

Sensorium™ Gateway — Installation & Quick-Start Guide

Unbox, mount, wire, power on, and commission the Universal IoT Gateway — the ruggedized Connect layer that aggregates Sensorium™ sensors and uplinks to the 5Tech Platform.

[sensorium-gateway-installation](#) · Revision Draft (Preliminary) · 2026-07-07 · Status:

PRELIMINARY

PRELIMINARY. This guide describes the intended installation procedure. Values marked [\[TBD\]](#) — torque figures, wire gauges, supply voltages, clearances, addresses, and LED colours — are pending engineering confirmation and must not be treated as final. Do not commission a production site from a preliminary procedure without verifying every [\[TBD\]](#) against the released manual and the unit's rating label.

About this guide

Product	Sensorium™ Gateway — Universal IoT Gateway
Family / role	Sensorium™ · Connect
Audience	Qualified installation and controls personnel
You will	Unbox → mount → wire (power, antennas, field, Ethernet) → power on → configure → commission
You need	This guide, the unit's rating label, and site network/enrollment details from the 5Tech Platform administrator
Related	Datasheet datasheets/sensorium-gateway-datasheet/ ; full operation & maintenance in the product manual (see §8)

Conventions. Steps are numbered, one action each; a safety notice always appears **before** the step it governs. Signal words follow the 5Tech standard:

SIGNAL WORD	MEANING
DANGER	Imminent hazard that will cause death or serious injury if not avoided.
WARNING	Hazard that could cause death or serious injury.
CAUTION	Hazard that could cause minor or moderate injury.
NOTICE	Practice that could cause property or equipment damage, or a failed install.

1. In the box

IN THE BOX



Gateway unit
×1



DIN / wall bracket



Antennas
×[TBD]



Connector set



Quick-start card

Contents — verify against the checklist; contact info@5tech.ca if anything is missing.

Figure FIG-001 — Everything that ships in the Sensorium™ Gateway box. Confirm every item is present before you start.

Unpack on a clean surface and check each item against the list. Exact quantities and part numbers are [TBD] pending the released bill of materials.

#	ITEM	QTY	NOTES
1	Sensorium™ Gateway unit	1	Ruggedized enclosure (sealing targeted) with integrated status LEDs
2	DIN-rail clip	[TBD]	Pre-fitted or in bag
3	Wall-mount bracket + fasteners	[TBD]	For surface mounting
4	Sealed connector set	[TBD]	For field / power wiring
5	Wi-Fi antenna	[TBD]	Quantity per variant
6	Cellular antenna (option)	[TBD]	With the cellular option only
7	Quick-start card	1	Points to this guide and the manual

NOTICE. Do not discard packaging until commissioning (§7) passes. Retain the rating label information — you will need the model/serial and any [TBD] supply rating during wiring and configuration.

Before you continue

- 1. Inspect the enclosure, connectors, and antenna threads for shipping damage.
- 2. Verify the box contents match the table above and the packing slip.
- 3. Record the model and serial number from the rating label for your commissioning record.

If any item is missing or damaged, stop and contact 5Tech support (§8) before mounting.

2. Required tools & safety

Read this entire section before starting. Installation must be performed only by **qualified personnel** familiar with low-voltage DC wiring, RF antenna installation, and the site's electrical safety rules.

2.1 Tools & materials

Exact fastener sizes, wire gauges, and torque values are [TBD] — confirm against §3–§4 and the rating label before cutting or tightening anything.

- Screwdrivers / bits to suit the terminal and bracket screws — size [TBD].
- Calibrated torque driver capable of the specified [TBD] N·m terminal and mounting torques.
- Wire strippers and ferrule crimper for the field/power conductors — ferrule size [TBD].
- Field conductors rated for the supply and environment — gauge/rating [TBD].
- Antenna wrench for the SMA connectors (finger-tight plus [TBD]).
- Digital multimeter to confirm supply polarity and voltage before connection.
- DIN rail (35 mm, [TBD] confirm) or wall anchors suited to the mounting surface.
- A laptop or mobile device for initial configuration (§6).
- Personal protective equipment per site rules (eye protection, insulated gloves as required).

