

CommScope's combiner solutions reduce Orange Tunisia's deployment time and costs



Customer

Orange Tunisia

Country

The Middle East-Africa

“As network demand increases, the competition for tower space is intensifying for carriers in new site acquisition phase. CommScope’s LLC solution’s versatility and customizability give operators the option of sharing tower space and/or modernize their network technology, increasing coverage and capacity while reducing the number of antennas and associated components on the tower. It’s a true win-win solution that allows speeding up network roll-out.”

— Paolo Di Carne, MEA Application Engineering Manager, CommScope

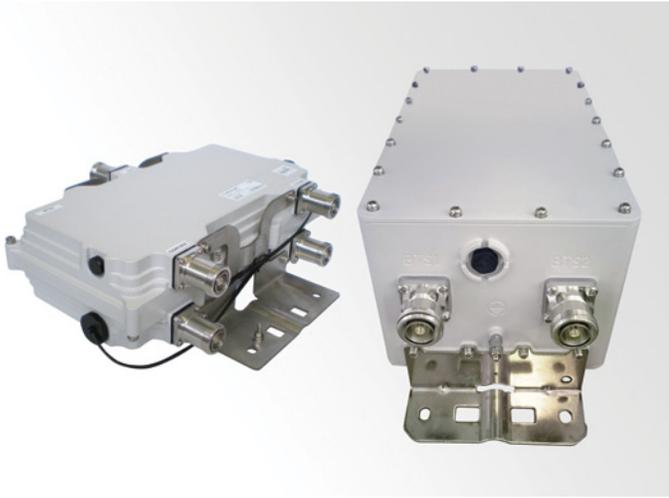


The Middle East – Africa (MEA) region is among the fastest-growing wireless markets in the world. But with explosive growth comes significant challenges, including overloaded towers and rooftops, and few available options for new sites. With minimal insertion loss compared to traditional hybrid units, CommScope’s customized low-loss combiners (LLC) enable Orange Tunisia to share existing sites with two other carriers and generate new revenue without a major CapEx investment.

Orange leads Tunisia’s rapid wireless network expansion

Orange Tunisia was founded in 2003 and is based in Tunis, Tunisia, currently the deployment is focus on 4G. They acquired a license in Tunisia on 5 May 2010, making it the leading 3G mobile operator with Divona Telecom as well as the second landline operator and the third mobile phone operator in Tunisia.

Orange is a long-time CommScope customer, relying on CommScope solutions to enable their rapid network expansion and delivery of high-quality service.



Because of their flexibility and customizability, CommScope LLCs are ideal for site-sharing applications, where the antenna, jumpers and feeder cables are shared between two or three operators to open up new capacity on existing sites.

“Installing the CommScope low-loss combiners achieved our goals of improving network coverage and quality while allowing for increased traffic at the site. The quality of experience for subscribers has also improved, enhancing their satisfaction with our wireless service.”

— Sedki BEN ROMDHANE
Direction Reseaux et Services, Orange Tunisie

A customized same band combiner solution allows successful site sharing for 3 operators to satisfy new connectivity demands

To meet the increased connectivity demand resulting from accelerating network deployment in Tunisia, Orange has decided to implement site-sharing strategies with other carriers. These shared sites require the addition of new antennas on rooftops or towers. Most of the time, operators find rooftops are already full of antennas—or towers that are already overloaded, with serious stability and wind-load issues.

One solution to these crowding problems is a same-band combiner—a unit that combines two base stations on the same band into a common port to reduce the number of antennas required. But introducing a passive unit in the RF path usually leads to an insertion loss that reduces the power available for coverage and capacity.

To minimize this power loss, CommScope has developed a new type of low-loss in-band combiner designed to deliver only 0.5 dB of insertion loss—an incredible advance over traditional one-size-fits-all hybrid combiners that lose 3 dB, essentially wasting half of the power available. CommScope’s 900 MHz, 1800 MHz and 2100 MHz LLC models are custom combiner solutions, tailored to the client’s spectrum, that enable carriers to reduce the number of antennas and speed up network expansion using same-band combiners to introduce new systems like UMTS900 or LTE1800 at existing sites—or to share tower infrastructure with other operators and reduce tower load. CommScope has an excellent portfolio of LLCs suitable for different applications, from site sharing to network modernization.

CommScope LLCs simplify site sharing for Orange

Orange Tunisia already deployed CommScope LLC solutions in different sites where they share the antenna line with other carriers.

Drive test and statistic counters analysis indicated that site coverage and traffic increased and quality improved after LLC installations, more so than with traditional hybrid combiners. The LLC solution also significantly increased per-site revenue, improved network performance and customer experiences, while simultaneously providing improved cost and timing for roll-outs due to cost sharing between three operators. This project is the first of this type in Africa and Middle East, and Orange may expand this successful model in other subsidiaries across Africa.

Benefits of the CommScope LLC solution for site sharing include:

- Cost savings from sharing the full RF path—antennas, feeders, cables and jumpers—as well as the tower structure, with associated lease savings
- Reduced tower loading for increased safety and stability
- Faster deployment due to easier installation—no need to add an additional antenna and feeders for the new operator
- Faster network rollout by avoiding the lengthy, complicated, and often uncertain site acquisition phase of deployment

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