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COMFORT V2



User Guide

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1 Product Description

1.1 Overview

The COMFORT v2 sensor is a low-power, IP65-rated, low-cost LoRaWAN device designed for commercial and residential indoor monitoring applications. This sensor includes two external connectors that support leak detection accessories and valve shutoff control. In addition, the device provides core sensing capabilities including temperature, humidity, ambient light, acceleration, and battery status reporting.

Table 1-1 summarizes the features available for the COMFORT v2 sensor.

Table 1-1: COMFORT v2 Available Features

Sensor Function	COMFORT v2
Temperature	✓
Relative Humidity	✓
Accelerometer	✓
Light Detection	✓
Magnetic Switch	✓
Two External Connectors	✓
Moisture Detection via enclosure screws	✓
Valve Control	✓

The functions indicated in Table 1-1 are briefly explained as follows:

- **Temperature & Relative Humidity:** Transducer reports temperature and relative humidity of the local environment.
- **Accelerometer:** Configurable triggers allow the sensor to detect if it has been moved.
- **Light Detection:** Light transducer reports the presence or absence of light using a configurable intensity threshold.
- **Magnetic Switch:** Digital On/Off sensing with an internal magnetic switch.
- **External Connectors:** In digital mode, leak detection ropes or cables connected to the interfaces can be monitored for leaks or used to count events. In analog mode, a thermistor can be connected for remote temperature sensing.
- **Moisture Detection via enclosure screws:** Four corner screws used for sealing the enclosure can be used as contact sensors for liquid leaks.
- **Valve Control:** Enables control of an externally electric-powered flow valve by activating a normally-open solid-state relay, causing it to transition from an open state to a closed state.



Figure 1-1: COMFORT v2 Sensor Model

Table 1-2: COMFORT v2 Model Numbers and Order Codes

Description	Product Model	Order Code	Region	Product PCBA Code
COMFORT SMART ROOM SENSOR V2	T0009125	SMT2BEU868	EU868	T0008998
COMFORT SMART ROOM SENSOR V2	T0009125	SMT2BUS915	US915	T0008998
COMFORT SMART ROOM SENSOR V2	T0009125	SMT2BAU915	AU915	T0008998
COMFORT SMART ROOM SENSOR V2	T0009125	SMT2BAS9231	AS923	T0008998
COMFORT SMART ROOM SENSOR V2	T0009125	SMT2BAS9232	AS923-2	T0008998
COMFORT SMART ROOM SENSOR V2	T0009125	SMT2BAS9233	AS923-3	T0008998
COMFORT SMART ROOM SENSOR V2	T0009125	SMT2BAS9234	AS923-4	T0008998

1.2 Physical Interfaces

Figure 1-2 illustrates the customer accessible interfaces for COMFORT v2

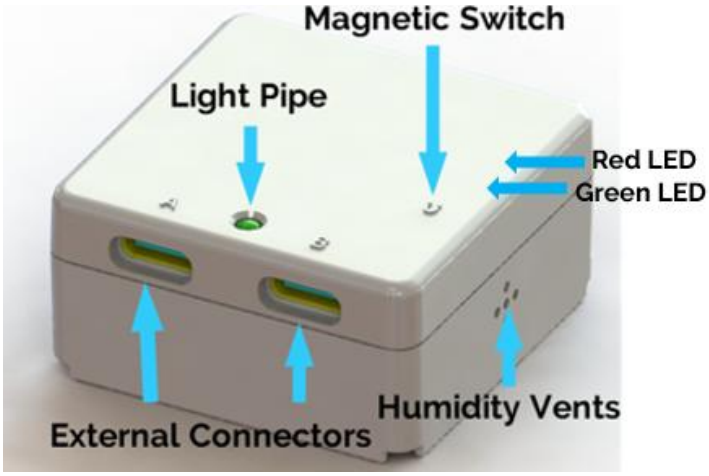


Figure 1-2: The COMFORT v2 External Interface Layout

1.3 Specifications

The COMFORT v2 Sensor specifications are listed in Table 1-3.

Table 1-3: COMFORT v2 Sensor Specifications

Parameter	Requirement
Use Environment	IP65, Indoor, commercial and residential.
Operating Temperature	0°C–60°C 10°C–40°C for optimal battery life
Storage Temperature	-30°C–60°C 0°C–30°C for optimal battery life
Relative Humidity	5%–95%, non-condensing
Size	43 mm x 43 mm x 22 mm
Weight	38.6 g (with battery)
Power Source	CR2477 Battery operated, with FET-based reverse polarity protection.
Network Technology/Frequency band	LoRaWAN in the following regions: EU868, US915, AU915, AS923, IN865, KR920, DN915, RU864
Air Interface	LoRa
Expected Battery Life	> 5 years COMFORT model with the baseline use case[1]
Maximum Transmit Power	13 dBm
Number of Indicator LEDs	2 (one green, one red)
Measurement Sensing Functions	Temperature, humidity, light, acceleration, remote digital and analog sensing, orientation with respect to gravity

[1] The baseline use case:

Temperature: 23°C

Tx power: 13 dBm

LoRa SF: 10

Tx periodicity: 4 times/hour for 10 hours and 2 times/hour for 14 hours (= 68 times/day)

