R&S®SMCV100B
VECTOR SIGNAL GENERATOR

Maximum flexibility in applications and in production
Modern and flexible

The R&S®SMCV100B vector signal generator uses the best direct digital RF upconversion technology for signal generation. Thanks to its powerful, fully software-based platform, it is ideal for applications requiring flexibility in various applications, including:
- Research
- NB-IoT device development
- Quality assurance
- EMC test houses
- Education, universities

Perfect fit in the lab and in production

With its compact housing, the R&S®SMCV100B is the perfect solution for the lab bench and where lab space is limited. The ventilation concept is optimized for minimum noise emissions. Cold air is drawn in from the front and heated air is blown out to the rear. This concept contributes to an optimal working environment in the lab and simplifies integration into 19” racks in production areas.

Expandable for future requirements

Thanks to its flexible and customizable design, the R&S®SMCV100B is ideally prepared to meet future requirements. Options can easily be added as software key codes, allowing users to quickly expand the I/Q modulation bandwidth, RF output power and RF frequency range of the R&S®SMCV100B to add standards.

Modern RF signal generator with direct digital RF upconversion

The R&S®SMCV100B vector signal generator features a new direct RF DAC concept for RF signal generation. This concept enables I/Q modulation and upconversion in the digital domain, which eliminates I and Q imbalance errors and allows seamless switching between different analog I/Q modulations.

Wide range of applications

- Research and education - use in labs at universities, schools, etc.
- Wide base market: use as general purpose instrument in labs
- Wireless market: signal generator for cellular signals, such as 5G, LTE and IoT, and non-cellular signals, such as WLAN, Wi-Fi, in the different versions of the IEEE 802.11, Bluetooth® and other standards
- Broadcast consumer equipment market: production and testing of broadcast receivers, set-top boxes, TV receivers, etc.
- Automotive market: production, end-of-line testing of car radios, entertainment and navigation systems, etc.
- Electronic manufacturing production: production of products with constantly varying user requirements

Modern RF signal generator

The R&S®SMCV100B options concept is fully software-based. No additional hardware needs to be installed for full device functionality. This applies to upgrading the frequency option, the memory depth of the ARB, the I/Q modulation bandwidth and all other R&S®SMCV100B options that can be used to cover different applications.
REAR PANEL CONNECTIONS

**Ethernet (LAN)**
For remote access and remote control

**Digital visual interface (DVI-D)**
External monitor interface

**Reference input**
For external clock source

**Reference output**
For synchronizing external instruments

**Multifunctional interface**
- Input for ASI, ETI, TS, trigger, SPDIF
- Output for markers

**Multifunctional interface**
- Input for 1 PPS
- Output for markers

**USB 3.0 interfaces**
PC data and streaming interfaces for waveform streaming

**QSFP+ slots with 10BASE-T**
For electrical interfaces (prepared for optical interfaces)

**IP streaming interface**
For external IP streaming to broadcast real-time coders
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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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
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