
ERICSSON LAUNCHES 5G PLUG-INS TO EQUIP TODAY'S NETWORKS FOR 5G

- New Ericsson 5G Plug-Ins address diverse 5G use cases from mobile HD video, driverless buses and haptic feedback-enabled drones to fiber-equivalent residential wireless access
- Software-driven Plug-Ins bring flexible 5G evolution to existing networks while improving operators' mobile broadband, fixed wireless and IoT services
- Ericsson 5G field trial innovations provide foundation for commercial availability of 5G Plug-Ins in 2017

5G subscription uptake will commence in 2020 and is expected to be faster than for 4G. The development of 5G is being driven by new use cases that will impact both consumers and industries. New applications and use cases anticipated for 5G include safe, self-driving cars, remote controlled robots, haptic feedback-enabled drones and fixed wireless access – rivaling fiber capacity – for residential homes. As a result, mobile operators are today planning for their 5G future.

Ericsson (NASDAQ: ERIC) is already working with more than 20 leading mobile operators worldwide on 5G networking and use cases, including 5G field trials in 2016. To facilitate rapid evolution of 5G access networks and the successful adoption of 5G services, Ericsson has announced 5G Plug-Ins, which are software-driven innovations that bring essential 5G technology concepts to today's cellular networks.

Arun Bansal, Senior Vice President and Head of Business Unit Radio, Ericsson, says: "5G will be driven by new use cases requiring higher performance – from connected cars with perfect driving records, to immersive augmented reality for remote surgery, to multi-K movies on mobile devices. 5G will unlock new consumer and industrial applications, and with our 5G field trial plans already well underway, we are now introducing Ericsson 5G Plug-Ins, which enable the evolutionary steps that operators need to take as they develop networks to secure their 5G future."

5G applications and use cases will leverage existing networks

LTE will continue to expand and evolve, addressing both an increased number of subscribers and their growing demands for extreme app coverage for data and video, as well as new low power wide area (LPWA) applications for the Internet of Things (IoT). In 2019, LTE will be the dominant mobile access technology globally and will reach a total of 4.3 billion subscriptions by the end of 2021.

In parallel, the development of 5G will encompass an evolution of today's radio access technologies and the addition of new, globally standardized technologies, often in higher frequencies. These higher frequencies have a shorter transmission range than current cellular networks and are prone to attenuation from foliage and weather-related factors, which can impact performance and reliability. However, the key success factor in 5G will not only be effectively leveraging these new spectrum bands, but also ensuring that the “whole is greater than the sum of its parts” when it comes to combining LTE with new radio access technologies.

This is where Ericsson 5G Plug-Ins come in. Ericsson 5G Plug-Ins are software-driven innovations supported by the Ericsson Radio System, and are specifically focused on capabilities that operators can leverage within current networks to facilitate their evolution to 5G.

Kick-starting flexible network evolution

Peter Jarich, Vice President, Consumer and Infrastructure Services, Current Analysis, says: “5G has gained undeniable momentum over the last year. Yet, without spectrum allocations or ratified standards, operators need a migration tactic allowing them to leverage current network investments in synch with their 5G evolution strategies. Ericsson’s 5G Plug-Ins deliver this flexibility, supporting the deployment of advanced access technologies in the near-term, and in preparation for 5G.”

Forty percent of the world’s mobile traffic is carried over Ericsson networks and Ericsson enables these networks to evolve flexibly based on user demand, new applications and local market requirements. With 5G Plug-Ins, mobile operators can begin to trial and implement 5G technology as early as this year, and evolve to 5G at their own pace.

Ericsson 5G Plug-Ins include:

- **Massive MIMO Plug-In:** Massive MIMO is the combination of Single-User MIMO (SU-MIMO) and beamforming supported by advanced antennas with a large number of steerable ports. Massive MIMO improves both the user experience and the capacity and coverage of the network.
- **Multi-User MIMO Plug-In:** building on Massive MIMO, Multi-User MIMO (MU-MIMO) transmits data to multiple user devices using the same time and frequency resources and coordinates beamforming. MU-MIMO provides a better user experience, enhances network capacity and coverage, and reduces interference.
- **RAN Virtualization Plug-In:** RAN Virtualization improves network efficiency and performance by enabling Virtual Network Functions (VNF) to be centralized on a common platform supporting both 4G and 5G.

- Intelligent Connectivity Plug-In: where 5G and 4G coverage areas overlap, Intelligent Connectivity enables the network to robustly anchor and intelligently route data based on application requirements and network resource availability, increasing the combined data throughput of 4G and 5G resources.
- Latency Reduction Plug-In: this Plug-In shortens access procedures and modifies the frame structure to enable instant network access and more frequent transmissions. This in turn reduces time-to-content while enabling real-time communications for key 5G applications such as smart vehicles.



Ericsson 5G Plug-Ins are available for operator trials starting in 2016 and will be available for commercial networks starting in 2017.

The 5G ecosystem

5G will impact the entire mobile network and associated ecosystem, from devices to radio access to the mobile core and into the cloud. Ericsson 5G Plug-Ins are designed for the radio access network and leverage the technology innovations enabled by the award-winning Ericsson 5G Radio Test Bed and Ericsson 5G Radio Prototypes already deployed and in field trials in Japan, South Korea, the US and Sweden. Ericsson 5G Radio Prototypes have already achieved peak downlink throughput of more than 25Gbps.

NOTES TO EDITORS

Video: [Ericsson 5G Plug-Ins bring 5G technology concepts to today's mobile networks](#)

More Info: [5G Plug-Ins](#)

More Info: [5G Radio Prototypes](#)

Video: [Introducing 5G Radio Prototypes](#)

[5G media kit](#)

[Ericsson 5G field trial gear achieves peak downlink throughput over 25 Gbps with MU-MIMO](#)

[Ericsson 5G radio prototypes prepped for field trials with NTT DOCOMO](#)

PRESS RELEASE
JUNE 16, 2016



[New 5G innovations boost mobile data speeds](#)

[Ericsson first with key 5G advances](#)

[White Paper: 5G radio access – capabilities and technologies](#)

[White Paper: 5G systems – enabling industry and society transformation](#)

[White Paper: 5G security – scenarios and solutions](#)

[White Paper: 5G energy performance – key technologies and design principles](#)

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Ericsson is the driving force behind the Networked Society – a world leader in communications technology and services. Our long-term relationships with every major telecom operator in the world allow people, business and society to fulfill their potential and create a more sustainable future.

Our services, software and infrastructure – especially in mobility, broadband and the cloud – are enabling the telecom industry and other sectors to do better business, increase efficiency, improve the user experience and capture new opportunities.

With approximately 115,000 professionals and customers in 180 countries, we combine global scale with technology and services leadership. We support networks that connect more than 2.5 billion subscribers. Forty percent of the world's mobile traffic is carried over Ericsson networks. And our investments in research and development ensure that our solutions – and our customers – stay in front.

Founded in 1876, Ericsson has its headquarters in Stockholm, Sweden. Net sales in 2015 were SEK 246.9 billion (USD 29.4 billion). Ericsson is listed on NASDAQ OMX stock exchange in Stockholm and the NASDAQ in New York..

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