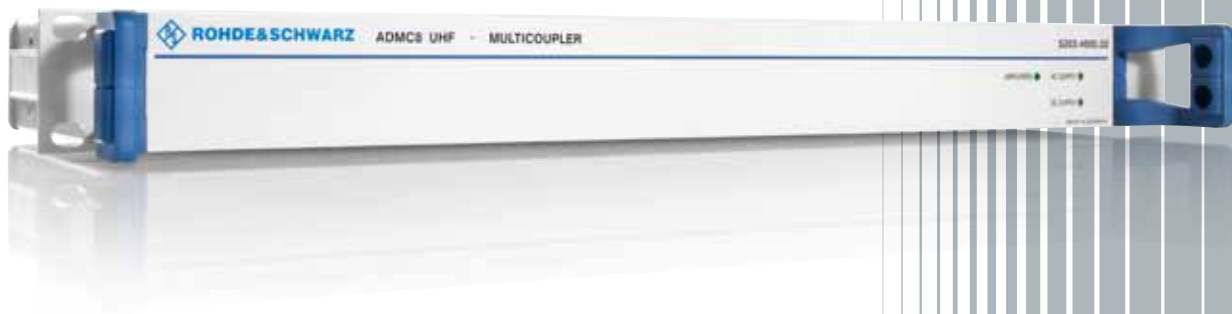


R&S® ADMC8 Multicoupler

Active UHF multicoupler
for 8-port ATC signal
distribution



R&S®ADMC8 Multicoupler At a glance

The R&S®ADMC8 is a multicoupler specifically designed for Rohde & Schwarz ATC receivers.

The space-saving R&S®ADMC8 optimally supports typical ATC system installations with eight receivers operated in parallel on one antenna. The multicoupler's integrated, steep-sided filters reliably suppress interference from high-power VHF FM and TV signals.

The intelligent switching concept of the R&S®ADMC8 multicoupler maximizes the operational reliability of the ATC receiving system by preventing a single point of failure in the amplifiers. To handle any interruptions in the AC supply voltage, the R&S®ADMC8 features automatic switchover to the DC input provided for emergency power supply. The internal operating state of the R&S®ADMC8 can be monitored and evaluated by R&S®Series4200 radios via an alarm contact.

Key facts

- Suppression of adjacent signals from high-power transmitters
- Band-selectivity in the UHF ATC frequency range
- 1-to-8 distribution
- Automatic emergency power switchover
- Overvoltage protection
- Floating alarm contact
- Customized filter frequencies on request
- Specifications in line with environmental data of the R&S®M3SR Series4400



R&S®ADMC8 Multicoupler Benefits and key features

Suppression of adjacent high-power signals

The R&S®ADMC8's integrated bandpass filtering considerably improves the reception conditions for the connected receivers. Adjacent signals such as high-power FM signals in the VHF band or TV signals in the UHF band are suppressed. The R&S®ADMC8 is available as a UHF model. The R&S®ADMC-B1 option is offered for cases where customized filters are needed.

In ATC, parallel operation of eight receivers on one antenna is very common which is why the R&S®ADMC8 multicoupler has eight ports. To prevent the connected receivers from affecting each other (e.g. due to local oscillators or synthesizers), the multicoupler features high port-to-port isolation.

Integrated automatic emergency power switchover

The R&S®ADMC8 is ideal for operation with either AC or DC power. The integrated electronic switchover mechanism automatically detects interruptions in the AC power supply and immediately switches to the DC supply without any signal interruption. The emergency power supply systems with 24 V DC voltage that are common in ATC can be used.

Reliable protection against large signals

The integrated protective circuits at the RF input protect the R&S®ADMC8 against large signals and reliably prevent damage to the connected receivers.

Remote monitoring through floating alarm contact

Featuring an integrated alarm contact as standard, the R&S®ADMC8 offers impressive capabilities for remote monitoring of the internal operating state. If a malfunction occurs, the R&S®ADMC8 immediately switches the floating contacts of a relay to indicate the modified operating state. All internal supply voltages of the amplifiers are monitored. In conjunction with R&S®Series4200 and R&S®Series4400 radios, this alarm contact offers the capability to automatically report the operating state of the R&S®ADMC8 to the user.



