

Narrow Beam JAHH Octo Port antennas for high performance LTE networks: New Product

CommScope is happy to announce some key new additions to the popular **JAHH** family of octo port antennas which are perfect for high performance LTE networks using **AWS, PCS, 700MHz** and **850MHz**. Two of these antennas side by side are the ideal solution for **4x4 MIMO application** for all of these four bands.

The narrow horizontal beamwidth of 45° or 33° gives this family the **best-of-class sector-power-ratio (SPR)** resulting in the **least sector overlap** and **best signal to noise ratio (SNR)**, both of which are key performance indicators for **high data throughput** in LTE networks.

With these narrow beams, it is even possible to increase the number of sectors which significantly adds **more capacity** to high traffic sites. 45° antennas can be used in **3 or 4 sector scenarios** and 33° antennas have multiple usages from supplying high signal levels along a narrow corridor along a highway to **six-sector site applications** which provide almost double the capacity to a site compared to a three-sector site using 65° antennas.

Advanced duplexing technology gives these antennas a **narrow form factor** for easier site approval.

The internal RET configuration of the JAHH antennas has been designed with **4X MIMO applications** in mind which require that all four ports of one band have the same tilt setting. Therefore these antennas have **three internal RETs**. One RET for 700MHz, one RET for 850MHz and one RET for both high bands. This ensures that all 4 HB ports are always tilted to the same setting which is a crucial requirement for MIMO and beamforming performance. The best way to use 4 x 700MHz ports and 4 x 850MHz ports is by installing two of these antennas side by side.

To take advantage of the internal SBT found in most LTE radios, these JAHH antennas also have internal SBTs. As a result, AISG signals injected by the radio onto the RF path can be received and routed directly to the RET actuators from within the antenna. That means no external SBT or external RET cables are needed, **saving both time and money**. In cases where the radio does not have an internal SBT, these antennas also feature AISG (RS-485) ports for use with RET cables, thereby providing **maximum flexibility** from design through installation.

Benefits of using internal SBTs:

- **Eliminates** need for external SBTs & RET cables
- **Simplifies** cabling on the tower
- **Improves** visual appearance
- **Reduces** installation time on site
- **Minimizes** installation errors



These antennas have also been designed with **Self-Optimizing Networks (SON)** in mind. For SON it is beneficial to have the low band and the high band RET path separated. Thus these antennas have two internal SBTs and two RET input/daisy-chain ports - one for the low band, one for the high band.

Product Highlights

- **Industry Leading Performance:** Impressive sector power ratio (SPR) to reduce cell overlap, minimize the noise in the network and ensure high data throughput rates.
- **Multiband:** 698-894MHz and 2x1695-2360MHz. Supports 700MHz, 850MHz, and on the high band all AWS, PCS and WCS frequencies (including AWS-3 and AWS-4).
- **Multi-Sector Applications:** With their narrow 45° or 33° beams, these antennas are perfectly suited not only for 3 sector applications but also for 4 or 6 sector applications.
- **Two internal SBTs:** One low band (LB). One high band (HB). Eliminate the need for external SBTs and RET cables.
- **Three internal RETs:** One 700MHz RET, one 850MHz RET, one HB RET. Maximize MIMO or 4 branch receive diversity performance by ensuring all four high band ports use the same tilt.
- **-153dBc PIM:** Superior, long term PIM performance which is crucial for noise suppression in the RF path and for high data throughput rates.

Ordering Information:

This product is currently available for the North America region. Please see details below for all released and upcoming models of the JAHH family.

Model Number	Beam width	Length	Width	Ports & Frequency	RET Option
JAHH-65C-R3B HB Tilt = 2-12°	65°	8ft	13.8 in	2x 698–894 MHz 4x 1695–2360 MHz	3 internal RETs <ul style="list-style-type: none"> • 1x 700MHz • 1x 850MHz • 1x HB (for both HBs)
JAHH-65C-R3B-V2 HB Tilt = 0-10°	65°	8ft	13.8 in		
JAHH-65B-R3B	65°	6ft	13.8 in		
JAHH-65A-R3B	65°	4ft	13.8 in		2 internal SBTs <ul style="list-style-type: none"> • 1x on first LB port • 1x on first HB port
JAHH-45C-R3B	45°	8ft	18.0 in		
JAHH-45B-R3B	45°	6ft	18.0 in		2 sets of AISG IN/OUT ports <ul style="list-style-type: none"> • 1x LB • 1x HB
JAHH-45A-R3B	45°	4ft	18.0 in		
JAHH-33C-R3B	33°	8ft	25.2 in		

Please contact your local CommScope Sales Representative for more information.