

DATASHEET

NEWBRIDGE AP-3944 DUAL BAND 4X4 MIMO ACCESS POINT

Newbridge AP-3944 is the indoor wall/ceiling mount wireless access point that delivers high performance.

- 4x4 2.4GHz radio, up to 800Mbps physical data rate
- 4x4 5GHz radio, up to 1733Mbps physical data rate
- Supports Multi-User MIMO (MU-MIMO)



OVERVIEW

Newbridge AP-3944 is designed with enhanced RF transmission technology, providing greater coverage and higher signal quality, and can be widely used in carrier, enterprise, industry and other markets.

AP-3944 supports 802.11a/b/g/n/ac protocol standard, built-in IEEE 802.11n 2.4 GHz 4x4 MIMO with up to 800Mbps throughput and 5GHz 4x4 MIMO with up to 1733Mbps throughput.

AP-3944 uses the industry best chipset and component in order to provide excellent performance and competitive pricing. Designed with a plastic shell and an aluminium base, the design helps enhance the cooling effect, while the built-in antenna supports both ceiling and wall installations. Using the elegant flying saucer design, multi-vents designed to effectively remove heat, extend equipment life.

AP-3944 promotes energy-saving, providing 500mW of transmit power while maintaining the total power consumption to less than 16W at any time. It also supports PoE+ power input.

APPLICATIONS

- 802.11g/n + 802.11ac/a/n MU-MIMO Access Point
- Point-to-MultiPoint High Capacity Wireless Bridge
- Wireless Customer-Premises Equipment (CPE)

FEATURES

Band-steering

The AP-3944 supports the spectrum radio navigation feature which guides and initiates association with dual-band clients. When the 5 GHz RF has less online client, dual-band clients will be redirected to the 5 GHz radio. The same applies to 2.4 GHz RF, dual-band clients will be redirected to the 2.4 GHz radio when the 2.4GHz RF has less online clients.

Multicast optimization

Multicast optimization converts multicast packets of destination address into unicast packets. With this wireless forwarding, high speed forwarding multicast members can be achieved, optimizing wireless multicast data forwarding.

Roaming steering

Client roaming can be navigated through the rejection of weak signal access and reconnection trigger for clients. Rejection of weak signal access can effectively prevent the access of clients with weak signals, further guiding the client to associate to a stronger RF signal. When a wireless client moves from one coverage area to another RF coverage area, the original coverage signal will become less, causing degradation of network connectivity. Client reconnection trigger helps initiate and triggers the client connect to a stronger RF signal.

Enhanced RF technology

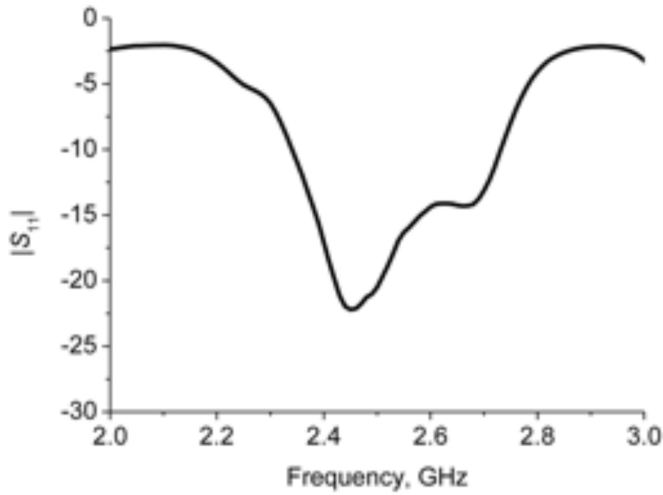
Supports maximum transmit power of 26dBm (EIRP), providing greater coverage, further reducing deployment density. With high-gain internal antenna, it covers more than 900 square meters of meeting place and studio. Improved receiver sensitivity provides better communication with the tablets, mobile phones and other handheld devices.

