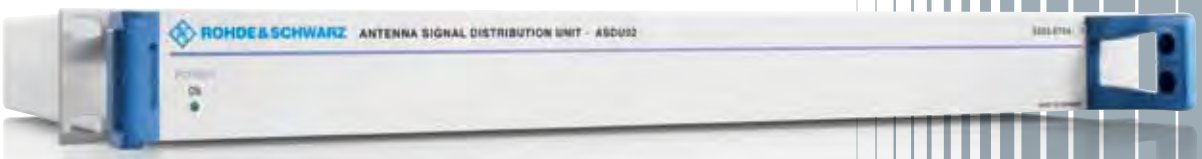
Антенный распределитель ASDU02



R&S®ASDU02 Antenna Signal Distribution Unit

At a glance

The R&S®ASDU02 is an active multicoupler for distributing signals from one antenna to multiple receivers.

Key facts

- Active multicoupler for antenna signal distribution
- Signal reception via modules in the HF and VHF/UHF bands
- Space-saving with only 1 HU

Benefits and key features

Optimized HF and VHF/UHF modules for best possible receiving conditions

To create ideal receiving conditions, two multicoupler modules have been developed for the R&S®ASDU02. The HF module covers the 10 kHz to 30 MHz band, the VHF/UHF module covers the 20 MHz to 3 GHz band.

1-to-4 distribution in each module without any loss in level

Each multicoupler module first amplifies the signal at the antenna input by using broadband low-noise amplifiers with wide dynamic range. As a result, the distributed input signal is made available at the four outputs of the multicoupler module without any loss in level. All inputs and outputs have N female connectors.

Amplifiers with wide dynamic range

The broadband amplifiers in the multicoupler modules have an extremely wide dynamic range. They can linearly amplify exceptionally weak signals, even if they occur directly next to signals with extremely strong levels. This makes the R&S®ASDU02 ideal for use in radiomonitoring applications.

High port-to-port isolation

The modules feature high port-to-port isolation to prevent the connected receivers from affecting each other, e.g. via local oscillators or synthesizers.

BITE option for device monitoring

The BITE option allows the hardware status of the two multicouplers to be monitored. The internal voltages of the modules and the power supply unit are also measured. As an additional highlight, the operating points of the broadband amplifiers are monitored.

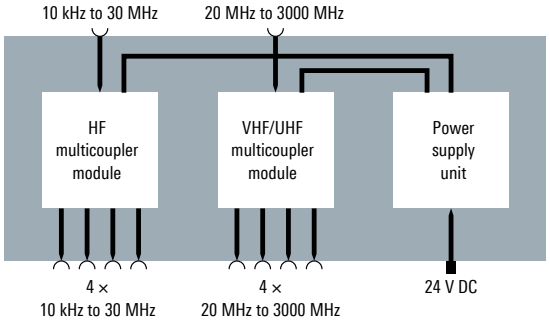
The measurement results of the BITE option are output on the rear of the device via one Ethernet interface (TCP/IP) per module. All relevant data is always available in realtime. The device is also controlled via the Ethernet interface.

The interface is installed and configured using an intuitive program. With the BITE option, the R&S®ASDU02 can be easily integrated into existing systems.

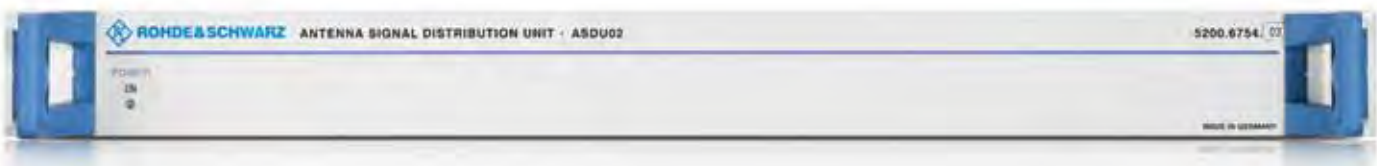
Combination of modules in robust 19" enclosure

The stable enclosure accommodates two multicoupler modules. The modules' inputs are protected against overvoltages. Occupying only one height unit, the R&S®ASDU02 saves space in any rack.

