

R&S®KG4200

ATC System Rack

Standard rack for R&S®Series4200 radios



R&S®KG4200 ATC System Rack At a glance

Setting up a compact, durable and reliable infrastructure is a key task for air traffic control (ATC) authorities. The R&S®KG4200 ATC system rack allows them to quickly plan such an infrastructure and put it into operation.

The R&S®KG4200 system rack is the basis for a fully equipped radio system consisting of R&S®Series4200 radios. Even systems with a large number of radio channels can be implemented in a minimum of space. Thanks to the standardized setup, various commercial-of-the-shelf (COTS) equipment can be integrated alongside the radios. The radio equipment and options can easily be installed, retrofitted and removed.

The R&S®KG4200 rack is made of stainless steel and aluminum, which ensures long life and high durability. It protects the equipment against mechanical stress and unauthorized access to the integrated components.

Key facts

- Specially developed for ATC systems, for integration of R&S®Series4200 radios, R&S®GV4000 multilink controller and filters
- Up to 24 transmitters/transceivers or up to 48 receivers
- Up to eight transceiver channels (MAIN/STANDBY) with filters in one rack
- Wide variety of standardized options
- Radios, COTS and third-party equipment in one rack



The R&S®KG4200 ATC system rack, equipped with R&S®Series4200 radios and R&S®ATCMC8 air traffic control multicouplers.

R&S®KG4200 ATC System Rack

Benefits and key features

R&S®Series4200 radios in R&S®KG4200 racks during operation.



Compact, scalable setup

The R&S®KG4200 provides 46 height units (HU), which means it can accommodate a maximum of equipment in a minimum of space. It can hold up to 24 transmitters/transceivers or 48 receivers. The R&S®KG4200 is offered in different models for different numbers of radios. As a result, it can be used in small tower systems as well as in large-scale radio stations.

Easy to install

Preinstalled rackmounts and KRONE® interfaces make it easy for the user to install radios and COTS products in the rack. The AC power supply is prewired and ready to be connected, minimizing setup time.

Flexible system integration

Thanks to the diverse R&S®KG4200 options, many different system versions can be implemented, e.g. MAIN/STANDBY installation, backup DC power supply or integration of n+m redundancy when using the R&S®GV4000 multilink controller. This allows, for example, a configuration with eight filtered radio channels based on R&S®Series4200 transmitters or transceivers in MAIN/STANDBY operation in one rack.

Installation of additional third-party equipment

The 19" rack design makes it possible to install additional COTS and other third-party equipment such as Ethernet switches for network-based remote monitoring and control systems or VoIP applications.

No additional cooling required

The perforated rear panel and door make sure that a completely equipped R&S®KG4200 is sufficiently cooled at a room temperature of up to +30°C. The rack design is tailored to the cooling concept of the R&S®Series4200 radios so that several racks can be set up next to each other. No modifications are required.

Durable and secure

The R&S®KG4200 consists of a stainless steel frame and aluminum side and rear panels that protect the integrated components from mechanical stress. Lockable doors are available to prevent unauthorized access to the radios.

Uniform appearance

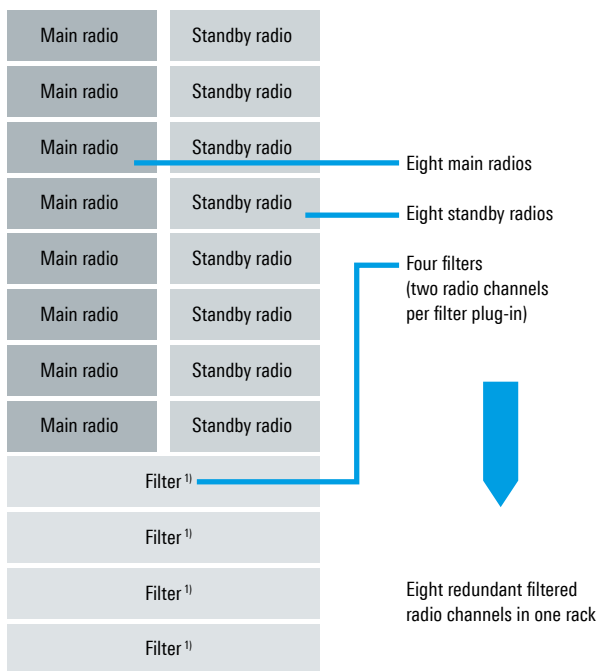
The color of the R&S®KG4200 rack is matched to the design of the R&S®Series4200 radios.

