

Intelligent Locations Gateway 300

Model: ILAT - GW300



The Intelligent Locations Gateway 300 is a Wi-Fi/BLE real-time location system (RTLS) gateway. It scans Bluetooth Low Energy (BLE) tags, computes Angle of Arrival (AoA) location telemetry using the onboard Silicon Labs BG24 radio and CoreHW antenna array, and sends gateway and tag data to the Intelligent Locations INTRAX® Platform over the facility's Wi-Fi network.

Installation Pre-requisites

- Standard AC wall outlet
- Intelligent Locations-approved wall plate and mounting screw
- Factory-provisioned 2.4 GHz / 5 GHz Wi-Fi network
- Active INTRAX® Platform account and configured deployment location

Main Features

- Wi-Fi/BLE RTLS gateway for indoor deployments
- BLE AoA / direction finding for supported tags
- Factory preconfigured Wi-Fi connectivity
- Cloud-managed configuration through INTRAX® Platform
- QR code with MAC address for device identification
- No user-facing LEDs, reset button, or service button

Electrical Specifications

- Ratings: 120/240 VAC, 50/60 Hz
- AC input range: 85-305 VAC, 47-63 Hz
- Current: approx. 70 mA at 115 VAC; 40 mA at 230 VAC
- Internal device power: 3.3 VDC
- Network interface exposed to user: Wi-Fi only

Physical Specifications

- Length: 3.00 in (76.20 mm)
- Width: 1.50 in (38.10 mm)
- Height: 3.50 in (88.98 mm)
- Wall-outlet installation with wall-plate screw retention

Processor / Memory

- NXP i.MX6ULL, ARM Cortex-A7, up to 900 MHz
- 512 MB DDR3L RAM
- 8 GB eMMC flash storage
- Embedded Linux / Yocto gateway runtime

Wi-Fi Specifications

- Certified dual-band Wi-Fi 802.11 ac/a/b/g/n
- Frequency bands: 2.4 GHz and 5 GHz
- Work mode: Client
- Wi-Fi credentials are provisioned at the factory
- Remote configuration is managed by Intelligent Locations through the INTRAX® Platform
- WPA2-Personal / WPA2-PSK
- WPA2-Enterprise / 802.1X, when provisioned by Intelligent Locations
- Enterprise authentication methods may include PEAP/MSCHAPv2 or certificate-based EAP-TLS depending on customer network requirements and firmware configuration.
- **Note:** The Gateway300 is designed for low-bandwidth RTLS telemetry.

BLE / AoA Specifications

- Silicon Labs EFR32BG24B220F1024IM48-B wireless SoC
- Bluetooth LE 5.4 operation
- 2.4 GHz BLE radio operation: 2.402-2.480 GHz
- ARM Cortex-M33 wireless SoC, 78 MHz
- 1024 kB flash, 128 kB RAM
- AoA antenna module
- Four patch antenna elements on a 75 mm x 75 mm PCB
- Antenna assembly is internal and not user-accessible

Environmental Specifications

- Operating temperature: 0 to 70°C
- Storage temperature: -40 to 85°C
- Storage humidity: 5% to 95% RH, non-condensing
- Indoor use only. Do not expose to rain, water, or outdoor conditions.

Applications

Gateway 300 is used in healthcare and workspace indoor RTLS deployments for room/zone-level location services, asset visibility, staff support workflows, patient tracking, and deployment analytics. The device collects BLE tag signals and AoA measurements and sends telemetry to the INTRAX® Platform for processing and application use.

Installation & Commissioning

1. Install Gateway 300 in the area according to the floorplan and RTLS design provided by Intelligent Locations.
2. Plug the device into the AC wall outlet and secure it to the wall plate using the retaining screw.
3. The gateway connects to the facility Wi-Fi network that was preconfigured before shipping.
4. Scan the QR code / MAC address label and assign the device to the correct location in the INTRAX® Platform.
5. When online, Gateway 300 sends BLE scan and AoA telemetry to the INTRAX® Platform.
6. Install and operate the device with at least 20 cm separation between the radiator and the body.

WARNING

- Gateway 300 contains electronic elements that should be properly disposed of. Contact Intelligent Locations support before disposal.
- No user-serviceable parts are inside. Do not open, alter, modify, repair, or service the device.
- Install indoors only and keep the device dry. Do not install in wet, outdoor, or explosive environments.
- Use only the approved enclosure, wall plate, and mounting hardware supplied or approved by Intelligent Locations.
- Do not cover the device with metal, foil, paint, or other materials that may block RF signals or airflow.

FCC Caution

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. Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. NOTE: Class A digital device. Operate in a commercial environment. Residential use may cause harmful interference, and the user may be required to correct it.

- 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.

The device has been evaluated to meet general RF exposure requirements. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

Produced for

Intelligent Locations, Inc.
INTRAX® Platform
Website: intelligentlocations.io
Support: support@intelligentlocations.io
Address: 8601 Six Forks Road, Suite 205, Raleigh, NC 27615, United States

Compliance

- FCC Part 15