R&S®ASDU02 model .03



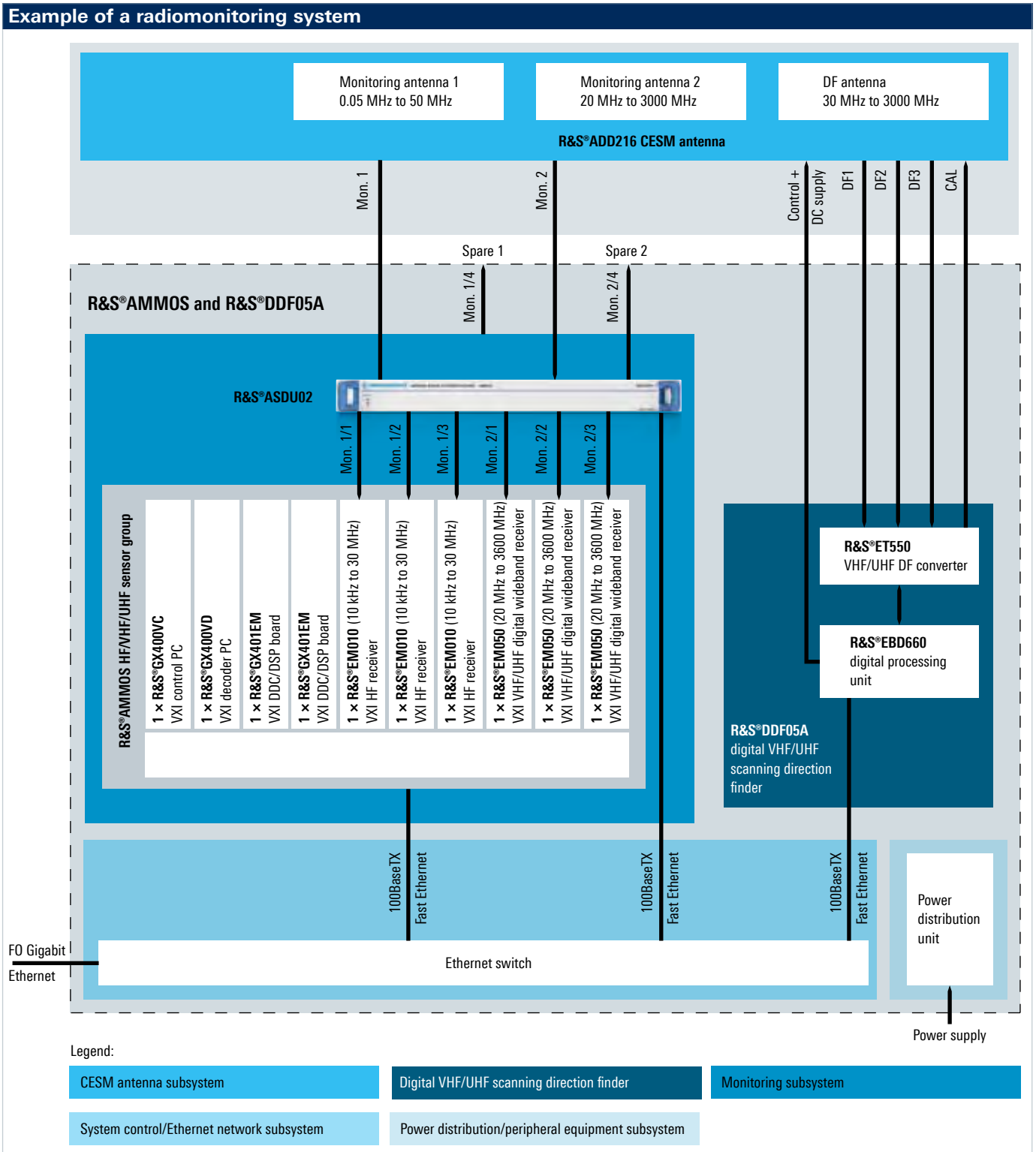
The R&S®ASDU02 comes in various models with different power supplies. The HF and VHF/UHF modules can be combined and both modules can be equipped with the BITE option.



System configuration

The R&S®ASDU02 is ideal for antenna signal distribution in all Rohde&Schwarz radiomonitoring systems. The figure below shows an example of a radiomonitoring system based on an R&S®AMMOS sensor group and a digital HF/VHF/UHF search direction finder.