SPECIFICATIONS

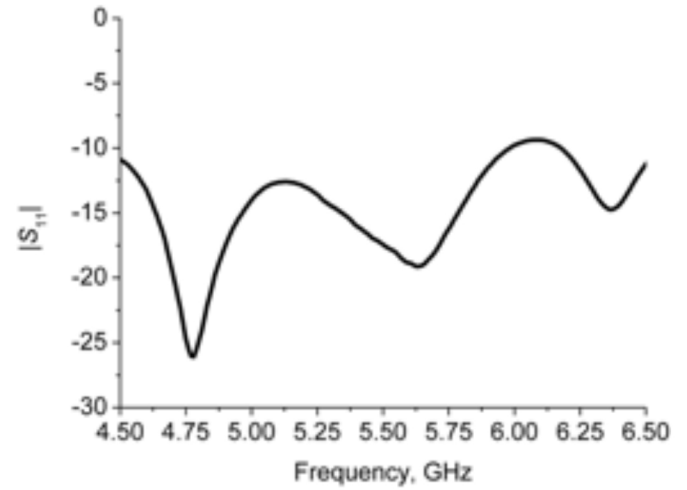
| Parameter | AP-3944 |
|---|--|
| Power Supply | IEEE 802.3af /at PoE, 36-57V |
| Dimensions | Height (H): 220 mm, Width (W): 220 mm, Depth (D) 67mm |
| Weight | 900 g |
| Interface | 2-port RJ45 10/100/1000 Base-T 802.11af/at PoE+ Ethernet Uplink |
| Power Consumption | 20W (Max) |
| DC Jack | No DC Jack Connector |
| Operating Voltage | 5V, 3.3V |
| Memory | 1GB (2x512MB) DDR3 |
| NAND FLASH | 256 MB |
| NOR FLASH | 32MB |
| Operating Temperature | 20 °C to 70 °C, Storage: -40 °C to 90 °C |
| Operating Humidity | 5% to 95%, Storage: Max. 90% |
| Installation | Ceiling mounted |
| Frequency Band | IEEE 802.11ac : 5.15 – 5.85 GHz IEEE 802.11a/n : 5.15 – 5.85 GHz IEEE 802.11b/g/n : 2.4 – 2.4835 GHz |
| Wireless Standard | IEEE 802.11a/b/g/n/ac |
| Maximum Transmit Power* | 20dBm on 2.4 GHz 20dBm on 5 GHz |
| EIRP Throughput* (Equivalent Isotropically Radiated Power) | 26 dBm on 2.4 GHz 26 dBm on 5 GHz |
| Supported Data Rates | 802.11ac : 29.3 Mbps - 1733 Mbps (80+80 MHz) 802.11n : 6.5 Mbps – 144.4 Mbps(20MHz) 13.5 Mbps – 800 Mbps (40MHz) 802.11a : 54, 48, 36, 24, 18, 12, 9 and 6 Mbps 802.11b : 11, 5.5, 2, 1 Mbps 802.11g : 54, 48, 36, 24, 18, 12, 9, 6 Mbps |
| Receiver Sensitivity | -96 dBm |
| Wi-Fi EVM | 802.11b EVM ≤ 0.35 802.11a/g EVM ≤ -25 dB 802.11n EVM ≤ -28 dB 802.11ac EVM ≤ -32 dB |
| Channelization | 20 MHz, 40 MHz, and/or 80 MHz or (80+80) MHz |
| Radio Chains/Streams | 4 x4:4 MU MIMO |
| Antenna Type | Flatant-4x4-dualband-6dBi: Internal flat antenna: 8x U.FL connectors |
| Direction | Vertical Polarization |
| Concurrent users | Up to 64 clients per radio |
| Extras | 1x Buzzer, 1x Heat Sink |
| Other Features | Surge Suppressor, Watchdog Timer, Dynamic Frequency Selection (DFS) |

