

DESCRIPTION

The Bluesocket 2030/2035 Access Point (BSAP) is designed for high user density environments such as conference centers and lecture halls. It supports high throughput applications such as video, and also applications with large file transfers such as CAD. The BSAP is fully functional with 802.3af Power over Ethernet (PoE), has a built-in stateful firewall, Wireless Intrusion-Detection System (W-IDS), and is completely plug-and-play ensuring simple and secure deployments.

Hardware

The following items are included in your shipment:

- Bluesocket 2030/2035 Access Point
- One wall/ceiling mounting hardware kit (two plastic anchors, two mounting screws)
- One flush/recessed ceiling T-rail mounting hardware kit (one flush mount bracket, one recessed mount bracket, four small screws)

Antenna

The BSAP 2030 includes one integrated, six element high-efficiency Planar Inverted F Antenna (PIFA) array with 5 dBi gain (no external antennas are required).

The BSAP 2035 includes six reverse-polarity subminiature version A (RP-SMA) antenna connectors (no integrated antennas are included with this model). Three antenna connectors are labeled **2.4G** and three labeled **5G**.

These antennas/connectors support two internal 802.11 radios: For a list of supported external antennas, refer to the [Bluesocket Compliance Notice](https://support-forums.adtran.com) located online at <https://support-forums.adtran.com>

- one 2.4 GHz 802.11b/g/n radio
- one 5 GHz 802.11a/n/ac radio

i NOTE

Record the 12-character MAC address and serial number listed on the back of the BSAP before mounting to a wall or other surface. This information will be required during configuration.

Installation

Before installing the equipment, inspect the BSAP. If damage has occurred during shipping, file a claim with the carrier, and then contact ADTRAN Customer Support. For more information, refer to the warranty or to ADTRAN enhanced support for ProCare or ProCare NBD purchased upgrades.

Mounting the BSAP to a Ceiling or Wall

Position the BSAP for maximum throughput and range between other BSAPs and wireless client devices. Complete these instructions and refer to [Figure 1](#) to mount the BSAP on an interior ceiling or wall using the enclosed ceiling/wall mounting kit:

1. BSAP 2035 only: Install the antennas (sold separately) onto the appropriate antenna ports. Both the antenna ports and the antennas are labeled **2.4G** and **5G**.

- Using a 0.25-inch (0.65 cm) drill bit, drill two holes in the ceiling or wall 2.75 inch (4.45 cm) apart, and tap the anchors into the holes.
- Drive the provided mounting screws into the plastic anchors leaving enough of the screws exposed to ensure that the screws can be inserted into the keyed slots in the bottom of the unit.
- Insert the screws into the keyed slots on the bottom of the BSAP and slide the BSAP forward (or backward) on the screws to securely mount it in place.
- Optionally, protect your BSAP with a Kensington cable lock (not provided) in the security slot.

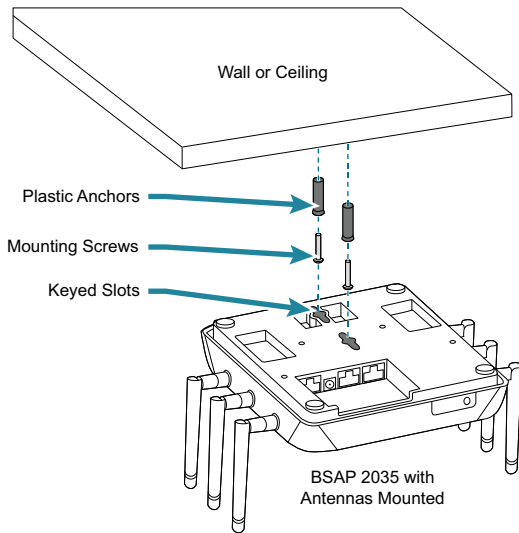


Figure 1. BSAP Hard Ceiling Mount

Mounting the BSAP to a Dropped Ceiling

Position the BSAP for maximum throughput and range between other BSAPs and wireless client devices. The BSAP 2030/2035 ships with plastic flush and recessed ceiling mounting brackets (T-rail kits) to mount the BSAP on the ceiling tile separators of standard and recessed dropped ceilings. Complete these instructions and refer to [Figure 2](#) to mount the BSAP to a dropped ceiling:

- Attach either the flush or recessed ceiling mounting bracket to the back of the BSAP using the included mounting screws.