2.2 Electrical safety

WARNING — Redundant power inputs. The Gateway accepts **two independent supplies (input A and input B)**. De-energizing one input does **not** de-energize the other. Isolate and lock out **both** sources before touching any power conductor.

WARNING — Shock hazard. Do not wire the unit while either supply is energized. Verify zero voltage at the terminals with a multimeter before connecting.

NOTICE — Supply rating. Connect only a DC supply within the unit's rated range (9–36 V DC). Confirm polarity before energizing; reverse-polarity behaviour is [TBD].

2.3 RF safety

WARNING — RF radiation. The Wi-Fi and cellular antennas radiate when the unit is powered. Do not operate at less than the [TBD] minimum-separation distance from the antennas, and do not touch an antenna during transmission.

NOTICE — Never power on without antennas. Operating the radios without their antennas connected can damage the modem. Fit all required antennas (§4) before power-on (§5).

2.4 Environment & handling

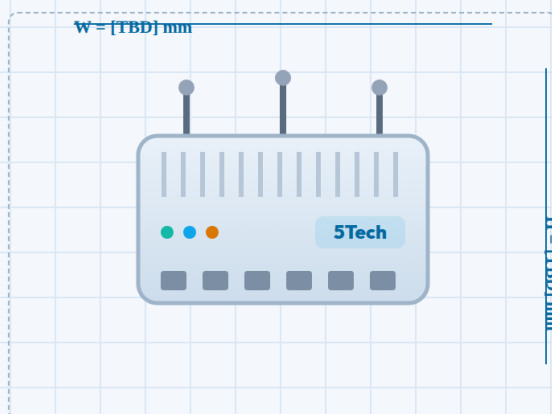
CAUTION — Hot surfaces. The aluminium enclosure and heat-sink fins dissipate heat and may be hot after operation. Allow to cool before handling.

NOTICE — ESD & sealing. Observe ESD precautions when the SIM/eSIM or connector covers are open. Keep all seals, glands, and unused-port caps in place to maintain the enclosure's environmental sealing (targeted).

3. Mounting

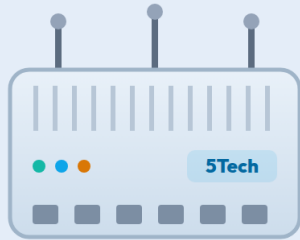
The Gateway mounts to a **35 mm DIN rail** or to a **wall** via its bracket. Review the dimensions before drilling.

DIMENSION DRAWING



Orthographic outline with principal dimensions and mounting pattern — values indicative, confirm before use.

Figure FIG-002 — Front and side elevations with overall dimensions and the mounting-hole pattern (mm). All values preliminary — [TBD].



- 1 Select mounting position
- 2 Fit DIN clip / wall bracket
- 3 Set orientation / field-of-view
- 4 Secure fasteners
- 5 Verify clearance

Figure FIG-003 — The Gateway on a DIN rail (left) and on its wall bracket (right), in the correct upright orientation.

3.1 Choose the location

NOTICE — Orientation & clearance. Mount the unit upright in the orientation shown in FIG-003, with the sealed connector face positioned to shed water (typically downward). Leave clearance of [TBD] around the heat-sink fins for convection and [TBD] for the antennas and cable bend radius. Do not obstruct the fins.

1. Select a flat, rigid surface or rail that can carry the unit's weight (~1.1 kg) plus cables.
2. Confirm the location keeps antennas clear of large metal obstructions for signal coverage.
3. Verify both power sources and all field/network cables can reach the connector face within their bend radius.

3.2 DIN-rail mounting

1. Confirm the rail is a standard 35 mm DIN rail ([TBD] confirm) and securely fixed.

2. Hook the top of the unit's DIN clip over the upper edge of the rail.
3. Push the bottom of the unit toward the rail until the clip snaps home.
4. Verify the unit is fully seated and does not slide along or lift off the rail.

3.3 Wall mounting

NOTICE — Fasteners. Use fasteners and anchors rated for the surface and the unit weight. Fastener size and mounting torque are [TBD] — do not exceed the released value.

