

R&S® BSCC2.0

BROADCAST SERVICE AND CONTROL CENTER

5G broadcast/multicast all-in-one core network



Product Brochure
Version 02.00

ROHDE & SCHWARZ

Make ideas real



AT A GLANCE

Running as part of the core network, the R&S®BSCC2.0 broadcast service and control center is the right software defined solution for delivering multimedia content over 4G/5G networks in broadcast (BC) and multicast (MC) mode. It prepares content and media for distribution in the radio access network (RAN) using either multiple frequency network (MFN) or single frequency network (SFN) deployments.

In addition to live and linear content, the second generation of R&S®BSCC broadcast service and control center allows the delivery of different types of premium content (such as file based content, packaged content, compressed content) to mobile users simultaneously. New services with consistent quality of service (QoS) 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.

As a technology leader, Rohde&Schwarz provides additional features for the R&S®BSCC2.0 that meet the needs of early adopters and help customers with their first commercial rollout of the new technology.

The setup of the R&S®BSCC2.0 enables the delivery of over-the-air (OTA) updates and upgrades, multimedia streaming services and public warnings. Network operators can define new vertical applications and diversified business cases, including venue casting, automotive services, eLearning and virtual commerce.

The R&S®BSCC2.0 supports various streaming platforms, such as MPEG-DASH, 3GP-DASH and HLS. These new services are possible thanks to new algorithms and protocols, such as file delivery over unidirectional transport (FLUTE), dynamic adaptive steaming over HTTP (DASH) and HTTP live streaming (HLS).

MBMS-GW, BM-SC and MCE are implemented in the R&S®BSCC2.0. The broadcast service and control center supports all required 3GPP standardized interfaces for delivering various types of premium content via 4G/5G networks in broadcast and/or multicast modes.

Key facts

- ▶ 3GPP Release 16 support
- ▶ File delivery over unidirectional transport stream (FLUTE) incl. announcements
- ▶ Dynamic adaptive streaming over HTTP (DASH)
- ▶ HTTP live streaming (HLS)
- ▶ Transport stream over IP (TSolP)
- ▶ Carrier management (including carrier aggregation)
- ▶ Common media application format (CMAF) support
- ▶ X-MB interface support
- ▶ SFN and MFN support

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



BENEFITS

- ▶ Compliant with 3GPP standards
- ▶ Full support for multicast broadcast single frequency network (MBSFN)
- ▶ Software defined application for resource optimization
- ▶ Flexible and cost-effective service rollout
- ▶ Intuitive GUI based control
- ▶ Centralized core network architecture

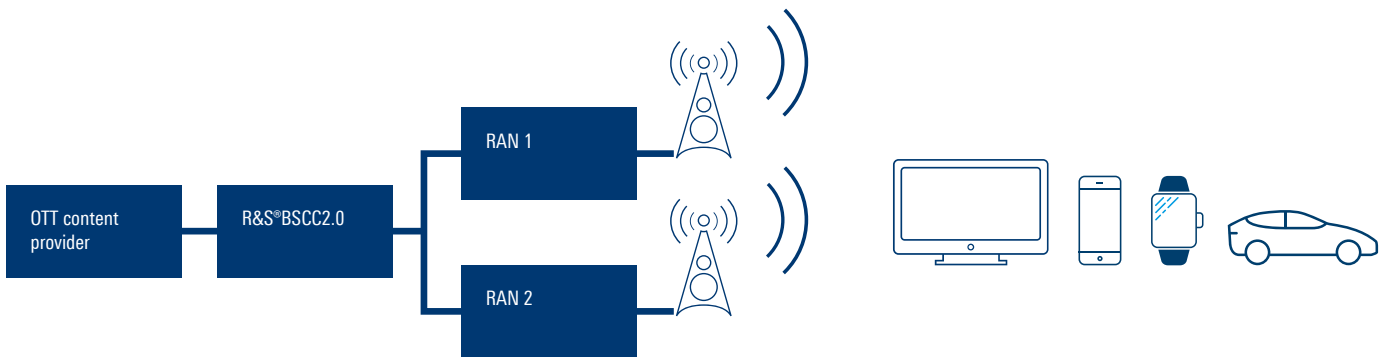
APPLICATIONS

Live casting	Public safety multicast
Vehicle casting (V2X)	Venue casting
OTA multicast (including IoT)	VoD (preloaded content)
eSports	eLearning
Live commerce	eAgriculture