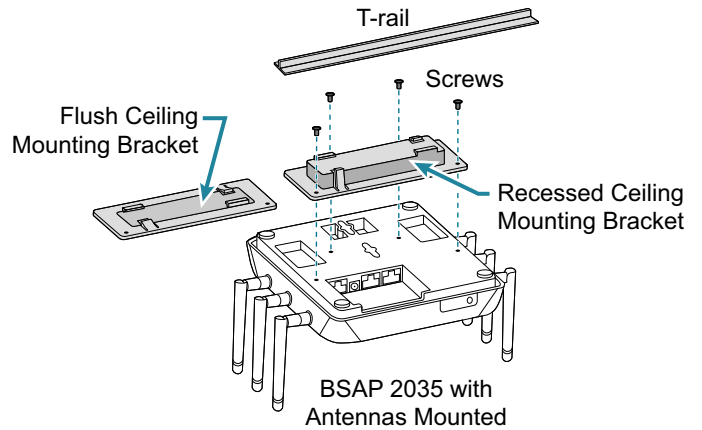


Figure 2. BSAP Mounting Bracket Kits

- For the BSAP 2035 only: Install the antennas (sold separately) onto the appropriate antenna ports. The antenna ports are labeled **2.4G** and **5G**.
- Once the mounting bracket is attached to the BSAP, align the mounting bracket at a slight angle to the T-rail. Slide the long bracket tabs onto the T-rail and rotate slightly until the flexible bracket tabs snap into place.

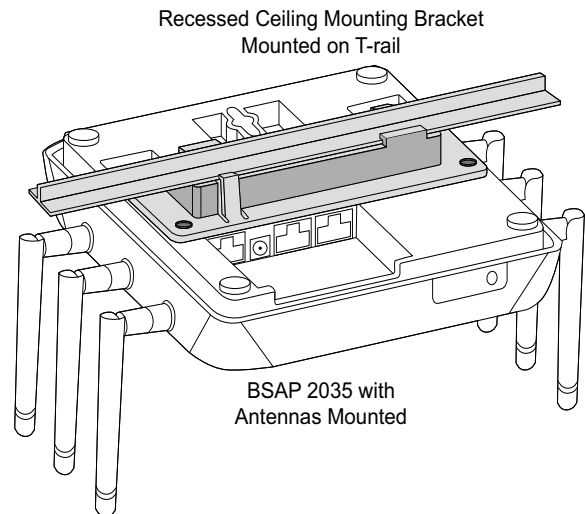


Figure 3. BSAP Dropped Ceiling Mount

- Optionally protect your BSAP with a Kensington cable lock (not provided) inserted in the security slot.

Supplying Power to the BSAP

The BSAP does not have a power switch. It is powered when connected to a network device that supplies PoE based on the IEEE 802.3af or 802.3at standard, or optionally by the following:

- External 802.3af PoE injector (P/N 1700926F1)
- External 802.3at PoE injector (P/N 1700923F1)
- External 2 amp DC power adapter (P/N 1700929F1) connected to an AC power source

To use the external DC power adapter, connect the adapter to the **12V DC** port on the back of the unit. The DC power adapter automatically adjusts to any voltage between 100 and 240 VAC at 50 or 60 Hz. No voltage range settings are required.

Connecting to the BSAP

If powering the BSAP using a network device such as a switch:

1. Connect the BSAP Ethernet port to the appropriate switch-port.
2. Obtain the IP address of the BSAP from the Dynamic Host Control Protocol (DHCP) server based on the MAC address of the BSAP. DHCP is enabled by default.
3. Use a Secure Shell (SSH) client to connect to the default IP address of the BSAP.

If powering the BSAP using a PoE injector:

1. Connect the Ethernet port of the BSAP to the **OUT** port of the PoE injector.
2. Connect the Ethernet port of the computer to the **IN** port on the PoE injector.
3. Use a Secure Shell (SSH) client to connect to the default IP address of the BSAP.