Application

The R&S®KG4200 in its basic configuration includes AC power strips. A wide variety of options are available to expand the range of application:

- ▮ Installation kit, mechanical
- ▮ Installation kit, electrical
- ▮ RF relay
- ▮ 3 dB coupler
- ▮ Various cables (RF, LAN, control)
- ▮ DC cabling and fuse block
- ▮ Overvoltage protection for audio and signal lines
- ▮ Fasteners for filters
- ▮ Fasteners for LAN switches
- ▮ Front and rear doors

Eight redundant filtered radio channels with required options (configuration example)



¹⁾ Two radios per filter plug-in.

Number	Option
Required	
1	Rack configuration (R&S®KG42-Z0)
8	Installation kit, mechanical (R&S®KG42-Z1), for mechanically installing radios
16	Installation kit, electrical, type 1 (R&S®KG42-Z2), for connecting audio and signal lines
8	RF relay, antenna relay (R&S®KG42-Z4)
8	RF cable set for RF relay (R&S®KG42-Z41), cable set for connecting the RF relays
4	Installation kit, filter (for transceiver) (R&S®KG42-Z9) for mechanical installation of filter
Additional	
3	Basic installation kit, DC (R&S®KG42-Z5), DC fuse block
8	Installation kit, DC (R&S®KG42-Z51), DC cables
18	Overvoltage protection for audio and signal lines (R&S®KG42-Z6)
1	Lockable front door (R&S®KG42-Z12)

Specifications

General data		
Power supply	AC	115/230 V AC –10/+15%, 47 Hz to 63 Hz
	DC	22 V to 31 V DC (with R&S®KG42-Z5/R&S®KG42-Z51 options)
Color	frame	stainless steel frame, blue front, RAL 5014
	paneling	aluminum panels (RAL 7047)
Dimensions (H xW x D)		2180 mm x 600 mm x 800 mm (85.8 in x 23.6 in x 31.5 in)
	with adjustable feet	2200 mm x 600 mm x 800 mm (86.6 in x 23.6 in x 31.5 in)
Operating temperature range	rack only	–20°C to +55°C
Storage temperature range	rack only	–40°C to +70°C
Vibration and shock		in line with IEC 60721-3-3 Cl. 3M2-3M3, IEC TR 60721-4-3 Cl. 3M3, IEC 60068-2-6: 1995-03, Part 2 (vibration), IEC 60038-2-27: 1987, Part 2 (shock)

R&S®KG4200 ATC system rack (with transmitters or transceivers)				
	Model .06	Model .12	Model .18	Model .24
Number of transmitters or transceivers	max. 6	max. 12	max. 18	max. 24
Transmitter/transceiver power consumption				
Peak power, all transmitters/transceivers keyed	2880 VA AC, 2340 W DC	5760 VA AC, 4680 W DC	8640 VA AC, 7020 W DC	11520 VA AC, 9360 W DC
Average power, transmitters/transceivers keyed for 10% of time (max.) 10:1 (RX:TX)	528 VA AC, 414 W DC	1056 VA AC, 828 W DC	1584 VA AC, 1242 W DC	2112 VA AC, 1656 W DC
AC	12.5 A	25 A	37.5 A	50 A
Recommended fusing				
230 V AC	2 x 16 A	2 x 16 A	4 x 16 A	4 x 16 A
24/28 V DC	95 A	2 x 95 A	3 x 95 A	4 x 95 A
28 V DC connection points in rack (six units per point); one basic option for six units	1	2	3	4
Empty weight	96 kg (211.6 lb)	102 kg (224.9 lb)	108 kg (238.1 lb)	114 kg (251.3 lb)
Max. weight with transmitters/transceivers (including options)	approx. 144 kg (317.5 lb)	approx. 198 kg (436.5 lb)	approx. 252 kg (555.6 lb)	approx. 306 kg (674.6 lb)

R&S®KG4200 ATC system rack (with receivers only)				
	Model .62	Model .74	Model .86	Model .98
Number of receivers	max. 12	max. 24	max. 36	max. 48
Receiver power consumption				
Peak power, all receivers	540 VA AC, 360 W DC	1080 VA AC, 720 W DC	1620 VA AC, 1080 W DC	2160 VA AC, 1440 W DC
AC	2.4 A	4.7 A	7.0 A	9.4 A
Recommended fusing				
230 V AC	2 x 16 A	2 x 16 A	4 x 16 A	4 x 16 A
24/28 V DC	2 x 7.5 A	4 x 7.5 A	6 x 7.5 A	8 x 7.5 A
28 V DC connection points in rack (six units per point); one basic option for six units	2	4	6	8
Empty weight	approx. 96 kg (211.6 lb)	approx. 102 kg (224.9 lb)	approx. 108 kg (238.1 lb)	approx. 114 kg (251.3 lb)
Max. weight with receivers (including options)	approx. 150 kg (330.7 lb)	approx. 210 kg (463.0 lb)	approx. 270 kg (595.2 lb)	approx. 330 kg (727.5 lb)