Parameter	Requirement
Detection Sensing Functions	Magnetic field, leak detection, external connector
Temperature Measurement Accuracy	<±0.3°C between 0°C and 5°C ±0.2°C between 5°C and 60°C
Humidity Measurement Accuracy	<±4% between 0% to 20%, and 80% to 100% ±2% between 20% and 80%
Light Sensitivity	Detection of weak light to typical light conditions (5 lux to 1000 lux) Peak sensitivity at 500 nm
Accelerometer Sensitivity	16 mg/LSB, 32 mg/LSB, 64 mg/LSB, 192 mg/LSB corresponding to ranges of:±2 g,±4 g,±8 g,±16 g
Magnetic Switch Actuation Distance	Operating range: 5–15 AT Requires about 10 gausses at edge of sensor to activate Actuation distance ranges from 5 to 25 mm, depending on the magnet's orientation. Experiment with different magnet orientations to find the one that provides the optimal actuation distance for your use case.
Moisture Detection	Enclosure screw moisture detection Range: ~0 mm from bottom surface of sensor case
External Inputs	Two USB-C type connectors[2] supporting: • leak detection rope • external input signal • external dry-contact input Input pulse frequency ≤ 20 Hz
External Output (Valve Shutoff)	Max valve rating of 24 VAC/VDC and max current of 300 mA
Remote Temperature Sense	A Remote thermistor probe (thermistor) (recommended 10 kΩ) can be connected to external connector Measurement range: • -55°C–125°C (CWF3AA103G3380) • -25°C–105°C (NTCAIMME3)

[2] These USB-C type connectors are custom and proprietary. They do not conform to the USB-C standards.

2 Installation

2.1 Included Product and Installation Material

The following items are included with each sensor package:

- COMFORT v2 sensor
- Mounting Bracket Kit

NOTE: To ensure safe installation and maintenance, please read Safety Precautions.

2.2 Unpacking and Inspection

The following should be considered during the unpacking of a new COMFORT v2 Sensor:

1. Inspect the shipping carton and report any significant damage to TEKTELIC.
2. Unpacking should be conducted in a clean and dry location.
3. Do not discard the shipping box or inserts as they will be required if a unit is returned for repair or re-configuration.

2.3 Commissioning

Each sensor has a set of commissioning information that must be entered into the network server for the sensor to be able to join the network and begin normal operation once activated. For instructions on how to do this please refer to the Network Server Quick Start Guide you get in the box with the device (also available online in the Knowledge Hub*)*.

You can find the commissioning keys inside the device box. If you don't have the box, raise a ticket in our support portal and provide the T-Code, Revision and Serial Number on the label placed on the device.

2.4 Power Up/Down Procedure

⚠ **WARNING — INGESTION HAZARD**

The COMFORT v2 Sensor contains a **coin cell battery**. Keep new and used batteries **out of reach of children**. If a battery is **swallowed or inserted into any part of the body, seek immediate medical attention**.

! **CAUTION:** Replace the battery only with the specified battery type. Using an incorrect battery type may create a risk of fire or explosion.

Once the sensor information has been added to the Network Server, follow these steps to access and replace the coin cell battery:

1. Using a flat tool, turn the battery lid **counterclockwise until the arrow on the lid aligns with the unlock symbol**, as shown in Figure 2-1.
2. Remove the battery lid and take out the coin cell battery.
3. Locate the sticker on the bottom of the coin cell. Remove the sticker.
4. Reinsert the coin cell battery with the positive terminal facing outward from the device.
5. Reinsert the battery lid and use the flat tool to turn the battery lid **clockwise until the arrow aligns with the lock symbol**, as shown in Figure 2-2. **Firm pressure is required to fully lock the battery lid.**

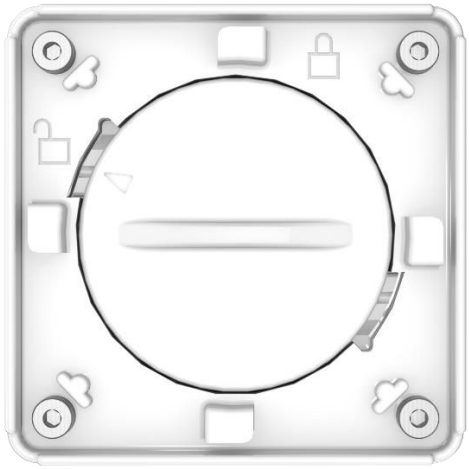


Figure 2-1: Unlocked Battery Lid

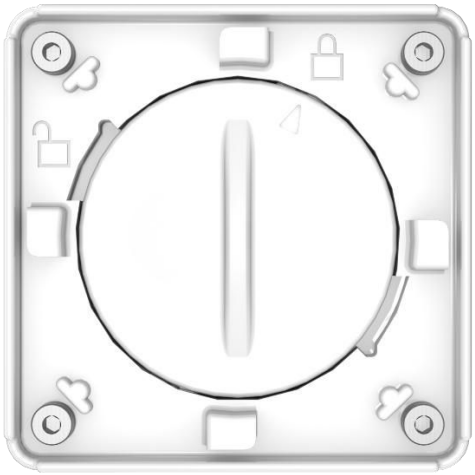


Figure 2-2: Locked Battery Lid

2.5 Default Configuration

The default configurations for COMFORT v2 are listed in Table 2-1.

