

LTE Radio Access Solution

Expanding possibilities
of network experience

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In order to overcome challenges operators face and to meet the highest levels of customer needs, The Samsung LTE Radio Access Solution offers higher capacity, better performance and simplified installation while minimizing cost.

Since the introduction of smart devices and the subsequent growth of data traffic, mobile operators have faced challenges in densifying networks, increasing efficiency, improving user experience and capturing additional profitable opportunities.

The exponential increase in mobile data traffic over the past few years has been astounding and this trend is still strong with global mobile traffic expected to grow eight-fold from 2015 to 2020¹⁾. At the same time, users now expect a fast and stable connection everywhere. In order to support such conditions, network providers and infrastructure vendors have so far utilized diverse systems (macro/small cell, indoor/outdoor) across a multitude of frequencies ranging from licensed and unlicensed to shared spectrum. Most providers are also already anticipating the introduction of future technologies such as IoT and 5G.

The Samsung LTE Radio Access Solution takes one more step to meeting the high demand of current users. The LTE network system offers higher capacity and performance than ever before, supporting growing traffic and the latest LTE-Advanced features. It is also future proof and provide forward compatibility for future 5G technologies. Moreover, the LTE network system is designed to minimize your ownership costs through efficient deployment and management.



1) Source : Cisco VNI Global Mobile Data Traffic Forecast (2015 to 2020)

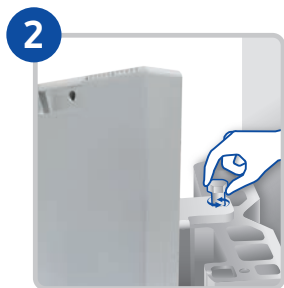
Delivering ultimate performance

The Samsung LTE Radio Access Solution has a proven record in some of world's heaviest data-consuming markets and it has just been made better. Both the capacity and performance of the LTE radio access solution have been improved 3-fold over the previous product generation, enabling service providers to meet the needs of today's users while providing room to grow.

The LTE network system is capable of supporting throughputs above 1Gbps per LTE baseband unit, while simultaneously employing some of the most cutting edge technologies, including 256QAM, 4X4 MIMO and Carrier Aggregation. Our Carrier aggregation (CA) features have also been expanded within the baseband with support for features beyond the current standard, including inter-site CA, TDD-FDD CA and 5-Band CA. The new baseband also supports high data rate fronthaul to enable these advanced features without any latency. The remote Passive Intermodulation (PIM) detection & cancellation feature improves uplink receiver sensitivity significantly, thus ensuring maximum network coverage.



Insert Radio Unit



Fix with One Bolt

Simplifying installation

Where would you like to install your LTE network system? Samsung's radio unit can be easily installed anywhere that you need and in various form factors. Whether it is deployed standalone on a wall or pole, stacked at ground level or within cabinet, or integrated with an antenna to save space, our radio unit can be located in virtually any position. Boasting a compact size, it is more than 50% smaller and lighter than previous models. All of our radio units, regardless of antenna configuration, share a unified form factor which allows horizontal and vertical one box installation and provides for efficient use of space and a reduction of site rental costs. The wind load on the radio unit is also the lowest in the industry, giving it a higher pole stability and enhanced durability. Moreover, the lower wind load is constant across all radio units and allows easier planning and installation, particularly for tower sites.

The installation process itself has also been simplified and streamlined. The radio unit offers an innovative design with semi-assembled components available thus making the bracket installation very easy. Site engineers simply need to insert the radio unit into a bracket and fix it in place with a single bolt. As a result, cost of installation is reduced by more than 50%-requiring less time and even less-skilled worker can conduct the process easily.

