

ROHDE & SCHWARZ

Make ideas real



5G BROADCAST/MULTICAST ALL-IN-ONE CORE NETWORK

R&S®BSCC2.0 broadcast service and control center



Seldom, if ever, has a new broadcast and mobile communications technology offered the potential gains that 5G broadcast/multicast does. These gains are available to both end consumers and service providers. For the first time, 5G broadcast/multicast offers users high quality, reliable video playback and much more. For broadcasters and service providers, it offers the potential to open up significant new revenue streams and entirely new business models.

5G broadcast/multicast is one of the main pillars of the 5G ecosystem. It consists of a broadcast/multicast radio access network (RAN) and a broadcast/multicast core network (CN).

Why is a 5G broadcast/multicast core needed?

You have probably heard about advanced 5G use cases where, thanks to ultra-low latency and very high speed, consumers' daily life and business will be revolutionized. 5G introduces new broadcast and multicast capabilities to the whole ecosystem, enabling totally new applications. Nevertheless, none of those will be possible without a 5G BC/MC core. Together with LTE/4G RAN and upcoming 5G NR, 5G BC/MC is a fundamental cornerstone of the 5G broadcast/multicast architecture.

5G BC/MC is the heart of a mobile broadcast network where ultra connectivity translates into service differentiation and business flexibility. It establishes highly reliable and secure connections to the network and access to its services. It determines and enforces the quality of service, allowing services differentiation and handling of wide area mobility throughout the broadcast/multicast network.

Thanks to its future-proof design, 5G BC/MC is the fundamental piece of 5G broadcast/multicast networks. It simplifies operations, adds service agility, improves network capabilities and enhances end user experience.

Our core network technologies provide the flexibility, adaptability and responsiveness you need to launch next generation broadcast/multicast services. Explore how R&S®BSCC2.0 can help you take advantage of the latest developments of 5G broadcast/multicast technology within the 3GPP ecosystem. Benefit from a comprehensive core infrastructure that simplifies operations and enables new business. R&S®BSCC2.0 is highly prepared to support 3GPP Rel. 14, 15 and 16.

Agility and innovation meet creativeness

The new all-in-one 5G BC/MC network delivers the flexibility, scalability and performance you need for mobile broadcast services and leads your journey into the dynamic 5G broadcast/multicast world. Our software solution makes your core network more flexible, efficient and open. The R&S®BSCC2.0 helps to reduce costs, add more agility and meet the demands of future mobile and fixed broadcast and multicast services.

The R&S®BSCC2.0 solution is based on a modular software architecture for improved software overload protection.



Limitless broadcast/multicast core

Running as part of the core network, the R&S®BSCC2.0 – including the broadcast multicast service center (BM-SC), multimedia broadcast/multicast service gateway (MBMS-GW) and a centralized multi-cell/multicast coordination entity (MCE) – is a software defined solution for delivering multimedia content over 4G/5G networks in broadcast and multicast mode. It encapsulates multimedia content into specific FeMBMS bearers to be delivered from the evolved packet core (EPC) down to the receiver. It allows network operators to roll out advanced FeMBMS services that mix different types of media over networks with hybrid unicast/broadcast coverage.

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The solution also includes services exposure capabilities to explore new business opportunities in the mobile industry coupled with broadcast capabilities while fulfilling the requirements of many service and content providers.

R&S®BSCC2.0 empowers you to:

- ▶ Provide residential and business customers with seamless multi-access connectivity for increased capacity and service resilience
- ▶ Expand into new vertical segments
- ▶ Create new service aware applications and manage network congestion with integrated application assurance capabilities
- ▶ Offer new low latency and high availability services
- ▶ Deliver enhanced broadcast services

Efficient and innovative

In addition to live and linear content, the second generation of the R&S®BSCC broadcast service and control center allows the delivery of different types of premium content (such as file based content, packaged content and compressed content) to mobile users simultaneously. New services with consistent quality of service need to be easy to implement for both broadcasters and mobile network operators. This results in higher quality of experience (QoE), spectral efficiency and reduced costs.

Universal adaptive core

The use of multiple fixed and mobile access technologies supports a wide variety of business models and meets the needs of new industry and enterprise customers.



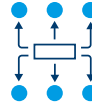
5G performance

5G delivers new services that depend on extremely low latency, massive connectivity, full mobility and high service availability.



More granularity

Benefit from flexibility and automation to manage increasingly complex networks.



Traffic efficiency

Maximize audience reach through a modular architecture that allows multiple delivery channels to connect to a single source. Deal with unpredictable demand by adapting instantly to traffic fluctuations and effectively shaping and scaling network resources to match different service needs.



Service innovation

Introduce new services more easily and bring innovations rapidly to market. The R&S®BSCC2.0 setup makes it easy to deliver more services such as over-the-air (OTA) updates and upgrades, venue casting, automotive services, eLearning, multimedia streaming on demand and public warnings. Network operators can define new use cases and diversified business cases thanks to new algorithms and protocols offered by the R&S®BSCC2.0.

Open network platform

The open network platform of the R&S®BSCC broadcast service and control center also meets the needs of many sectors beyond the telecommunications industry.



Rohde & Schwarz

The Rohde & Schwarz electronics group offers innovative solutions in the following business fields: test and measurement, broadcast and media, secure communications, cybersecurity, monitoring and network testing. Founded more than 80 years ago, the independent company which is headquartered in Munich, Germany, has an extensive sales and service network with locations in more than 70 countries.

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- ▶ Local and personalized
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- ▶ Long-term dependability

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