

Alcatel-Lucent OmniAccess Stellar IoT Gateway AP1201BG

Today's enterprise is being transformed through intelligence and visibility provided by asset management and tracking. Alcatel-Lucent OmniAccess® Stellar LBS and Asset Tracking solution improves business efficiencies by providing the real-time location of an asset and its use. This solution also provides analysis and tools that optimize asset use and provisioning. Instant asset search enhances the employee experience and improves employee productivity and workflows.



The efficient [Alcatel-Lucent OmniAccess Stellar IoT Gateway AP1201BG](#) leverages Bluetooth low-energy (BLE) and Wi-Fi for asset tracking services.

AP1201BG gathers data from Stellar BLE tags and securely pushes it to the Alcatel-Lucent OmniVista® Cirrus Asset Tracking application to identify asset location which will be used by enterprises to improve workflow, optimize staff productivity and improve ROI by solving business issues associated with asset tracking and usage.

OVC-Asset Tracking takes advantage of data gathered by AP1201BG to analyze and provide output as actionable business insights.

AP1201BG has integrated support for BLE5.0/Zigbee/Thread, making it ideal as a broad gateway for IoT end-points and applications.

Cloud and on-premises centralized management

The AP1201BG BLE gateway can be managed by the OmniVista Cirrus cloud platform or OmniVista Enterprise. OmniVista Cirrus powers a secure, resilient and scalable cloud-based network management platform. OmniVista Enterprise offers simplified, secure, centralized on-premises management of AP1201BG. Centralized management enables configuration changes and network updates to be pushed remotely without on-site support.

Datasheet

[Alcatel-Lucent OmniAccess Stellar IoT Gateway AP1201BG](#)

Simplified deployment and management

AP1201BG provides cloud connectivity over Wi-Fi or Ethernet to meet various deployment requirements. AP1201BG are easy to deploy, configure and manage. AP1201BG gathers BLE signals from Stellar BLE tags, filters them based on the configuration before sending to the OVC-Asset Tracking application via Wi-Fi or Ethernet. This ensures low hosting cost and optimizes WAN bandwidth.

Stellar BLE tags equipped with accelerometer ensure data optimization based on the asset motion. This improves tags battery life as well as ensure low hosting cost.

By leverage existing Wi-Fi deployment, AP1201BG simplify Asset Tracking deployment and reduces infrastructure cost.

Secure cloud connectivity

The AP1201BG provides enterprise grade security and supports WPA/WPA2 with enterprise encryption of AES 128-256 bits to connect to cloud over Wi-Fi. AP1201BG uses secure communication protocols such as secure MQTT and Kafka, which provides security and scaling that is required for a large-scale asset tracking solution.

Simultaneous BLE beacon and BLE gateway functionality

The AP1201BG acts in BLE beacon mode and BLE gateway mode, or both modes simultaneously. This enables a single infrastructure to be used for asset tracking as well as for location-based services such as smart-phone based way-finding, geo-notification and more. A single infrastructure simplifies the solution deployment as well as brings down the cost of the total solution.

Product specifications

Radio specification

- BLE5.0: 2.4 GHz, Maximum transmit power 19 dBm
- Wi-Fi: 5 GHz 802.11ac 2x2:2 MU-MIMO + 2.4 GHz 802.11n 2x2:2 SU-MIMO
- Supported Wi-Fi radio frequency bands (country-specific restrictions apply):
 - 2.400 to 2.4835 GHz
 - 5.150 to 5.250 GHz
 - 5.250 to 5.350 GHz
 - 5.470 to 5.725 GHz
 - 5.725 to 5.850 GHz
- Wi-Fi radio frequency bands: Compliance requirements vary by country/region
- Supported modulation types:
 - BT: GFSK
 - BLE5.0: GFSK, $\pi/4$ -DQPSK, 8DPSK

Interfaces

- 1x 10/100/1000Base-T autosensing (RJ-45) port, Power over Ethernet (PoE)
- 1x management console port (RJ-45)
- Reset button: Factory reset
- Kensington security slot

BLE reception

- -103.3 dBm sensitivity at 125 Kb/s GFSK, 2.4 GHz
- -94.8 dBm sensitivity at 1 Mb/s GFSK, 2.4 GHz
- -91.5 dBm sensitivity at 2 Mb/s GFSK, 2.4 GHz
- -102.7 dBm sensitivity at 250 Kb/s DSSS-OQPSK, 2.4 GHz

Visual indicators (tri-color LEDs)

- For system and radio status
 - Red flashing: System abnormal, link down
 - Red light: System startup
 - Red and blue rotate flashing: OS upgrading
 - Blue light: BLE and Wi-Fi working properly
 - Green flashing: Bluetooth working abnormally
 - Green light: Bluetooth working properly
 - Red, blue and green rotate flashing: Use for location of a BG

Security

Integrated Trusted Platform Module (TPM) for secure storage of credentials and keys

Antenna

- Integrated BLE antenna with peak gain 3.7dBi
- Two integrated dual-band omnidirectional antennas for 2x2 MIMO with maximum individual antenna gain of 4.7 dBi in 2.4GHz and 4.6 dBi in 5 GHz.