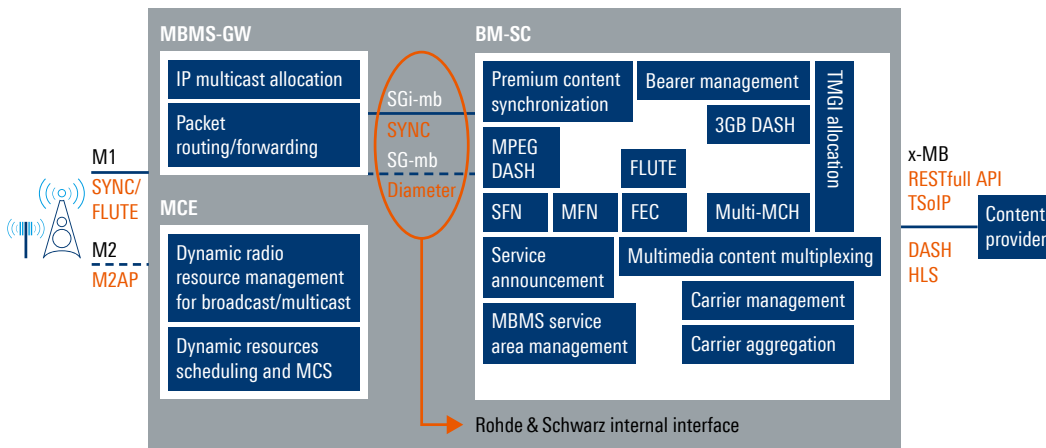


ARCHITECTURE

R&S®BSCC2.0 position in 5G BC/MC architecture



R&S®BSCC2.0 internal architecture



SERVICE CARE

Rohde&Schwarz provides comprehensive support that meets the unique needs of your business, enables you to ensure services and delivers the seamlessness users expect. R&S®BSCC2.0 service care and service care advanced offer flexible and progressive service level agreements (SLA). They proactively detect, isolate and

help resolve issues affecting user experience, and measure actual improvements in services. Service care for the R&S®BSCC2.0 includes general software updates, major software upgrades, technical expert support, hotline support, advanced hardware replacement and technical training.

ORDERING INFORMATION

Designation	Type	Order No.
Broadcast service and control center	R&S®BSCC2.0	2511.9201.20

Network functions

- ▶ **BM-SC**
Broadcast multicast service center is a 3GPP instance that provides membership and session control. One of the main tasks is ensuring content synchronization, service announcements and security. The BM-SC sets up the FeMBMS session and initiates delivery of the content by pulling it from the content server.
- ▶ **MBMS-GW**
Multimedia broadcast multicast service gateway distributes FeMBMS user plane data to the transmitters using IP multicast and performs FeMBMS session control signaling. It acts as a mobility anchor and provides service continuity.
- ▶ **MCE**
Multicell/multicast coordination entity can be a separate entity or a part of eNodeB/transmitter. The main role of the MCE is to manage the broadcast/multicast-related radio resources such as the modulation and coding scheme (MCS).

Service that adds value

- Worldwide
- Local and personalized
- Customized and flexible
- Uncompromising quality
- Long-term dependability

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.

www.rohde-schwarz.com

Sustainable product design

- ▶ Environmental compatibility and eco-footprint
- ▶ Energy efficiency and low emissions
- ▶ Longevity and optimized total cost of ownership

Certified Quality Management

ISO 9001

Certified Environmental Management

ISO 14001

Rohde & Schwarz training

www.training.rohde-schwarz.com

Rohde & Schwarz customer support

www.rohde-schwarz.com/support