1. Fit the wall bracket to the unit (if not pre-fitted) using the supplied fasteners.
 2. Hold the bracket at the chosen location, level it, and mark the mounting holes per FIG-002.
 3. Drill and fit anchors appropriate to the surface.
 4. Fasten the bracket to the wall and tighten to [TBD] N·m.
 5. Verify the unit is level, secure, and does not move under hand pressure.
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4. Wiring & connections

Wire the unit in this order: **protective earth** → **redundant power** → **antennas** → **field/sensor** → **Ethernet**. Keep every supply isolated until S5.

Terminal	Signal	Rating
PWR A	+ / - redundant input A	[TBD]
PWR B	+ / - redundant input B	[TBD]
ETH	network / PoE	[TBD]
FIELD	sensor / fieldbus	[TBD]

Terminal assignments — observe polarity on redundant inputs; ratings per the datasheet.

Figure FIG-004 — Field wiring overview: redundant power inputs A/B, Wi-Fi and cellular antennas, field/sensor and Ethernet connections. Terminal designations preliminary.

WARNING — De-energize first. Confirm both power sources (input A and input B) are isolated and locked out, and verify zero voltage at the terminals, before making any connection.

Terminal and port designations are preliminary; confirm against the rating label and the released manual.

CONNECTION	TERMINAL / PORT	SIGNAL	NOTES
Protective earth	[TBD]	PE / ground	Connect first, remove last
Power input A	[TBD]	+ / – DC	Primary supply, 9–36 V DC
Power input B	[TBD]	+ / – DC	Redundant supply, independent source
Wireless antenna	SMA (female)	Wi-Fi / cellular RF	Required before power-on
Cellular antenna (option)	SMA (female) [TBD]	Cellular RF	With the cellular option
Field / sensor	[TBD] terminal	Fieldbus / sensor	Sensorium™ devices & PLCs
Ethernet (LAN)	[TBD]	Ethernet (PoE [TBD])	Local devices / service
SIM / eSIM	Sealed access	Cellular SIM	Provision per carrier

4.1 Earth and power

NOTICE — Polarity. Confirm DC polarity with a multimeter before landing the power conductors. Reverse-polarity behaviour is [TBD].

1. Connect the protective-earth conductor to the earth terminal and tighten to [TBD] N·m.
2. Land power **input A** (+ and –) on its terminal; tighten to [TBD] N·m.
3. Land power **input B** on its terminal from an independent source; tighten to [TBD] N·m.
4. Verify each conductor is captive and no strands are exposed outside the terminal.

4.2 Antennas

NOTICE — Fit before power. Attach all required antennas before applying power (§5) to avoid modem damage. Do not over-tighten SMA connectors.

1. Thread the Wi-Fi / cellular antenna(s) onto the marked SMA port(s); tighten finger-tight plus [TBD].
2. Thread the cellular antenna onto its port (if the cellular option is fitted); tighten finger-tight plus [TBD].
3. Verify each connector is seated square and the seal is intact.

4.3 Field / sensor and Ethernet

- 1. Land the Sensorium™ field/sensor and fieldbus conductors on the field terminal per FIG-004; observe the [TBD] pinout.
- 2. Connect the Ethernet cable to the LAN port for local devices or service access.
- 3. Fit sealed glands/covers on all used ports and caps on all unused ports to preserve the ingress rating.
- 4. Verify all cables are strain-relieved and dressed within their bend radius.