Table 2-1: COMFORT v2 Default Configurations

Reported Data	COMFORT v2
Battery Data	1 hour
Ambient Temperature	1 hour
Relative Humidity	1 hour
Magnetic Switch	Every actuation
Digital input (i.e. External Connector in the digital mode)	Every actuation

2.6 Reconfiguration

The COMFORT v2 Sensor supports a full range of over the air (OTA) configuration options. Specific technical details are available in the corresponding COMFORT v2 Technical Reference Manual (TRM) document. All configuration commands need to be sent OTA during the sensor's downlink (DL) receive (Rx) windows.

2.7 Mounting

The COMFORT v2 Sensor is mounted using the supplied mounting bracket by attaching it with screws (included) or a zip-tie (not included), as seen in the figure below.

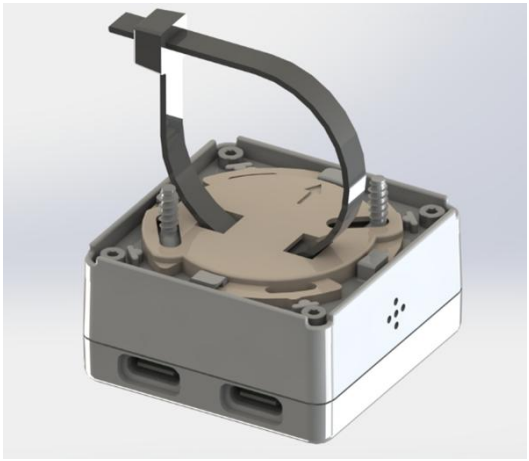


Figure 2-3: Mounting Bracket

Figure 2-4 demonstrates how to easily mount the COMFORT v2 Sensor using the two included screws and mounting bracket.



Figure 2-4: Wall Mount Application

2.8 External Connector Cable Installation

The COMFORT v2 Sensor features two external connectors for the connection of probes, ropes or magnetic switches. The external device attaches to the USB-C type connector located on the side of the sensor, as seen in Figure 2-5.

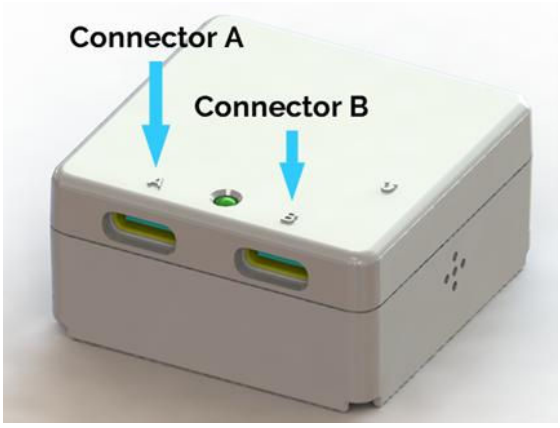


Figure 2-5: Two USB-C Type External Connectors

NOTE: The cable length in any mode MUST NOT exceed 3 meters.

2.9 LED Behaviour

See Figure 2-6 for the location of the sensor LEDs. The expected LED behaviors for various states are described in Table 2-2.



Figure 2-6: LEDs

Table 2-2: COMFORT v2 LED Behaviour

Step	State	LED Behavior	Meaning
1	Power On	Both LEDs briefly on	Power applied
		LEDs turn off	
		One LED blinks briefly	
2	After Boot Pattern	System LED blinks	All health checks passed

Step	State	LED Behavior	Meaning
		LoRa LED blinks	One health check failed. Consider battery replacement or moving to suitable temperature environment
3	Join Procedure	System LED blinks continuously	Sensor joining network
		LoRa LED blinks	LoRa activity on sensor (transmitting or receiving packets, including join request packets)
4	Normal Operation	LoRa LED blinks	LoRa activity on sensor (transmitting or receiving packets)
		Any other LED pattern	Low battery

NOTE: If the LED behavior for steps 1-2 repeat continuously, the battery no longer has enough charge to power the join procedure. Therefore, the battery should be replaced. Refer to Section 4 for more information.

3 Operation and Functions

3.1 Temperature and Relative Humidity Transducer

The COMFORT v2 contains a temperature and relative humidity (RH) transducer. Vents on the enclosure allow air to contact the transducer. Response time can be reduced by forcing air to move over the vent as seen in Figure 3-1.



Figure 3-1: Humidity Vents

COMFORT v2 supports reporting ambient temperature, MCU temperature and RH values periodically (most common use case) and on a user-defined threshold basis. Alarm points can be set individually for ambient temperature, RH, and MCU temperature. The frequency of measurements is user configurable with different sample rates if the measured value is within the normal operating window (see Section 2-5).

3.2 Acceleration Transducer

COMFORT v2 features a 3-axis accelerometer for acceleration sensing, which can be turned off to save power. It supports two interrupt-based accelerometer events, both with configurable thresholds:

1. **Acceleration Event**: Triggered by exceeding an acceleration threshold. The accelerometer is disabled for a set debounce time to prevent multiple reports for a single event.
2. **Impact Alarm Event**: Activated when an impact alarm threshold is surpassed a configurable number of times within a set period. The alarm clears after a grace period with no impacts.

Both acceleration and impact alarm functions can be toggled independently.