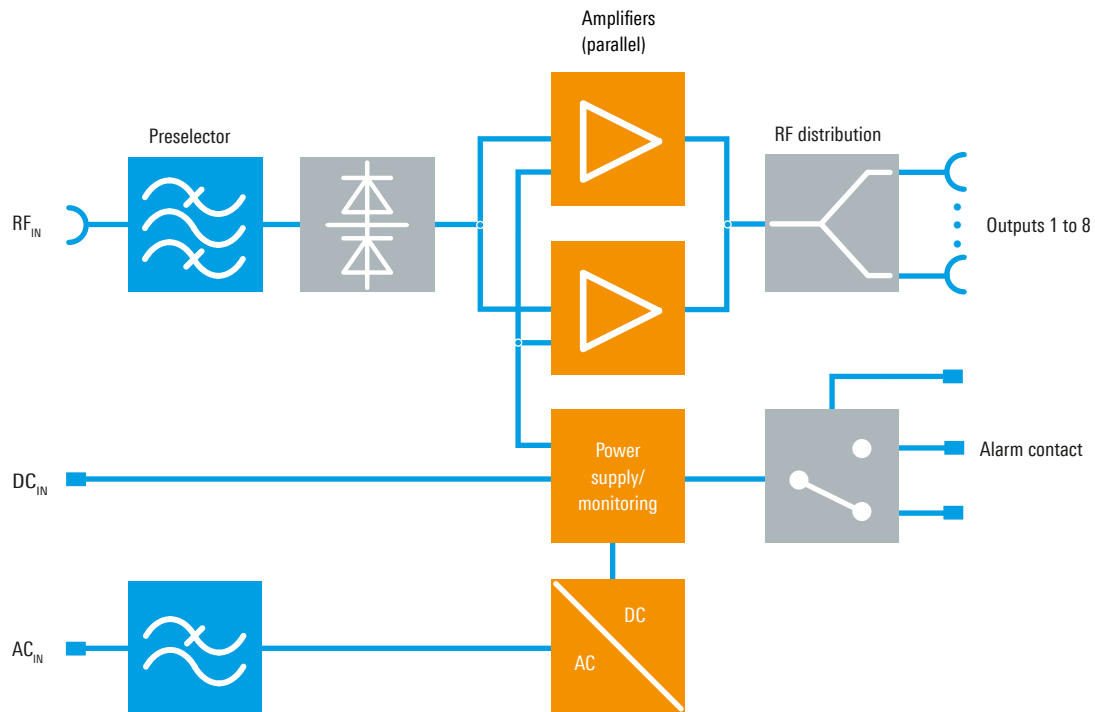
Operational reliability and safety

Operational reliability has top priority during the development of all Rohde&Schwarz ATC devices.

The amplifier redundancy concept of the R&S®ADMC8 with two amplifiers operated in parallel ensures that a signal is available at all times.

The R&S®ADMC8 complies with the high environmental standards of the R&S®M3SR Series4400.

Block diagram of the R&S®ADMC8 multicoupler



Specifications

Specifications		
Standard frequency range ¹⁾		225 MHz to 400 MHz
Impedance	input/output	50 Ω
RF input	1 ×	N female
VSWR	input	< 1.5:1, typ. 1.2:1
VHF FM band suppression	5-pole Chebyshev highpass filter referenced to 310 MHz	< -17 dBr for f < 100 MHz
UHF band V suppression	5-pole Chebyshev lowpass filter referenced to 310 MHz	< -17 dBr for 650 MHz < f < 1 GHz
Max. input power		15 dBm
RF outputs	8 ×	N female
VSWR	output	< 1.5:1, typ. 1.2:1
1 dB compression		> 15 dBm, typ. 18 dBm
Decoupling between two outputs	adjacent outputs	> 23 dB, typ. 26 dB
	non-adjacent outputs	> 23 dB, typ. 30 dB
Intermodulation suppression IP3	output	> 32 dBm, typ. 35 dBm
Gain		2 dB +2 dB/-1.5 dB
Noise figure		< 7 dB, typ. 5 dB
Reverse decoupling		> 33 dB, typ. 38 dB
General data		
Temperature	operating temperature range	-20°C to +55°C
	storage temperature range	-40°C to +70°C
Primary power supply	AC	90 V to 250 V/50 Hz to 60 Hz; IEC connector
Energy consumption		≤ 8 W
Emergency power supply	DC (fully automatic switchover)	19 V to 32 V, typ. 0.3 A
Alarm contact	maximum switching current	≤ 1 A
	maximum switching voltage	≤ 42 V
Connector type	emergency power supply, alarm contact	CA 6 GS (6+PE)
Electromagnetic compatibility		EN55011 class B and EN61326
Humidity		≤ 95% at +55°C in line with MIL-STD-810F method 507.4 and DIN EN60068-2-30, +25°C/+55°C
Vibration		5 Hz to 55 Hz, 0.4 mm double amplitude, test period: 30 min. in each of three axes, in line with DIN EN68-2-6
Shock		45 Hz to 2000 Hz, ≤ 40 g, three shock spectra in each of three axes, in line with DIN EN68-2-27, MIL-STD-810D method 516.3 procedure I
Water and dust resistance		IP 32 for front and side panel
Dimensions	W × H × D	482.6 mm × 43.8 mm × 145 mm (19", 1 HU) (19.0 in × 1.7 in × 5.7 in)
Weight		approx. 2.6 kg (5.7 lb)

¹⁾ Other frequency ranges on request.

Ordering information

Designation	Type	Order No.
Base unit, UHF frequency range		
Multicoupler, UHF, 8 outputs	R&S®ADMC8 UHF	5203.4000.02
Options		
Customized Filter Frequencies	R&S®ADMC-B1	5203.4017.02

Service you can rely on

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

About Rohde & Schwarz

Rohde & Schwarz is an independent group of companies specializing in electronics. It is a leading supplier of solutions in the fields of test and measurement, broadcasting, radiomonitoring and radiolocation, as well as secure communications. Established more than 75 years ago, Rohde & Schwarz has a global presence and a dedicated service network in over 70 countries. Company headquarters are in Munich, Germany.

Environmental commitment

- | Energy-efficient products
- | Continuous improvement in environmental sustainability
- | ISO 14001-certified environmental management system

Certified Quality System
ISO 9001

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PD 5214.6051.12 | Version 01.00 | July 2011 | R&S®ADMC8
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