5. Power-on & indicators

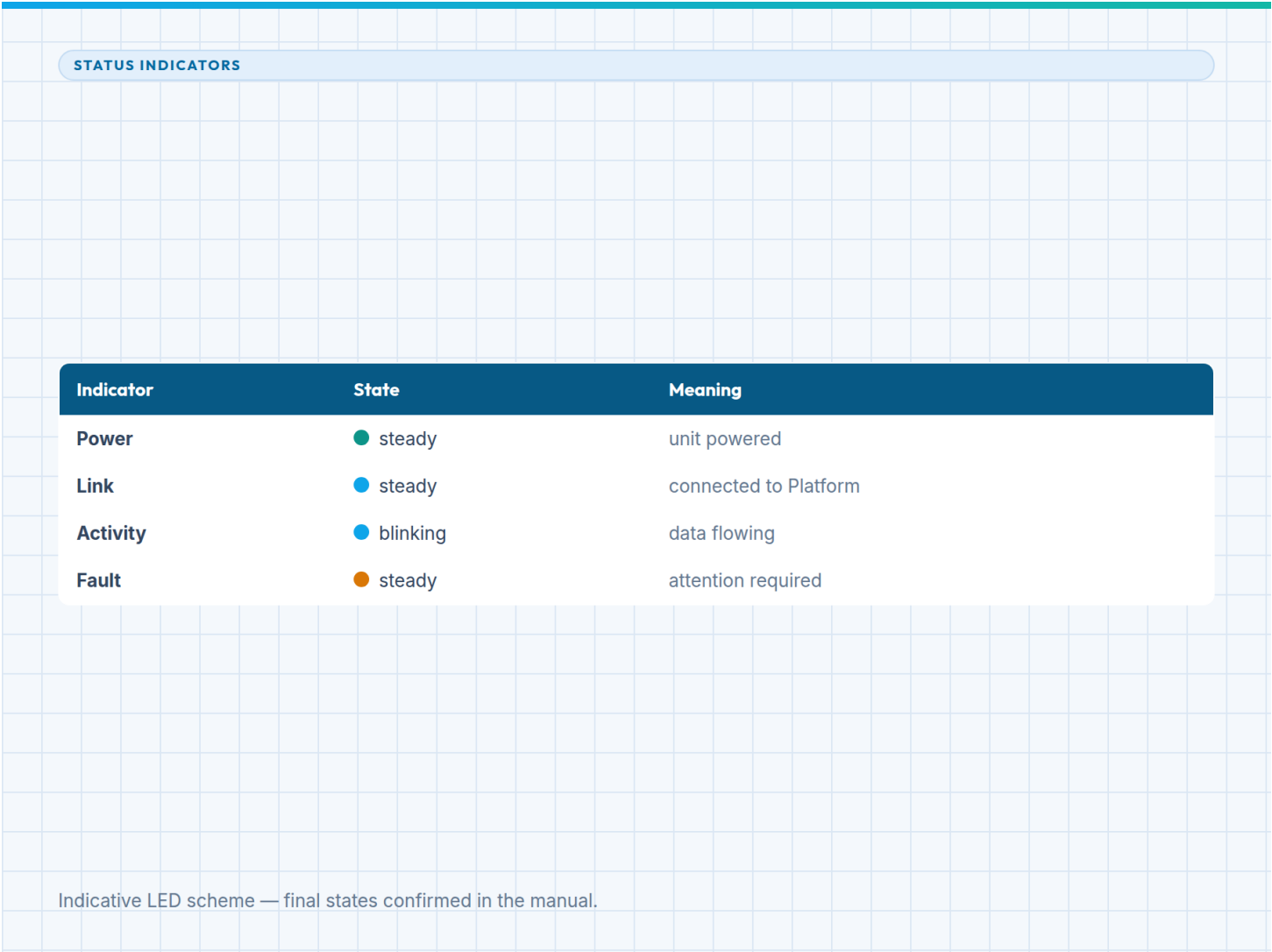


Figure FIG-005 — Status-LED row with a legend mapping each indicator and its start-up state to a plain-language meaning. LED colours and blink patterns are preliminary — [TBD].

WARNING — Antennas required. Confirm all required antennas are fitted (§4.2) before applying power. Do not stand within the [TBD] RF separation distance during the first

transmission.

5.1 Apply power

1. Remove the lockout from power **input A** and energize it.
2. Verify the **Power A** indicator confirms supply present (state [TBD]).
3. Remove the lockout from power **input B** and energize it.
4. Verify the **Power B** indicator confirms the redundant supply present (state [TBD]).
5. Allow the unit to complete its start-up sequence (duration [TBD]) without interruption.

5.2 Read the indicators

Indicator purposes are as designed; exact colours, blink patterns, and timing are [TBD] and confirmed in the manual.

INDICATOR	PURPOSE	EXPECTED AFTER HEALTHY START-UP
Power A	Supply present on input A	On — state [TBD]
Power B	Supply present on input B (redundant)	On — state [TBD]
System / Status	Unit booted and running	Steady healthy state [TBD]
WAN	Wi-Fi / cellular link status	Connected — state [TBD]
BLE / Sensors	BLE sensor-node link status	Active — state [TBD]
Network / Link	Uplink to the 5Tech Platform	Connected — state [TBD]

NOTICE — Fault indication. If the System/Status indicator shows a fault state ([TBD]) or a power indicator is off, remove power, recheck §4 wiring, and consult the troubleshooting chapter of the manual before proceeding.