Various installation possible with new, single platform



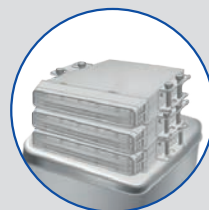
Wall



Pole



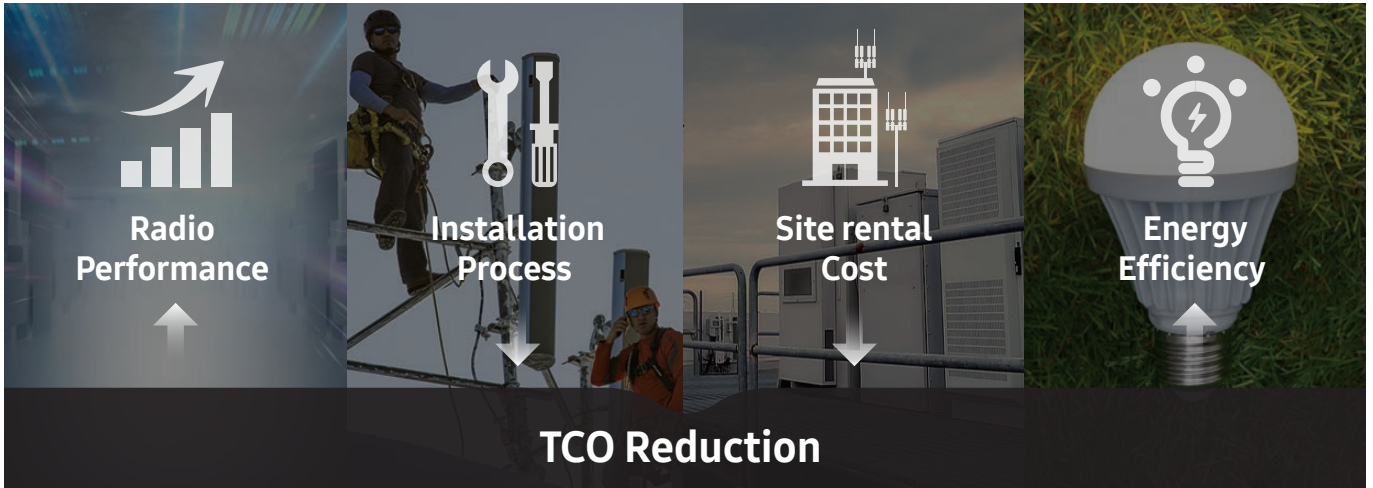
Cabinet



Stack



Integrated Antenna



Minimizing your cost

Optimize how your LTE network is operated and minimize cost of ownership. The Samsung LTE Radio Access Solution automatically controls when, where and how much energy is consumed by constantly monitoring the amount of traffic each radio access network is processing.

Samsung Self-Configuring Voltage function controls the bias voltage of a radio unit depending on the changes in the downlink output power level. In addition, the Dynamic Power Amplifier bias on/off function turns the power off when there is no traffic, ensuring that energy is not wasted. The combination of these two functions allows the radio access network to save over 40% of energy than before.

Samsung's radio unit is designed to minimize the number of site maintenance visits made after initial installation. The radio unit is equipped with a field installation test function (FITF) which self-detects whether the power, antenna, Remote Electrical Tilt (RET), and optic cables are properly connected during installation, even before a baseband is installed. Problems with a radio unit installation can be immediately detected and fixed, thus eliminating the need for additional visits. Site visits for PIM cancellation can also be avoided, since Samsung's radio unit can remotely detect PIM, which causes uplink receiver sensitivity degradation.

Ensuring the future

In the near future, mobile communications will be very different from what we are familiar with today. Billions of connected devices will autonomously interconnect with one another and new and evolved services will be delivered to subscribers, enterprises and even machines.

The Samsung LTE Radio Access Solution is crafted for such future networks, supporting LTE-Advanced Pro features including enhanced Machine Type Communications (MTC), NB-IoT, FD-MIMO, License Assisted Access (LAA) and public safety features. Even with these features deployed, the capacity of the conventional LTE system remains untouched, maintaining a positive and seamless experience for existing users. In addition to future LTE technologies, The Samsung LTE Radio Access Solution provides a smooth evolution path to fifth generation (5G) mobile communications to herald an era of truly immersive services.

Overall, the Samsung LTE Radio Access Solution not only increases site capacity, throughput and improves user QoE, but it also reduces your Total Cost of Ownership (TCO) significantly, making it an ideal solution for any network.



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About Samsung

Samsung is recognised as one of the leading and most enduring names in the world of mobile technology. For more than 3 decades we have championed developments in the industry and played an integral part in the evolution of the mobile telecom sector. Our strong track record in innovation and manufacturing is matched with a history of financial stability, and an extensive globally-distributed, skilled employee base. This combination of factors has led to Samsung being the preferred partner of top-tier operators around the world. We are committed and active participants in key leadership bodies, helping to shape and regulate the industry.

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