TEKTELIC communications

LoRa Alliance Member

KONA Macro Ex IoT Gateway (DRAFT)

Scalable ATEX Zone 1 Rated LoRaWAN® Gateway for Outdoor Hazardous Location Deployments

TEKTELIC **KONA Macro Ex IoT Gateway** is suitable for 4X (IP66) and Zone 1 types of deployments. The gateway is designed for Hazardous area installations where combustible gasses, vapors or liquids may be present. It is ideal for public and private network operators that require Full Duplex, multiple Rx and Tx Channels, rugged industrial design and reliable LoRaWAN® gateways to maximize their network investment.

- **Chemical Production Facilities**
- **Refineries & Processing Plants**
- **Commercial Grain Production**
- **Div 1 Zone 1 Deployments**
- **Pipeline Monitoring**
- **Mining**

Key Product Differentiators

- Custom Enclosure design specifically optimized for airflow, heat dissipation, and cable management of a highly reliable Carrier-Grade LoRaWAN Gateway.
- Can be deployed directly onsite where gases, vapors, or combustible dusts may be present.
- Supports regulatory requirements for ATEX Zone 1 certified sites (certification pending).
- Remote management reduces operational costs of site visits to Zone 1 certified locations.
- Carrier-Grade radio design improves signal reception in challenging RF environments, extending the coverage area and ensuring reliable communication with distant or weakly transmitting devices in the LoRaWAN network.

Key Features

- Frequency Duplex 16 Rx / 2 Tx (NA)
- Time Duplex 16 Rx / 2 Tx (Int.)
- Custom TEKTELIC ATEX Zone 1 (Div 1) Design
- Integrated Highly Selective and Adaptive Cavity Bandpass Filters
- Enhanced Radio Design built for Low Noise Figure, Low LO Phase Noise, and Digital Signal to Noise optimization
- Ethernet and 3G/4G cellular backhaul utilizing high quality, globally certified cellular modems
- Full Featured Operations, Administration and Management Tools for remote Gateway management
- Simple onboarding with LeapX App

Specifications are subject to change

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Technical and Functional System Specifications

Mechanical Parameters

MTBF	850,000 hours
DC Power Consumption	14 W (Typical)
Operational Temperature	-40°C to +60°C
Operational Humidity	10% to 100% Condensing
Ingress Protection	4X (IP66)
Size	352 x 247 x 158 mm
Weight	15 kg
Volume	13.7 L

Software and Management

Tools	Access Control List managment
	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

LoRa Radio Parameters

ISM Bands (FDD)	EU868, US915
Tx Power	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

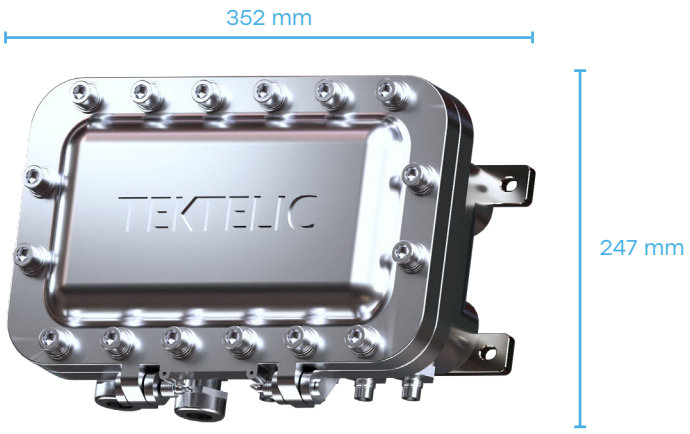
Interfaces

Ethernet Backhaul & PoE	M25 x 1.5 (RJ-45, IEEE 802.3at)
GPS	N-Type
Cellular Backhaul (3G/4G)	N-Type (Main & Diversity)
LoRa Antenna	N-Type
DC Power	M25 x 1.5 (48V terminal block)

Regulatory Compliance (in progress)

CAN & USA Division	Class I Div 1 Group B C D T6 Class II Div 1 Group E F G T85°C
CAN & USA Zone	Zone 1 AEx db (ia Ga) IIB+H2 T6 Gb Zone 21 AEx tb (ia Da) IIIC T85°C Db
ATEX	<Ex> II 2 G Ex db (ia Ga) IIB+H2 T6 Gb <Ex> II 2 D Ex tb (ia Da) IIIC T85°C Db
IECEx	Ex db (ia Ga) IIB+H2 T6 Gb Ex tb (ia Da) IIIC T85°C Db

Specifications are subject to change



TEKTELIC Communications is a premier supplier of best-in-class LoRaWAN® IoT Gateways, Sensors, and custom applications. These elements combined provide a powerful end-to-end solution that can be easily, quickly, and cost effectively deployed to address the most demanding IoT challenges.

For more information please visit www.tektelic.com