6. Initial configuration

The goal of this section is the minimum configuration needed to bring the Gateway online and **reach the 5Tech Platform**. Obtain the site network and enrollment details from your Platform administrator first.

Access addresses, default credentials, and the enrollment/claim procedure are [TBD] — use the values issued for your deployment.

1. Connect your laptop or mobile device to the Gateway's local service interface (Ethernet or [TBD]).
2. Open the local configuration interface at the [TBD] address in a browser.
3. Sign in with the credentials issued for the unit; change any default credential when prompted.
4. Enter the WAN settings: Wi-Fi credentials and, if the cellular option is fitted, the cellular APN / SIM profile ([TBD]).
5. Confirm the unit acquires a WAN connection (the WAN indicator reaches its connected state).
6. Enter the 5Tech Platform enrollment details (site/claim identifier and endpoint, [TBD]).
7. Apply the settings and confirm the Network/Link indicator reaches its connected state.
8. Verify the unit appears as online in the 5Tech Platform for this site.

NOTICE — Credentials. Do not leave the unit on default credentials. Record the final configuration in your commissioning file and hand it to the site owner.

7. Commissioning verification

Complete every check before leaving the site. All items must pass; any [TBD] acceptance value is confirmed against the released manual.

- [] Box contents verified; model/serial recorded (§1).
- [] Unit mounted upright, level, and secure in the correct orientation with required clearances (§3).
- [] Protective earth connected; both power inputs A and B landed to independent sources and torqued (§4.1).
- [] All required antennas fitted and seated (§4.2).
- [] Field/sensor and Ethernet connections landed per FIG-004; all seals, glands, and unused-port caps fitted (§4.3).
- [] Power A and Power B indicators confirm both supplies present (§5).
- [] System/Status indicator shows the healthy running state (§5).
- [] Redundancy verified: with input B present, briefly removing input A (per site rules) does not drop the unit — supply restored afterward ([TBD] confirm procedure).

- [] WAN link established (Wi-Fi / cellular) (§5–§6).
- [] Uplink to the 5Tech Platform established; unit shows **online** for this site (§6).
- [] Aggregated Sensorium™ field/sensor data is visible in the Platform ([TBD] confirm expected signals).
- [] Default credentials changed; final configuration recorded and handed over (§6).

If every item passes, the installation is commissioned. If any item fails, resolve it using this guide and the manual's troubleshooting chapter before handover.

8. Next steps

This guide covers installation and quick-start only. For full operation, configuration, maintenance, and troubleshooting, use the product **manual**.

- **Manual:** [manuals/sensorium-gateway-manual/](#) — operation, configuration, maintenance, troubleshooting.
 - **Datasheet:** [datasheets/sensorium-gateway-datasheet/](#) — full mechanical, electrical, and environmental specifications.
 - **Aggregates:** Sensorium™ Safety Zone and Sensorium™ Smart Bolt devices.
 - **Uplinks to:** the 5Tech Platform (Monitoring · Automation · AI assistance).
 - **Support:** 5Tech — Vancouver, BC, Canada · info@5tech.ca.
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Figures

ID	TITLE	SUBFOLDER / FILE	PURPOSE
FIG-001	In the Box	figures/in_the_box.png	Unboxing checklist — confirm all shipped items
FIG-002	Dimension Drawing	cad/dimension_drawing_mm.png	Mounting dimensions & hole pattern (mm)
FIG-003	DIN-Rail / Wall Mounting & Orientation	figures/mounting_din_wall.png	Mount methods and correct orientation
FIG-004	Wiring — Redundant Power, Antennas & Field	diagrams/wiring_power_antenna_field.png	Power, antenna, field, and Ethernet wiring
FIG-005	Status Indicators	figures/status_indicators.png	Start-up LED states and legend

Specifications and procedures are preliminary and subject to change. Figure source of truth: [figures.json](#). See [revision.md](#) for change control and [references.md](#) for sources. Web publication target: [/resources/manuals/gateway-install](#).