If the BSAP is powered using the optional DC power adapter:

1. Connect the Ethernet port of the BSAP to the Ethernet port of the computer.
2. Use a Secure Shell (SSH) client to connect to the default IP address of the BSAP.

Using the BSAP with Express Cloud

Express Cloud is now included with the purchase of new ADTRAN Bluesocket 2000 and 3000 series APs. Express Cloud can be used with the BSAP, however Elite Cloud or Elite On-Premises can be purchased for access to upgraded features.

For initial setup of Express Cloud:

1. Go to <https://adtran.com/cloud> and provide the requested information to create a new account. Express Cloud access information and credentials will be sent via email within one business day.
2. After receiving e-mail confirmation, connect BSAP to a power supply.
3. Connect BSAP to an internet-accessed network. The BSAP will automatically discover Express Cloud and will display in the account.

For existing Express Cloud accounts adding additional BSAPs:

1. Go to <https://adtran.com/cloud>.
2. Using the same email address as the existing Express Cloud account in the email field and the domain name in the company field.
3. If using an email address that already has an account and a domain that already exists, you will be adding additional BSAPs to that existing account and domain.

4. Confirmation that BSAPs have been added will be sent via email within one business day.
5. After receiving e-mail confirmation, connect the BSAP to a power supply.
6. Connect the BSAP to an internet-accessed network. The BSAP will automatically discover Express Cloud and will display in the account.

Express Cloud support is available in the ADTRAN interactive support community online at <https://supportforums.adtran.com>.

For further details regarding Express Cloud, Elite Cloud and Elite On-Premises, please refer to the FAQ in the support Community. For further information on creating an Express Cloud account refer to Creating an Express Cloud Account in the support community.

Using the BSAP with Elite Cloud

Purchasing an Elite Cloud subscription automatically creates a user cloud account. All further communication regarding the subscription will be provided via email.

For initial setup of Express Cloud:

1. Elite Cloud access information and credentials will be sent via email within one business day.
2. After receiving e-mail confirmation, connect the BSAP to a power supply.
3. Connect the BSAP to an internet-accessed network. The BSAP will automatically discover Elite Cloud and will display in the account.

For existing Elite Cloud accounts purchasing additional BSAPs and Elite Cloud Subscriptions:

1. Confirmation that the BSAPs have been added will be sent via email within one business day.
2. After receiving e-mail confirmation, connect the BSAP to a power supply.
3. Connect the BSAP to an internet-accessed network. The BSAP will automatically discover Elite Cloud and will display in the account.

Using the BSAP with Elite On-Premises

The BSAP can be configured for use with Elite On-Premises, the Bluesocket virtual wireless local area network (vWLAN). Using BSAP discovery to configure the BSAP with a previously-installed vWLAN can be achieved by allowing the BSAP to discover the vWLAN and receive its configuration information. This BSAP discovery process uses an algorithm that attempts discovery methods in this order: static configuration, Dynamic Host Control Protocol (DHCP) vendor option (43), Domain Naming System (DNS) discovery, cached vWLAN info, and Express/Elite Cloud Zero Touch discovery. If no response to the discovery request is received, the algorithm moves to the next method in the list (except when using static configuration, which never queries the other discovery methods).

Two additional network components can be configured to facilitate BSAP discovery:

1. An external DHCP server can be configured to assign IP addresses to the BSAPs associated with the vWLAN. When configuring the DHCP server, make sure to configure the Bluesocket DHCP Vendor option (43) on the server.
2. An external DNS server can be configured to resolve the name **apdiscovery** to the IP address of the vWLAN in the network environment.

i **NOTE**

When running static configuration the BSAP will not automatically query the other discovery methods.

For more information on the vWLAN and BSAP discovery, please refer to the [vWLAN AP Discovery Configuration Guide](https://supportforums.adtran.com) available online at <https://supportforums.adtran.com>.

Configuring the BSAP's IP Address or Static Discovery Using the CLI

By default, DHCP is enabled on the BSAP. However, if static configuration is required for the IP address or AP discovery for the BSAP, users can access the BSAP's CLI using either a VT100 terminal emulation program or an SSH client.

