

## CONFIGURING THE APPLICATION

More detailed documentation for configuring the BSAP 2020 Series is provided in the *vWLAN Administrator's Guide*, available online at <https://supportforums.adtran.com>.

## BSAP 2020 SERIES LED DESCRIPTION

BSAP State	Status	Ethernet	Radio
Boot Loader Initialization	Off	Off	Solid Orange
Operating System Initialization	Solid Green	Off	Off
LAN Initialization	Flashing Green	Flashing Orange	Off
Discovering vWLAN	Flashing Green	Flashing Green	Off
Firmware Upgrade (download)	Off	Flashing Green	Flashing Orange (Slow)
Firmware Upgrade (writing or verifying)	Off	Flashing Green	Flashing Orange (Fast)
Firmware Upgrade Complete	Off	Flashing Green	Solid Orange
Operational with No Activity on Radios	Solid Green	Flashing Green	Solid Green
Operational with Activity on Radios	Solid Green	Flashing Green	Flashing Green

## FCC RADIO FREQUENCY INTERFERENCE

This device complies with Part 15 of the Federal Communications Commission (FCC) rules. The operation of this device 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.



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

## THIRD-PARTY SOFTWARE

The software included in the Bluesocket 2020 Series contains copyrighted software that is licensed under the GNU General Public License (GPL). For a list of third-party software and their licenses, go to <http://www.adtran.com/software/EULA>. You can obtain the complete corresponding source code of such software components from ADTRAN for a period of three years after our last shipment of this product by sending a money order or check for \$5 to:

ADTRAN, Inc. P.O. Box 933638, Atlanta, GA 31193-3638

Please write *GPL Source for product Bluesocket 2020 Series* in the memo line of your payment. This offer is valid to anyone in receipt of this information.

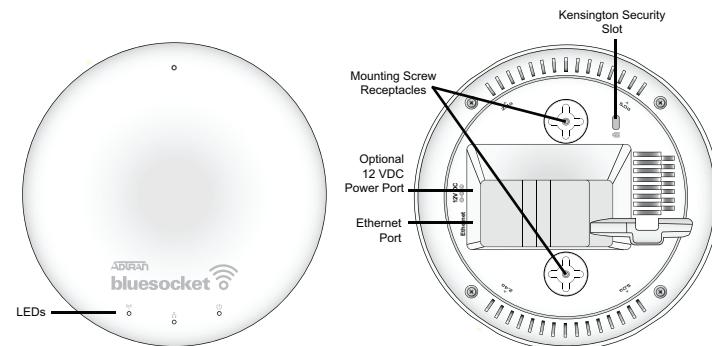
## BLUESOCKET 2020 SERIES ACCESS POINT

P/N 1700945F1

### HARDWARE

The following items are included in your shipment:

- Bluesocket 2020 Series Access Point (BSAP)
- One plastic wall/ceiling mounting bracket with hardware (two metal screw anchors, two long screws, two short screws)
- One flush/recessed ceiling T-rail mounting hardware kit (four T-rail clips (two sizes), two spacers, two long screws, two short screws)



### ANTENNAS

The BSAP 2020 Series provides one integrated, four element high-efficiency Planar Inverted F Antenna (PIFA) array with 3 dBi gain (no external antennas are required).

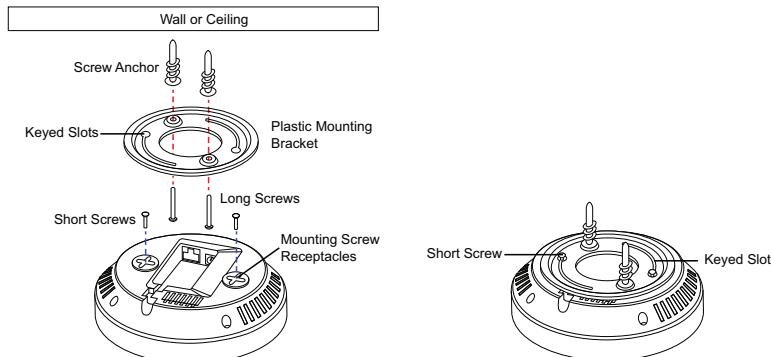


Make a note of the 12-character MAC address and serial number listed on the back of the BSAP 2020 Series before mounting the BSAP to a wall or other surface. This information will be required during configuration.

### MOUNTING THE BSAP TO A CEILING OR WALL

BSAPs should be positioned for maximum throughput and range between other APs and wireless client devices. Follow these instructions to mount the BSAP to an interior ceiling or wall using the enclosed ceiling/wall mounting kit:

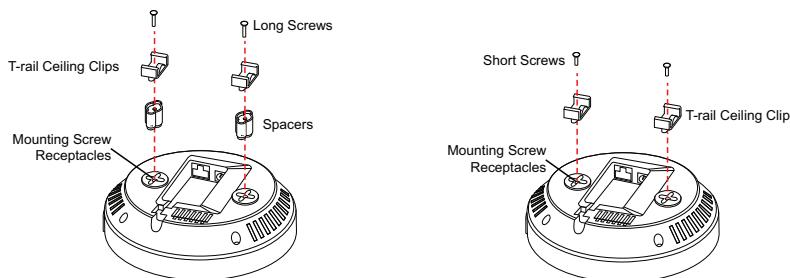
1. Using the plastic mounting bracket as a template, mark the location to insert the screw anchors.
2. Press the point of the screw anchors into the sheetrock at the marks and drive them into the wall using a Phillips-head screwdriver.
3. Insert the long screws through the recessed holes in the plastic mounting bracket and drive them into the metal anchors.
4. Drive the short screws into the metal screw receptacles on the bottom of the BSAP until they are firmly seated in the receptacle. If extra space is required, use the spacers and long screws provided with the T-rail mounting hardware kit to increase the space between the unit and the mounting bracket. Leave enough of the long screws exposed above the spacer to ensure they can be inserted into the keyed slots on the mounting bracket.
5. Mount the BSAP on the mounting bracket by inserting the screws on the back of the BSAP into the keyed slots on the mounting bracket and rotating the unit clockwise 90 degrees to secure it on the bracket.
6. Optionally, protect your BSAP with a Kensington cable lock (not provided) inserted into the security slot.



## MOUNTING THE BSAP TO A DROPPED CEILING

The BSAP 2020 Series ships with a T-rail mounting kit to mount the BSAP on the ceiling tile separators of standard dropped ceilings. The mounting clips come in two sizes and can be mounted to either recessed (using the spacer) or flush dropped ceiling T-rails. BSAPs should be positioned for maximum throughput and range between other BSAPs and wireless client devices. To mount the BSAP to a dropped ceiling:

1. Attach the appropriate size ceiling clips to the bottom cover of the BSAP using the provided short screws.



If extra space is required to accommodate recessed dropped ceiling tiles, use the provided spacers and longer screws included in the T-rail ceiling mount kit.

2. Once the ceiling clips are attached to the BSAP, line up the T-rail clips with an appropriately sized rail and press the unit onto the rail until it snaps into place.
3. Optionally, protect your BSAP with a Kensington cable lock (not provided) inserted in the security slot.

## SUPPLYING POWER TO THE BSAP

The BSAP 2020 Series does not have a power switch. It is powered when connected to a network device that supplies PoE based on the IEEE 802.3af standard, an optional external PoE injector (P/N 1700923F1), or by an optional external 1.25 amp DC power adapter (P/N 1700928F1) connected to an AC power source. The BSAP 2020 Series is fully functional using 802.3af PoE and 802.3at PoE+. 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.



- If the BSAP is used in a medical environment, it must use an IEC/EN 60601-1 compliant power adapter.
- Ethernet and PoE cables are intended for intrabuilding use only. Connecting this device directly to cables that run outside the building in which the unit is housed will void the user's warranty and could create a fire or shock hazard.

## CONNECTING TO THE BSAP

If the BSAP is to be powered using a network device such as a switch, connect the Ethernet port of the BSAP to the appropriate switchport. 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. You can then use a Secure Shell (SSH) client to connect to the BSAP based on the instructions below.

If the BSAP is powered using a PoE injector, connect the Ethernet port of the BSAP to the **OUT** port of the PoE injector and connect the Ethernet port of the computer to the **IN** port on the PoE injector. Then proceed to SSH to the default IP address of the BSAP as instructed below.

If the BSAP is powered using the optional DC power adapter, connect the Ethernet port of the BSAP to the Ethernet port of the computer. Then proceed to SSH to the default IP address of the BSAP as instructed below.

## CONFIGURING THE BSAP WITH vWLAN AND AP DISCOVERY

The BSAP 2020 Series can be configured for use with the Bluesocket virtual wireless local area network (vWLAN). If you have installed vWLAN, and want to use AP discovery to configure the BSAP, follow these steps. For more information on the vWLAN and AP discover, refer to the [vWLAN AP Discovery](https://supportforums.adtran.com) configuration guide available online at <https://supportforums.adtran.com>.

1. After powering the BSAP and connecting it to the network, allow the BSAP to discover the vWLAN appliance to receive its configuration information. This AP discovery process uses an algorithm that attempts discovery methods in this order: static configuration, DHCP vendor option (43), Domain Naming System (DNS) discovery, and cached vWLAN information. 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).
2. There are two additional network components that can be configured to facilitate AP discovery. First, an external DHCP server can be configured to assign IP addresses to APs associated with the vWLAN. When configuring the DHCP server, make sure to configure the Bluesocket DHCP Vendor option (43) on the server. Second, you can configure an external DNS server to resolve the name **apdiscovery** to the IP address of the vWLAN instance in the network environment.

## CONFIGURING THE BSAP'S IP ADDRESS USING THE CLI

By default, DHCP is enabled on the BSAP 2020 Series. However, if you need to statically configure the IP address or statically configure AP discovery for the BSAP, you can access the AP's CLI using an SSH client by following these steps:

1. Ensure that the BSAP is connected to a controlling computer (using the provided RJ-45 Ethernet cable).
2. Set your PC to a static IP address of **192.168.190.2** with a subnet mask of **255.255.255.0**.
3. Next, access the BSAP's command line interface (CLI) using an SSH client. 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. To access the unit using vWLAN, and for more instructions about CLI configuration, refer to the [Bluesocket vWLAN Administrator's Guide](https://supportforums.adtran.com), available online at <https://supportforums.adtran.com>.