ANTENNA S-PARAMETERS

Return Loss

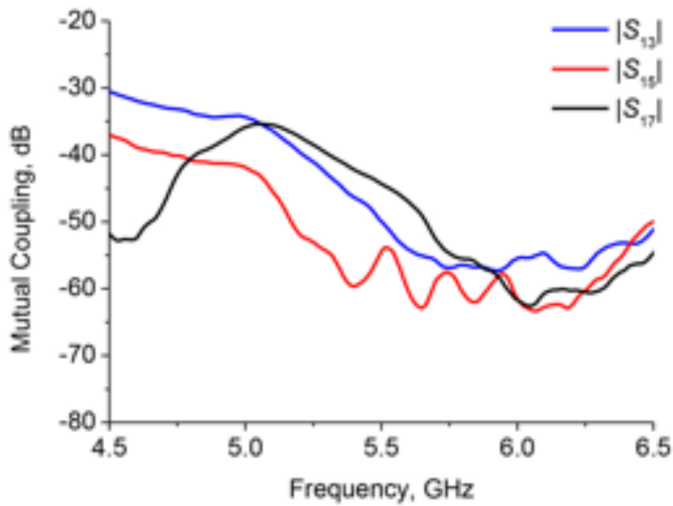


2.4GHz

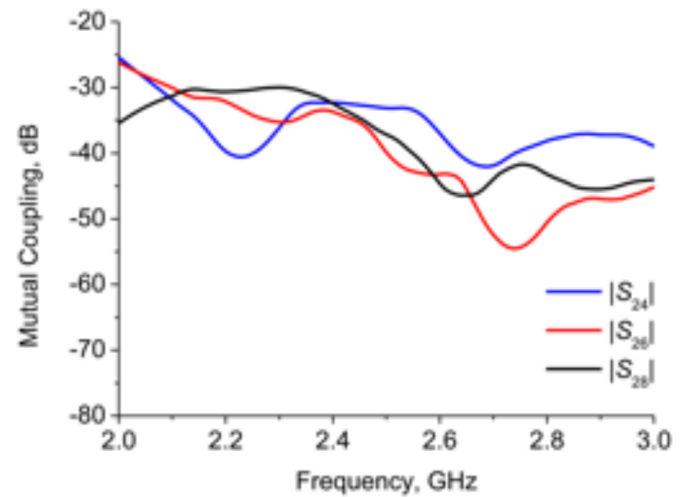


5.0GHz

Mutual Coupling



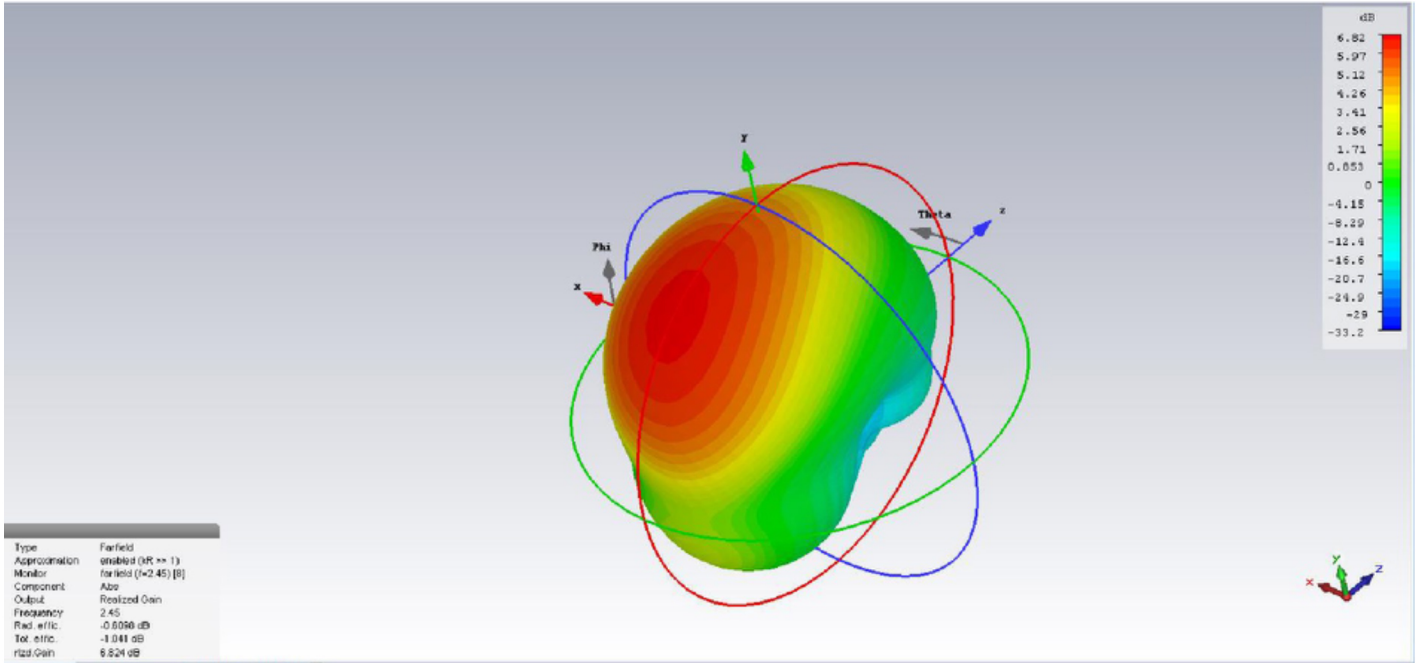
2.4GHz



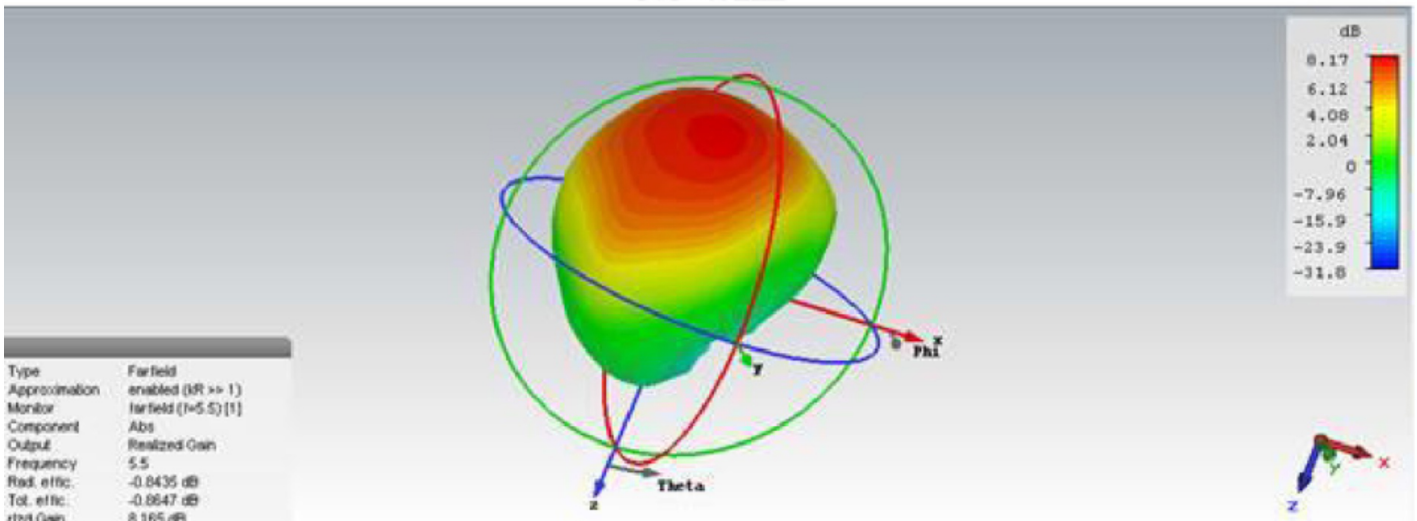
5.0GHz

3D RADIATION PATTERN OF EACH ELEMENT

2.45 GHz



5.5 GHz



ORDER INFORMATION

| Part No. | Description |
|---------------------|--|
| NB3944-AP | Newbridge AP-3944 dual-band (2.4 GHz & 5 GHz Concurrent) 802.11ac Ceiling Mount Wireless Access Point, 4x4:4 (2.4GHz) and 4x4:4 (5GHz) |
| NB3944-AP-1Y | Newbridge AP-3944 AHR1y |
| NB3944-AP-3Y | Newbridge AP-3944 AHR3y |

For more information on Newbridge product family, please visit www.newbridge-tech.com.