- Accelerometer readings can be in X-Y-Z vector or magnitude form.
- Axes (X, Y, Z) can be enabled or disabled independently; disabled axes output zero.
- Sampling rate is adjustable (possible options: 1 Hz, 10 Hz, 25 Hz, 50 Hz, 100 Hz, 200 Hz, or 400 Hz). Higher rates detect shorter events but drain battery faster. Default is 1 Hz.

NOTE: Higher sample rates enable the detection of shorter acceleration events but consume more battery power.

3.3 Ambient Light Transducer

The COMFORT v2 features an ambient light sensor located on the top surface, measuring light intensity through a light pipe, as seen in Figure 3-2.



Figure 3-2: Light Pipe

Ambient light sensor can report both light intensity (periodically) and light status (dark or bright) based on a configurable threshold:

- **Light Measurement**: Sensitive to human visible light, peak sensitivity at 550 nm. Sensing range: 5 lux to 1000 lux.
- **Threshold Adjustment**: Light threshold is adjustable from 0 to 63. If light status (dark/bright) doesn't match detected intensity, an event is reported. This event reporting can be enabled or disabled.

3.4 Magnetic Switch

The COMFORT v2 sensors contain a magnetic switch. The location of the switch is shown in Figure 3-3 below.

The COMFORT v2 Sensor can be configured to activate based on the state of this switch and to report after a user-configurable count of switch events. To activate the switch, a magnetic field of about 10 gauss (1 milli-tesla) must be applied to the edge of Sensor.

NOTE: A magnet required to activate the switch is not provided in the box. Standex-Meder M4, M5 or M13 magnets are suggested but any magnet of sufficient strength can be used.

The switch function can be configured to sense open to close events, close to open events or both types of events. For example, if the Sensor is being used for sensing access to a door and is set to read both event types, it will record an event each time the door is opened and each time it is closed. The reporting of these events can be set by the customer to report after a number of events has occurred. If it is set to 0, no events are reported. If it is set to 1, it reports after each event.

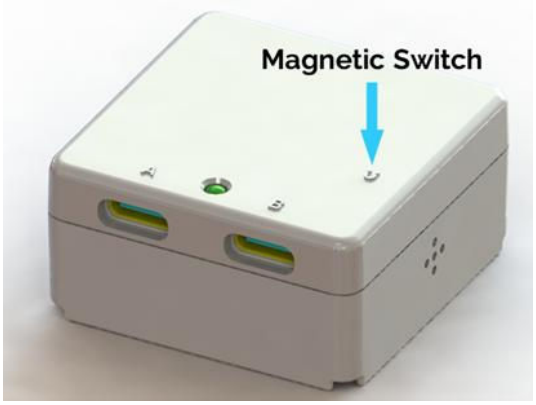


Figure 3-3: Magnetic Switch

NOTE: Input pulse frequency must be less than 20 Hz (for both Reed Switch and External Connector).

3.5 External Connectors

The COMFORT v2 Sensor contains USB-C type external connectors, which has two modes, digital and analog. The connectors called “Connector A” and “Connector B” both support digital mode of operation, but only “Connector B” supports both digital and analog modes of operation.

In the digital mode, each of two External Connectors can work with one of the following:

- Connection to an external open-closed or open-drain type switch (e.g. a manual switch/ a “dry contact” switch, or a on-off (reed) switch activated by an external magnetic field, or an externally controlled open-drain transistor);
- Connection to a leak detection rope;
- Connection to an external digital input signal [0V to 1.8V (or float) logic levels, 3.3V maximum] with a pulse frequency of 20Hz or less.

NOTE: When designing a cable to monitor logic levels, please note that the USB-C connector is not symmetrical. Ensure the cable is designed to connect in the correct orientation to the COMFORT v2 Sensor.

NOTE: For more information about external connectors provided by TEKTELIC, please contact your local sales representative. If you are designing your own cable, refer to the Knowledge Hub for detailed information on the connector pinout.

3.6 Leak Detection via Enclosure Screws

In COMFORT v2, leak detection covers the enclosure, using screws as sensors. Similar to rope sensing, this method relies on electrical conductivity. Four enclosure screws serve this purpose, two as "signal" and two as "ground" screws, as seen in Figure 3-4 Any connection between a "signal" and a "ground" screw triggers the leak alert, beneficial for monitoring floor or wall leaks. However, caution is needed to avoid false alarms, like from wet hands or touching metal.

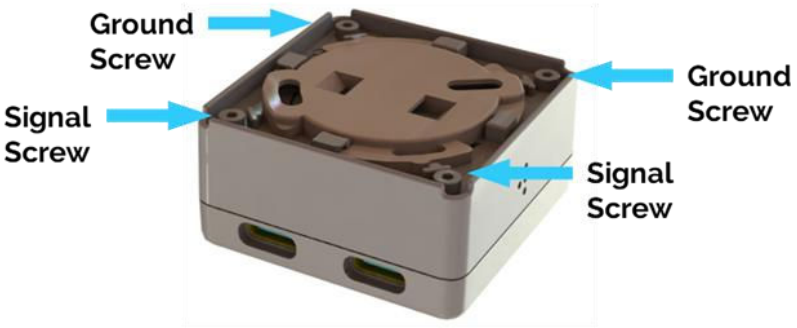


Figure 3-4: COMFORT v2 Enclosure Screws

NOTE: To detect a leak via the enclosure screws, do not attach anything to Connector A.