To access the BSAP CLI using a VT100 terminal emulation program:

1. Connect a DB-9 to RJ-45 serial cable (rollover cable) to the BSAP's **CONSOLE** port, and connect the other end of the serial cable to the PC.
2. Open a VT100 terminal emulation program with the following settings: **115,200** data rate, eight data bits, no parity bits, and **1** stop bit (no flow control).
3. Select **<Enter>** to access the CLI. At the prompt, enter the user name **adm1n** and the password **blue1socket**.

To access the BSAP CLI using an SSH client, complete these steps:

1. Ensure that the BSAP is connected to a controlling computer (using the provided RJ-45 Ethernet cable).
2. Specify that the computer's TCP/IP setting is On or Enabled by navigating to Control Panel and select Network Connections.
3. Double-click the connection of your network interface card and select Internet Protocol (TCP/IP).
4. Select Properties then specify that the TCP/IP setting is enabled.
5. Set your PC to a static IP address of 192.168.190.2 with a subnet mask of 255.255.255.0.
6. Access the BSAP's command line interface (CLI) using an SSH client.
7. Open an SSH connection using the unit's default IP address (192.168.190.1) and port 2335 connected to the LAN1 port on the BSAP.
8. At the prompt, enter the user name **adm1n** and the password **blue1socket**.

BSAP 2030/2035 LED Description

LED Array					BSAP State
					Boot Loader Initialization
					Operating System Initialization
					LAN Initialization
					Discovering vWLAN
					Firmware Upgrade (Download)
					Firmware Upgrade (writing or verifying)
					Firmware Upgrade Complete
					Operational with No Activity on Radios
					Operational with Activity on Radios

* Flash speed varies with data rate. If the data rate is slow, LED flashes slowly. If the data rate is extremely slow, the LED may appear solid green.

Configuring the Application

More detailed documentation for configuring the BSAP 2030/2035 is provided in the [vWLAN Administrator's Guide](https://supportforums.adtran.com), available online at <https://supportforums.adtran.com>.

Additional safety and regulatory guidelines are given in the document [Bluesocket Compliance Notice](https://supportforums.adtran.com) available online at <https://supportforums.adtran.com>.

Acronyms

BSAP	Bluesocket Access Point
CLI	Command Line Interface
DHCP	Dynamic Host Configuration Protocol
DNS	Domain Name System
LED	Light Emitting Diode
PIFA	Planar Inverted F Antenna
PNS	Product Name Short
PoE	Power Over Ethernet
SSH	Secure Shell
TCP/IP	Transmission Control Protocol/Internet Protocol
vWLAN	Virtual Wireless Local Area Network
WIDS	Wireless Intrusion-Detection System

SAFETY AND REGULATORY

Refer to the Safety and Regulatory Notice for this product (P/N: 1700948F1, 1700949F1) for detailed safety and regulatory information.

Consultez l'avis sur la sécurité et la conformité à la réglementation pour ce produit (61700948F1-13E) pour obtenir des renseignements détaillés sur la sécurité et la réglementation

Ausführliche Sicherheits- und regulatorische Informationen sind in der Konformitätserklärung zur Sicherheit und Einhaltung von Normen zu diesem Produkt (61700948F1-13E) aufgeführt.

FCC Radio Frequency Interference

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.
2. This device must accept any interference received, including interference that may cause undesired operation.

Documentation for ADTRAN Network Solutions products is available for viewing and download directly from the ADTRAN Support Community website.

Go to: <https://supportforums.adtran.com/welcome>

Registration is required.

ADTRAN offers training courses on our products, including customized training and courses taught at our facilities or at customer sites.

For inquiries, go to: <http://adtran.com/training>

The following online documents and resources provide additional information for this product:

Bluesocket Compliance Notice

vWLAN Administrator's Guide

vWLAN AP Discovery Configuration Guide

Warranty: ADTRAN will replace or repair this product within the warranty period if it does not meet its published specifications or fails while in service. Warranty information can be found online at www.adtran.com/warranty.

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