

4X MIMO-ready base station antennas

Deploy 4X MIMO on both low and high frequency bands... with a single antenna

The wireless industry is in a time of transformation. While subscriber growth is slowing, network data traffic continues to significantly increase each year. What's more, subscribers are increasingly demanding more bandwidth with seamless, high-performance connectivity wherever they go.

As you modernize your network to meet these challenges, adding more capacity and achieving better performance are key. But, with new site development becoming more challenging, getting the most capacity out of each site through improved spectral efficiency is critical. For many operators, implementing higher-order multiple-input/multiple-output (MIMO) configurations is a key part of their strategy for increasing network capacity.

Modern wireless networks require a combination of higher-order modulation, large spectrum ownership, and multiple data streams to achieve 1 Gbps data speeds and meet customer expectations. At the base station, this means having multiple antennas available to transmit and receive signals with the users' devices. Being able to deploy 4X MIMO technology can cut the amount of spectrum required to reach higher data speeds in half compared to a 2X MIMO configuration.

A 4X MIMO-READY SOLUTION TO MEET CURRENT AND FUTURE DEMAND

To maximize spectral efficiency, the flexibility to deploy 4X MIMO on both low and high bands within your network offers the most advantage. In the past, it took two antennas to implement 4X MIMO on the low band. But CommScope's new 4X MIMO-ready base station antennas are fully integrated to support configurations on both low and high frequency bands—from 600 to 2600 MHz.

With a single antenna covering both low and high bands, you can add capacity more efficiently within your existing cell site footprint. Each antenna provides four ports at multiple frequencies to deliver added flexibility and space-saving advantages.

By replacing multiple antennas with just one 4X MIMO-ready antenna you can:

- Save precious space on the tower and associated OpEx and CapEx costs
- Prevent interference, such as PIM, to optimize network capacity
- Overcome wind load and weight restrictions that can impact site approvals
- Reduce leasing costs with lighter weight and smaller size vs. a two-antenna solution

4X MIMO-READY DELIVERS THESE BENEFITS

- **Efficiency:** Make more efficient use of tower space by fitting more capabilities into a single antenna that supports 4X MIMO on both low and high bands.
- **Performance:** Optimize your network performance by allowing up to four data streams per downlink channel to maximize the potential of your usable spectrum.
- **Savings:** Save tower space by using only one antenna position; save on leasing costs with a smaller profile and lighter weight; and save structural costs with fewer mounting pipes required.

Family	# of RF Ports	MIMO Configurations Supported	Bands	# of RETS
FF-65	4	4x4, 4x2	4 x 617–806 MHz	1
FFHH-65	8	4x4, 4x2	4 x 617–806 MHz	3
			4 x 1695–2360 MHz	
RRZZ-65	8	4x4, 4x2	4 x 694–960 MHz	4
			4 x 1427–2690 MHz	
NNHH-65	8	4x4, 4x2	4 x 698–896 MHz	4
			4 x 1695–2360 MHz	
NNH4-65	12	4x4, 4x2	4 x 698–896 MHz	6
		4x4, 4x2 on 2 bands	8 x 1695–2360 MHz	
RRV4-65	12	4x4, 4x2	4 x 694–960 MHz	6
		4x4, 4x2 on 2 bands	8 x 1695–2690 MHz	

Watch for new introductions to this portfolio, as more variations are in development.

Pattern shaping techniques can deliver a significant increase in throughput. Ask us about antenna models that offer enhanced:

- Sector power ratio
- Front-to-back ratio
- Upper sidelobe suppression
- Consistent azimuth beamwidth

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