3.7 Valve Shutoff

The COMFORT v2 allows control of an externally electric-powered flow valve. The operation is as follows:

- **Leak Detection and Activation**: Upon detecting a water leak, COMFORT v2 can activate a normally-open solid-state relay on the PCB. This relay, in turn, triggers the externally powered valve, causing it to transition from an open to a closed state
- **Valve Type:** To conserve battery power, only "latching" valves are supported. These valves require a brief energization period, typically around 10 seconds, to effectuate the transition from open to close. Reverting the valve to its flow-enabled state requires user intervention.
- **Relay and Power Consumption:** The onboard TLP3122A relay consumes approximately 3mA from the coin cell battery. The duration of relay energization can be configured to minimize battery drain.
- **Relay Configuration:** The relay connects "VBUS" and "GND" pins on both "A" and "B" connectors, to activate the control of the water valve. When closed, VBUS is shorted to GND on both connectors, rendering it unsuitable for connecting COMFORT v2 to a conventional USB charger or device.
- **Valve Electrical Ratings:** The controlled valve is rated for a maximum of 24VAC or VDC and a maximum current of 300mA. It's essential to verify this rating through testing

4 Battery Replacement

The COMFORT v2 Sensor is powered by a standard CR2477 coin cell.

⚠ **WARNING — INGESTION HAZARD**

This product contains a button cell or coin battery.

- **DEATH or serious injury can occur if ingested.**
- A swallowed button cell or coin battery can cause **internal chemical burns in as little as 2 hours.**
- **KEEP new and used batteries OUT OF REACH OF CHILDREN.**
- Seek immediate medical attention if a battery is suspected to have been swallowed or inserted inside any part of the body.
- If the battery compartment does not close securely, stop using the product and keep it away from children.

! **CAUTION:** Risk of fire or explosion if the battery is replaced with an incorrect battery type.

Use only approved CR2477 cells when replacing the battery. The following are approved replacement cells:

- Panasonic (model CR2477)
- Sony (model CR2477)
- EVE Energy (model CR2477)
- Jauch (model CR2477)

To access the battery, please follow the steps listed below:

1. Using a flat tool, turn the battery lid **counterclockwise until the arrow on the lid aligns with the unlock symbol**, as shown in Figure 2-1.
2. While holding the sensor with the bottom facing up, remove the battery lid from the device.
3. With the battery lid removed, the coin cell battery is accessible.
4. Remove the coin cell from the holder.
5. Place the new cell in the holder. The top of the coin cell is marked with a + symbol indicating the positive terminal. This positive terminal must face outward from the device, meaning it is visible after insertion.
6. Check for LED activity. If the LEDs are lit, the battery replacement was successful.
7. Reinsert the battery lid and use the flat tool to turn the battery lid **clockwise until the arrow aligns with the lock symbol**, as shown in Figure 2-2. **Firm pressure is required to fully lock the battery lid.**

5 Device Configuration with ATLAS

To perform more configuration or read the data of COMFORT v2 device you can use TEKTELIC's complementary service, ATLAS at www.atlas.tektelic.com.

There are two ways to access ATLAS:

