise Network Synchronization (GPS)

» Integrated GPS Holdover

» Geolocation Support

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Technical and Functional System Specifications

Mechanical Parameters

MTBF	450,000 hours
DC Power Consumption	20 W (Typical)
Operational Temperature	-40°C to +60°C
Operational Humidity	10% to 100% Condensing
Ingress Protection	IP67
Size	222.2 x 267.6 x 101 mm
Weight	5 kg
Volume	6 L

LoRa Radio Parameters

ISM US915 Band	902 - 915 MHz (Rx)
	923 - 928 MHz (Tx)
Tx Power	1W (2 x 27 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	RJ-45 & PoE (802.3bt)
GPS	N-Type
Cellular Backhaul (3G/4G)	N-Type (Optional)
Hybrid Optical and DC Power	Harting Hybrid (Optional)
LoRa Antenna (2 ports)	N-Type (2nd Port Optional)
Power	37-57 VDC or PoE++ (802.3bt)

Regulatory Compliance

Safety	UL / CSA / EN / IEC 62368-1
Regulatory	FCC: 15.247, 15.109, 15.209
	ISED: RSS - 247, RSS - Gen

222.2 mm

101 mm

267.6 mm