Example of a radiomonitoring system



Specifications

Specifications		
Module-specific data		
HF multicoupler module [1]		
Frequency range		0.01 MHz to 30 MHz
Impedance	input/output	50 Ω
Connectors	1 × antenna input, 4 × receiver output	N female
Gain	f > 0.025 MHz	3.0 dB ± 2.5 dB
Noise figure		< 8.0 dB, typ. 7 dB
Second-order intercept point (SOI) (output)	f > 1 MHz	> 67 dBm, typ. 75 dBm
Third-order intercept point (TOI) (output)	f > 1 MHz	> 35 dBm, typ. 43 dBm
1 dB compression		> 18 dBm, typ. 22 dBm
Decoupling between two outputs	f > 1 MHz	26 dB, typ. 30 dB
Decoupling between output and input	f > 1 MHz	30 dB, typ. 35 dB
Maximum input level (CW)		20 dBm
Protective circuit at signal input		0.5 kV in line with EN 61000-4-5
VHF/UHF multicoupler module		
Frequency range		20 MHz to 3000 MHz
Impedance	input/output	50 Ω
Connectors	1 × antenna input, 4 × receiver output	N female
Gain		3.0 dB ± 2.5 dB
Noise figure		< 8.5 dB, typ. 7.5 dB
Second-order intercept point (SOI) (output)	20 MHz to 1 GHz	> 45 dBm, typ. 56 dBm
	1 GHz to 3 GHz	> 37 dBm
Third-order intercept point (TOI) (output)	typ. 1 GHz	> 21 dBm, typ. 25 dBm
	typ. 2 GHz	> 17 dBm, typ. 19 dBm
	typ. 3 GHz	> 14 dBm, typ. 15 dBm
1 dB compression		8 dBm, typ. 10 dBm
Decoupling between two outputs		> 35 dB, typ. 43 dB
Decoupling between output and input		> 55 dB, typ. 65 dB
Max. input level (CW)		20 dBm
Protective circuit at signal input		0.5 kV in line with EN 61000-4-5
General data		
Temperature range	operating temperature range	–10 °C to +55 °C
	storage temperature range	–40 °C to +70 °C
Power consumption		22 W
Input voltage		24 V ± 3 V DC
DC voltage connector		XLR
MTBF		> 60 000 h
MTTR		0.5 h
Electromagnetic compatibility		EMC Directive 2004/108/EC in line with EN 61326
Electrical safety		in line with EN 61010 part 1
Dimensions	W × H × D	483 mm × 45 mm × 270 mm (19.02 in × 1.77 in × 10.63 in), 19", 1 HU
Weight	with two multicoupler modules	3 kg (6.61 lb)

[1] Slight variation of performance features at frequencies below 500 kHz.

Ordering information

Designation	Type	Order No.	BITE option
Antenna Signal Distribution Unit			
With 1 × HF module + 1 × VHF/UHF module	R&S®ASDU02	5200.6754.03	no
With 1 × HF module + 1 × VHF/UHF module	R&S®ASDU02	5200.6754.04	yes
With 1 × VHF/UHF module	R&S®ASDU02	5200.6754.10	no
With 1 × VHF/UHF module	R&S®ASDU02	5200.6754.11	yes
With 2 × VHF/UHF module	R&S®ASDU02	5200.6754.20	no
With 2 × VHF/UHF module	R&S®ASDU02	5200.6754.21	yes
With 1 × HF module	R&S®ASDU02	5200.6754.30	no
With 1 × HF module	R&S®ASDU02	5200.6754.31	yes
With 2 × HF module	R&S®ASDU02	5200.6754.40	no
With 2 × HF module	R&S®ASDU02	5200.6754.41	yes
Options for VHF/UHF modules			
Additional 3 dB Gain, for 1 VHF/UHF module	R&S®ASDU-B1	5201.7525.02	
Additional 3 dB Gain, for 2 VHF/UHF modules	R&S®ASDU-B2	5201.7525.03	
Recommended extra			
External Power Supply, 100 V to 240 V AC	R&S®ASDU-Z1	5201.7548.00	

Rear view.