1. Using in Offline mode

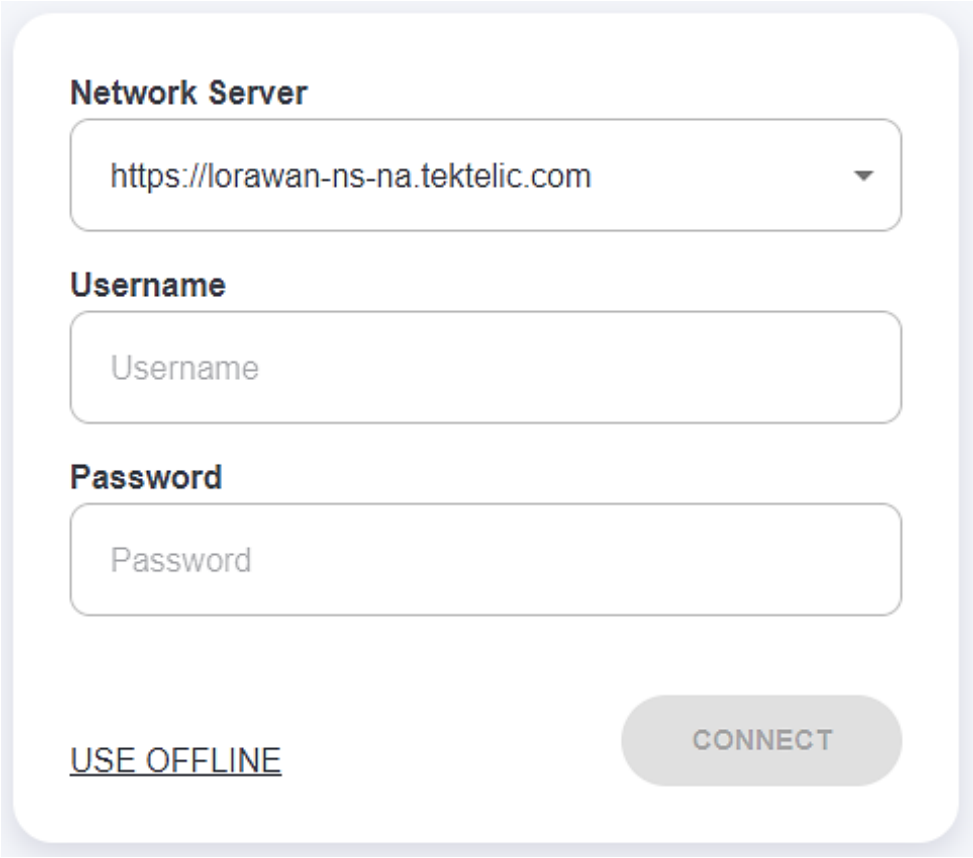


Figure 5-1: Login as Offline Mode

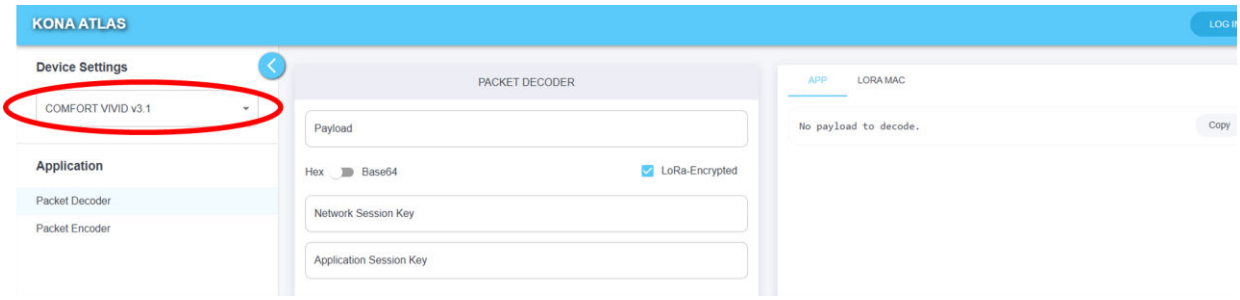


Figure 5-2: Select Decoder

2. With your TEKTELIC Network Server Credentials

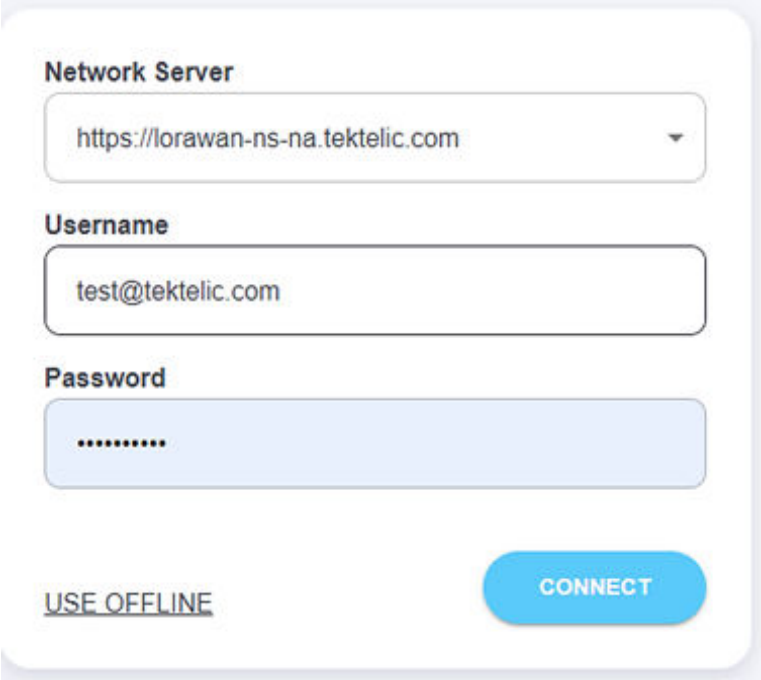


Figure 5-3: Login with Network Server Credentials

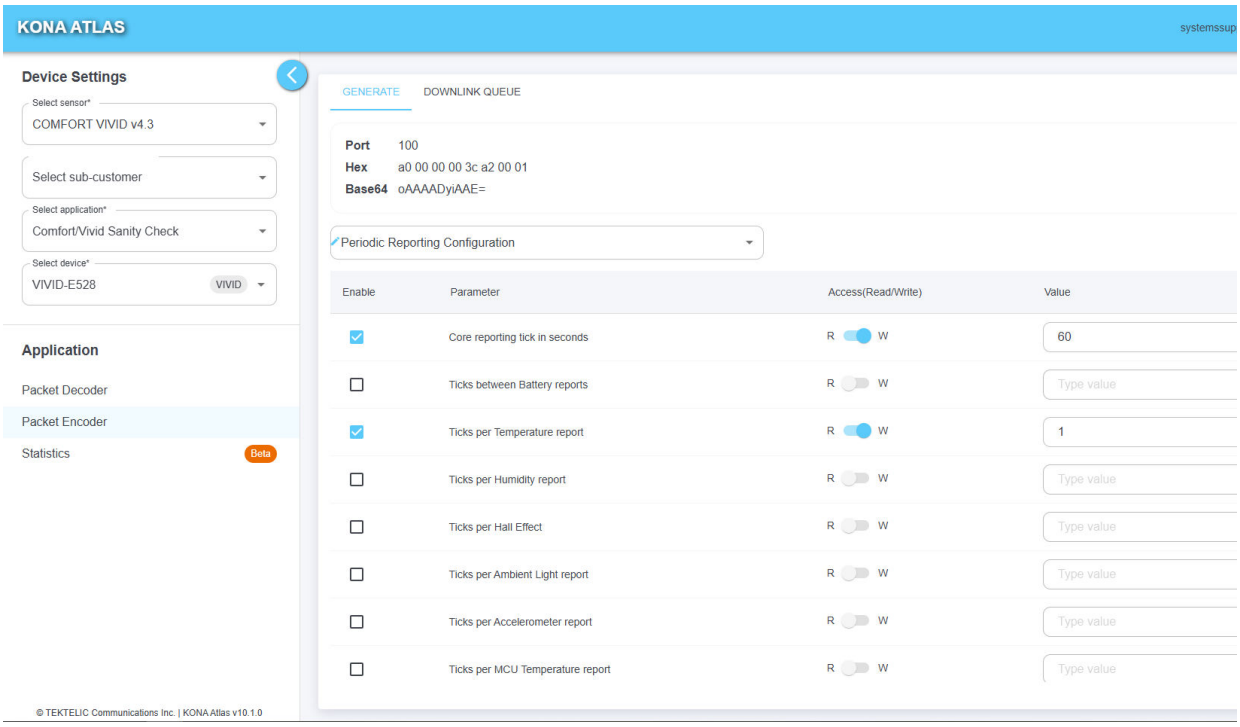


Figure 5-4: Select Decoder, Application, and the Device

For more information follow this link: TEKTELIC at www.tektelic.com.

6 Basic Downlinks

COMFORT v2 use a "tick" system for reporting data. Generally, the sensor will report most important data every tick. A tick can be measured in seconds.

There are two sets of settings that must be configured in conjunction - "Core reporting tick in seconds" and "Ticks per [data/report]".

