TEKTELIC BREEZE

A LoRaWAN® connected Indoor Air Quality (IAQ) Sensor

The **TEKTELIC BREEZE Indoor Air Quality sensor** provides continuous, real-time monitoring of key indoor environmental parameters, including air quality, temperature, humidity, and ambient light. Designed with a compact and unobtrusive form factor, BREEZE supports data-driven optimization of occupant comfort, health, and energy efficiency. Leveraging LoRaWAN® connectivity, it delivers reliable long-range communication with minimal power consumption, enabling scalable deployment across commercial, educational, and public indoor environments.

LoRaWAN CERTIFIED

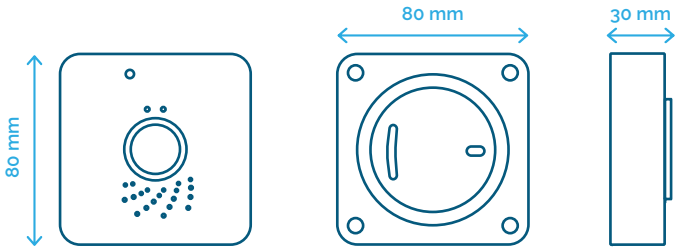
Sensing Functions

- CO2 CONCENTRATION
- AMBIENT TEMPERATURE
- AMBIENT RELATIVE HUMIDITY
- AMBIENT LIGHT
- BAROMETRIC AIR PRESSURE
- BATTERY LEVEL INDICATOR

Features

- **10+ Years battery life*** enabled by an optimized low-power design for extended maintenance-free operation
- **Quick and easy** device **onboarding & data viewing** using TEKTELIC **LeapX™** mobile application
- **Automatic sensor calibration** to maintain long-term accuracy and reduce maintenance
- **Simple onboarding and real-time data visualization** through the **BREEZE application**
- **Barometric pressure compensation** for improved measurement accuracy across varying indoor conditions
- TEKTELIC **Kona Atlas™ support** for payload encoding and decoding
- **Dynamic reporting schedules** optimized for maximum battery life and application flexibility
- TEKTELIC **Locus™ integration** for centralized device, data, and fleet management
- **Compatible with standard LoRaWAN® gateways and network servers** for broad interoperability
- **Sleek, unobtrusive industrial design** suited for modern indoor environments
- **Optional E-Ink display enabled via Bluetooth** connectivity providing convenient at-a-glance IAQ monitoring
- **Rapid deployment** for scalable commercial and enterprise installations

* Actual battery life varies based on configuration, data rate, and operating temperature.



Technical and Functional System Specifications

General System Parameters			
Operational Temperature	0°C to 60°C		
Storage Temperature	-40°C to 60°C		
Operational Relative Humidity	5% - 95% Non-Condensing		
Ingress Protection	IP30		
Size	80 x 80 x 30 mm (with mounting clip)		
	80 x 80 x 26 mm (without mounting clip)		
Weight (including batteries)	128 g		
Battery	2 x AA LTC		
Battery Life			
Reporting Period = 15 min @SF7	11 Years		
Reporting Period = 15 min @SF10	7 Years		
Wireless Parameters	**LoRa**		**BLE**
RF Power (Max)	15 dBm		0 dBm
RF Sensitivity	-137 dBm (SF12, 125 kHz)		-96 dBm (1 Mbps)
Channel Plans	EU868, US915, AU915, AS923-1,-2,-3,-4, IN865, KR920		2.4GHz ISM
Antenna	Internal		Internal
LoRa Device Class	Class A		N/A
Specification Version	1.0.4		5.2
Sensor Specifications	**Range**	**Accuracy**	**Resolution**
CO2 (using NDIR Sensor)	400-5000ppm	+/- 30 ppm +3% of reading	1 ppm
Ambient Temperature	0-60°C	+/- 0.3°C	0.1°C
	5-60°C	+/- 0.2°C	
Ambient Relative Humidity	0-100%	+/- 4%	0.5%
	20-80%	+/- 2%	
Ambient Light	5-1000 lux	N/A	N/A
Barometer	300-1200 hPa	+/- 2 hPa	0.1 hPa
	700-1100 hPa	+/- 1.5 hPa	
Certifications & Compliance			
Regulatory	FCC, ISED, CE (RED)		
Product Safety	IEC 62368-1		
Environmental	RoHS		
LoRaWAN Certified	LoRaWAN 1.0.4 for EU 868		

TEKTELIC Communications is a premier supplier of complete LoRaWAN® IoT solutions. Our end-to-end systems combine network infrastructure, devices, and applications to enable easy, fast, and cost-effective deployment for the most demanding IoT challenges.

TEKTELIC communications
LoRa Alliance Member

E-Ink Display Tablet

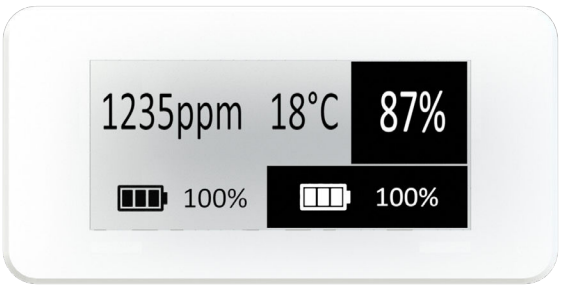
BLE connected Display to Visualize Measurements and Data