Power

- Supports direct DC power and Power over Ethernet (PoE)
- When both power sources are available, DC power takes priority over PoE
- Maximum (worst case) power consumption:
 - 11W (802.3af PoE or DC)
 - 4.1W in idle mode
- Direct DC source: 48V DC nominal, $\pm 5\%$
- Power over Ethernet (PoE): IEEE 802.3af source

Mounting

- The AP-211BG ships with mount kits for flat-surface (wall).
- Optional mount kits for Open Silhouette and Flanged Interlude.
- Optional mount kits for 9/16-inch or 15/16-inch flat T-bar drop-tile ceiling

Environmental

- Operating:
 - Temperature: 0°C to 45°C (+32°F to +113°F)
 - Humidity: 10% to 90% non-condensing
- Storage and transportation:
 - Temperature: -40°C to +70°C (-40°F to +158°F)

Dimensions/Weight

- Excluding packing box and accessories:
 - 155 mm (W) x 155 mm (D) x 28 mm (H)
 - 6.10 in. (W) x 6.10 in. (D) x 1.10 in. (H)
 - 310 g/0.68 lb.
- Including packing box and accessories:
 - 185 mm (W) x 172 mm (D) x 57 mm (H)
 - 7.28 in. (W) x 6.77 in. (D) x 2.24 in. (H)
 - 500 g/1.10 lb.

Reliability

- MTBF: 1,143,213h (130.5 years) at +25°C operating temperature

Authentication and encryption

- 802.11i, Wi-Fi Protected Access 2 (WPA2)
- WPA3 hardware ready Regulatory and certification
- CB Scheme Safety, cTUVus
- Wi-Fi Alliance (WFA) certified 802.11a/b/g/n/ac
- FCC
- CE marked
- RoHS, REACH, WEEE
- EN 60601-1-1 & EN 60601-1-2
- EMI and susceptibility (Class B)

Ordering information

| Items | Description |
|-----------------|--|
| OAW-AP1201BG-RW | OmniAccess Stellar IoT GATEWAY AP1201BG. Dual radio 2x2:2 802.11a/b/g/n/ac Wi-Fi client, integrated BLE GW, integrated antenna, 1x GbE, 1x 48V DC power interface, 1x Console. Cannot be used as Access Point. Restricted Regulatory domain - Rest of the World. |
| OAW-AP1201BG-US | OmniAccess Stellar IoT GATEWAY AP1201BG. Dual radio 2x2:2 802.11a/b/g/n/ac Wi-Fi client, integrated BLE GW, integrated antenna, 1x GbE, 1x 48V DC power interface, 1x Console. Cannot be used as Access Point. Restricted Regulatory Domain: United States. |
| OAW-AP1201BG-ME | OmniAccess Stellar IoT GATEWAY AP1201BG. Dual radio 2x2:2 802.11a/b/g/n/ac Wi-Fi client, integrated BLE GW, integrated antenna, 1x GbE, 1x 48V DC power interface, 1x Console. Cannot be used as Access Point. Restricted Regulatory Domain Israel & Egypt. |

| Accessories | Description |
|-----------------|---|
| OAW-AP-MNT-B | OmniAccess indoor mounting kit, for AP1201BG, AP1X01, AP122X, AP123X, Type B1(9/16") and B2(15/16") for T-shaped ceiling rail mounting. Standard configuration in the product packaging. Optional for customer ordering |
| OAW-AP-MNT-W | OmniAccess indoor mounting kit, for AP1201BG, AP1X01, AP122X, AP123X, Type W wall and ceiling mounting with screws. |
| OAW-AP-MNT-C | OmniAccess indoor mounting kit, for AP1201BG, AP1X01, AP122X, AP123X, Type C1 (Open Silhouette) and C2 (Flanged Interlude), for other shaped ceiling rail mounting. Optional for customer ordering |
| PD-9001GR/AT/AC | 1-Port IEEE 802.3at PoE Midspan. Port speed 10/100/1000M PoE power 30W. No power cord included. Please order PWR-CORD-XX for country specific power cord. |
| ADP-30HRBD | 48V/30W AC-to-DC Power Adapter with Type A DC plug 2.1*5.5*9.5mm circular, straight. Please order PWR- CORD-XX for country specific power cord. |

Warranty

OmniAccess Stellar AP1201BG comes with a Hardware Limited Lifetime Warranty (HLLW)

Services and support

OmniAccess Stellar AP1201BG includes one year of complementary SUPPORT Software for partners. For more information about our

Professional Services, Support Services, and Managed Services, please go to <http://enterprise.alcatel-lucent.com/?services=EnterpriseServices&page=directory>