"Core reporting tick in seconds" will determine the interval between ticks. For example, you may set it to 30 seconds or 180 seconds (3 minutes) for each tick.

"Ticks per [data/report]" determines how many ticks it will take before the sensor reports any data. For example, if you set "Ticks per Battery report" to 2, it will take 2 ticks before the sensor reports battery data.

To Change the Core Report to Every Minute

With LeapX application (you can get it on Google Play or App Store): write 1 number in the field minutes between reports, then click on saved changes.

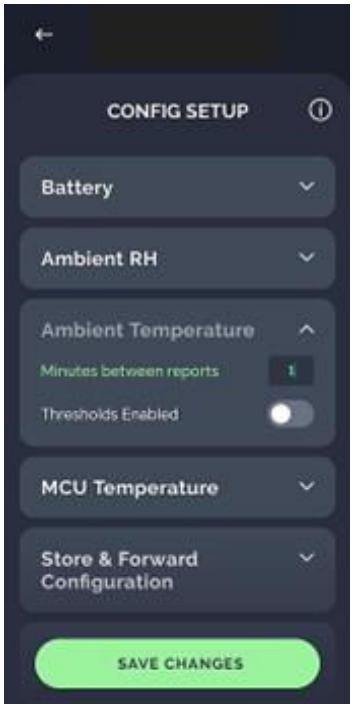


Figure 6-1: LeapX Application

With ATLAS: check the box for Core report tick in seconds and ticks between ambient temperature reports. Write the values shown in the Figure 6-2 and click send.