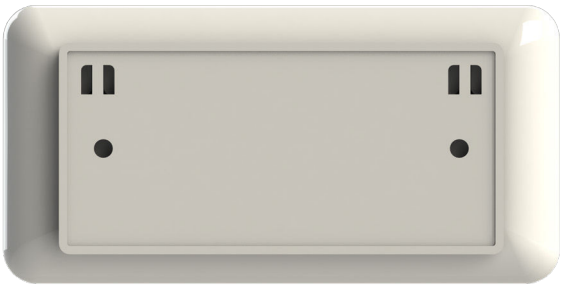
TEKTELIC's Multi-Purpose E-Ink Display Tablet is ideal for visualization of data measurements collected from our BREEZE CO_2 solution. Deploy in schools, retail, healthcare facilities, laboratories and office spaces. Combining the low power technologies of LoRaWAN, BLE and E-Ink, accommodates a low powered consumption solution. The E-Ink display tablet is fully wireless and can be mounted on a table or wall.

General Specifications

Item	Specification
Model	T0007851
Dimension (L x W x H)	100 x 50 x 23mm
Screen Area	67 x 30 mm
Display Pixels	296 128 (37,888)
Dots per Inch (DPI)	112
Display Type	E-Ink
Orientation	Landscape

Viewing Angle	> 180˚
Operating Temperature Range	0˚C to 50˚C
Storage Temperature Range	-20˚C to 70˚C
Mounting	Wall or Table
Weight	160g
Communications	Bluetooth 5.0, 2.4GHz
Battery	2x AA LTC, 3.6V 2600mA
Battery Life	5 years, 8 months (102 refresh per day)





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KONA Micro IoT Gateway

Indoor LoRaWAN® Gateway for Mission Critical Deployments

The KONA Micro IoT Gateway is designed for enterprise and lightweight industrial applications that require "Always On" connectivity. Configured with an internal cellular modem and a built-in battery backup, the KONA Micro IoT gateway continues to operate and transmits sensor data to the network even when the main site has lost power.

IP 30

- SMART HOME & OFFICE
- SMART BUILDINGS
- WAREHOUSES
- FACILITY MANAGEMENT
- SAFETY & SECURITY
- SMART GREENHOUSES
- SCHOOLS & UNIVERSITIES
- RETAIL

Key Features

- US915, EU868, AU915, AS923 Channel Plans
- 27 dBM Tx Power
- 12V or PoE Power
- Operational Status LED
- Time Duplex 8 Rx / 1 Tx
- Plug & Play Operation
- Integrated Dual SIM Cellular Modem
- Factory Image for Mass Deployment
- External LoRa Antenna
- In-Service Updates
- Four Hour Battery Backup
- Listen Before Talk (LBT)*

* Enabled according to applicable regional standards

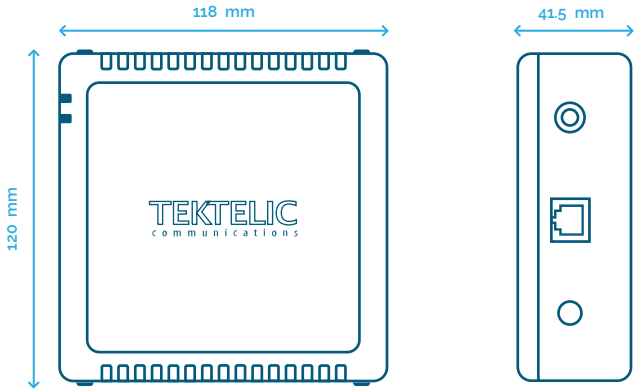
Key Product Differentiators

- Enable critical enterprise IoT applications with 'Always On' connectivity. Battery backup and an integrated cellular modem.
- Simplify management with the Kona Pilot OAM tool.
- Reduce set up costs with plug-n-play installation using a custom provisioned factory image.
- Operational status indicated with multi-function LED.
- Improve coverage and service resulting in increased IoT application adoption and customer satisfaction.
- Fully integrated with the broader eco-system of LoRa™ network servers and sensors.

Technical and Functional System Specifications

Mechanical Parameters	
MTBF	830,000 hours
DC Power Consumption	2.3 W (Ethernet Backhaul)
	2.6 W (Cellular Backhaul)
Operational Temperature	0°C to +40°C
Operational Humidity	5% to 95% Condensing
Ingress Protection	IP30
Size	120 x 118 x 41.5 mm
Weight	350 g (<200 g without battery)
LoRa Radio Parameters	
Channel Plans*	US915, EU868, AU915, AS923
Tx Power	14 dBm to 27 dBm
Rx Sensitivity	-141dBm (SF12, 293 bits/sec)
Rx Noise Figure	3.5 dB
Rx Linearity	-10 dBm
Rx Dynamic Range	70 dB Analog, 100+ dB Digital
Regulatory Compliance	
Safety	UL / CSA / EN / IEC 62368-1
Regulatory	FCC: 15.247, 15.109, 15.209
	ISED: RSS - 247, RSS - Gen
	CE: RED 2014/53/EU

Software and Management	
Tools	Access Control List management
	Cellular Parameter Configuration
	System Health Monitor
	Radio Configuration and Control
	Remote Software Upgrade
	Active and Passive Image Management
	Factory image provisioning
	Field Configuration Tool
Networking	DHCPv4 client
	TFTP server
	HTTP server
	Firewall and Access Lists
Interfaces	
Ethernet Backhaul	RJ-45 (10/100 BaseT)
Cellular Backhaul	Dual SIM / Internal Antenna
LoRa Antenna	SMA-RC
Power	12V / 1A Adapter or PoE



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