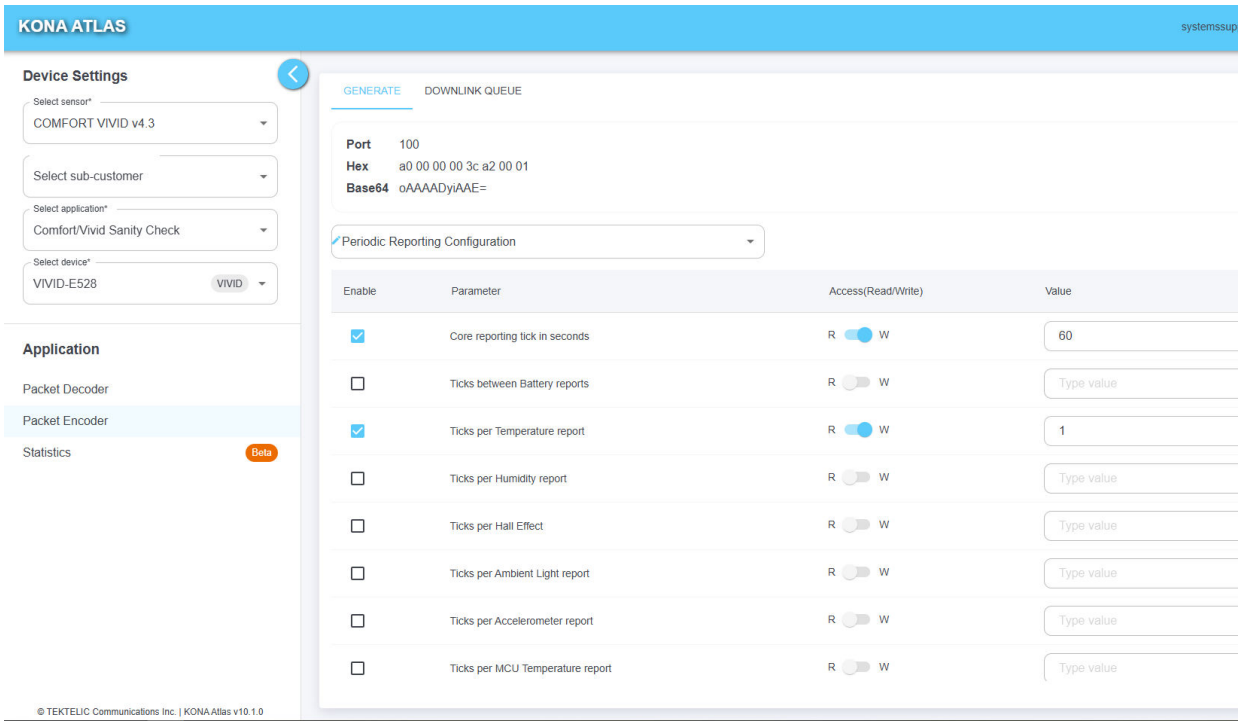


Figure 6-2: ATLAS Application

Example of an Uplink

"data": {

"raw": "03 67 00 F2 04 68 1A 00 BA 0B BA",

"fPort": 10,

"ambient_temperature": "24.2",

"relative_humidity": "13.0",

"battery_voltage": "3.002"

},

"errors": [],

"warnings": []

7 Data converters

Please follow this link: https://github.com/TektelicCommunications/data-converters/tree/master for the data converters that are to be used on TEKTELIC & other Network Server for TEKTELIC Sensors. These data converters can be used as a reference for other platforms.

TEKTELIC's data converters conform to the LoRa Alliance Payload Codec Specification and can be used with any 3rd party Network Server / Application Server that supports this specification.

https://resources.lora-alliance.org/technical-specifications/ts013-1-0-0-payload-codec-api

8 Safety Precautions

The following safety precautions should be observed:

- The COMFORT v2 is intended for indoor use.
- The COMFORT v2 Sensor contains a lithium coin cell battery.

⚠ **WARNING — INGESTION HAZARD**

This product contains a button cell or coin battery.

- **DEATH or serious injury can occur if ingested.**
- A swallowed button cell or coin battery can cause **internal chemical burns in as little as 2 hours.**
- **KEEP new and used batteries OUT OF REACH OF CHILDREN.**
- Seek immediate medical attention if a battery is suspected to have been swallowed or inserted inside any part of the body.
- If the battery compartment does not close securely, stop using the product and keep it away from children.

! **CAUTION – Risk of fire or explosion if the battery is replaced by an incorrect type.**

! **CAUTION – This product contains a coin / button cell battery. If the coin / button cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.**

- To reduce risk of fire, explosion or chemical burns: replace only with approved 3 V CR2477 coin batteries; DO NOT recharge, disassemble, heat above 100°C (212°F) or incinerate battery.
- The COMFORT v2 Sensor requires an external magnet for use with the internal magnetic switch.
- Keep magnets away from all children. Small magnets can pose a serious choking hazard. If multiple magnets are swallowed, immediately seek medical attention.

9 Compliance Statements

Federal Communications Commission:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

To comply with FCC exposure limits for general population / uncontrolled exposure, this device should be installed at a distance of 20 cm from all persons and must not be co-located or operating in conjunction with any other transmitter.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Innovation, Science and Economic Development Canada:

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

This device should be installed and operated with minimum distance 0.2 m from human body.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) L’appareil ne doit pas produire de brouillage.

(2) L’appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d’en compromettre le fonctionnement.

Cet appareil doit être installé et utilise à une distance minimale de 0.2 m du corps humain.

California Proposition 65:

⚠ **WARNING:** This product can expose you to chemicals including lead, nickel & carbon black, which are known to the State of California to cause cancer, birth defects or other reproductive harm. For more information, go to www.p65warnings.ca.gov.

Revision History

Revision	Date	Editor	Position	Comments
0.1	May 29, 2024	A. A.	Systems Engineer	Initial Draft based on COMFORT/VIVID v1 UG
1.0	June 03, 2024	A. A.	Systems Engineer	Released after technical review
2.0	June 14, 2024	A. A.	Systems Engineer	• Removed technical section on external connections • Updated document T-code to T0009096 • Released after document format update
2.1	Nov 13, 2024	E. T.	Systems Engineer	• Updated COMFORT/VIVID T-codes to match updated ones: (T0009125, T0009156, T0009157, T0009126, T0009158, T0009159) • Updated External Connector section to reflect Connect B supporting analog mode • Updated PIR section to reflect VIVID v2 implementation • Updated figures
2.2	Jan 16, 2025	E. T.	Systems Engineer	• Updated specifications to indoor-only • Corrected external output rating to 300 mA
2.3	June 25, 2025	M. Y. & E. T.	Business Analyst & Systems Engineer	Remove motion and FoV temperature
2.4	November 27, 2025	J. H.	Systems Engineering Intern	Separated COMFORT and VIVID UG documents
3.0	January 7, 2026	E. T.	Systems Engineer	Reviewed separated Vivid v3 UG and updated figures as needed.
3.1	May 6, 2026	E. T. & A.K.	Systems Engineer & Business Analyst	• Added Table 1-2 with Order codes. • Updated document T-code • Updated Tx power • Updated hyperlinks
3.2	November 3, 2026	E.T.	Systems Engineer	• Added rendering of how to fully close battery door.
3.3	November 6, 2026	A.K.	Business Analyst	• Formatting changes in Section 2.4 and Section 4