Ordering information

Designation	Type	Order No.
Base unit		
Transmitter/Transceiver Rack, 19" (48.26 cm), 46 HU, AC		
Model .06 for up to 6 transmitters or 6 transceivers	R&S®KG4200	6137.1751.06
Model .12 for up to 12 transmitters or 12 transceivers	R&S®KG4200	6137.1751.12
Model .18 for up to 18 transmitters or 18 transceivers	R&S®KG4200	6137.1751.18
Model .24 for up to 24 transmitters or 24 transceivers	R&S®KG4200	6137.1751.24
Receiver Rack, 19" (48.26 cm) , 46 HU, AC		
Model .62 for up to 12 receivers	R&S®KG4200	6137.1751.62
Model .74 for up to 24 receivers	R&S®KG4200	6137.1751.74
Model .86 for up to 36 receivers	R&S®KG4200	6137.1751.86
Model .98 for up to 48 receivers	R&S®KG4200	6137.1751.98
Rack Configuration per rack incl. configuration sheet	R&S®KG42-Z0	6137.2206.02
Hardware accessories		
Installation Kit, mechanical	R&S®KG42-Z1	6137.2635.02
Installation Kit, electrical (type 1)	R&S®KG42-Z2	6137.2693.02
Installation Kit, electrical (type 2), with telephone adapter	R&S®KG42-Z3	6137.2812.02
Installation Kit, RF relay with 2 RF cables to radios	R&S®KG42-Z4	6137.2935.02
RF Cable Set for RF relay with 1 RF cable to filter in same rack	R&S®KG42-Z41	6137.2241.02
Basic Installation Kit, DC (for transmitter)	R&S®KG42-Z5	6137.2993.02
Basic Installation Kit, DC (for receiver)	R&S®KG42-Z5	6137.2993.03
Installation Kit, DC with cables for 2 radios	R&S®KG42-Z51	6137.3054.02
Overvoltage Protection for KRONE® interfaces	R&S®KG42-Z6	6137.3119.02
X-Cross Adapter for R&S®Fx22x automatic filter with control cables	R&S®KG42-Z75	6167.2633.02
Installation Kit, 3 dB coupler with 2 cables to radios	R&S®KG42-Z8	6137.3354.02
RF Cable Set for 3 dB coupler with 1 cable to filter in same rack	R&S®KG42-Z81	6137.2287.02
Installation Kit, filter (for transmitter/transceiver) and 2 cables to radios in same rack	R&S®KG42-Z9	6137.3419.02
Installation Kit, filter (for receiver) and 2 cables to radios in same rack	R&S®KG42-Z9	6137.3419.03
Installation Kit, filter (without cable)	R&S®KG42-Z9	6137.3419.04
Cable Set, LAN (2 × 1.0 m)	R&S®KG42-Z10	6137.2493.02
Cable Set, LAN (6 × 1.0 m)	R&S®KG42-Z10	6137.2493.03
Installation Kit, 19" (48.26 cm) unit (for additional COTS component)	R&S®KG42-Z11	6137.2564.02
Front Door, with lock	R&S®KG42-Z12	6137.2341.02
Back Door, with lock	R&S®KG42-Z13	6137.2429.02
Installation Kit, mechanical, for LAN switch (with T35 rail)	R&S®KG42-Z14	6137.3477.02
Installation Kit, mechanical, for LAN switch (without T35 rail)	R&S®KG42-Z14	6137.3477.03 ¹⁾
Installation Kit, AC, for 1 MOXA LAN switch	R&S®KG42-Z15	6137.2058.02
Installation Kit, AC, for 2 MOXA LAN switches	R&S®KG42-Z15	6137.2058.03
Installation Kit, AC, for 3 MOXA LAN switches	R&S®KG42-Z15	6137.2058.04
Installation Kit, AC, for 4 MOXA LAN switches	R&S®KG42-Z15	6137.2058.05
Installation Kit, DC, for each MOXA LAN switch	R&S®KG42-Z16	6137.2129.02
RF Cable Set, for R&S®ATCMC8 8-port receiver multicoupler	R&S®KG42-Z20	6148.9894.02
RF Cable Set, for R&S®ATCMC16 16-port receiver multicoupler	R&S®KG42-Z20	6148.9894.03
Rack Rolling Kit	MAT	5121.5504.02

Designation	Type	Order No.
Accessories for R&S®GV4000 multilink controller		
Connector Board, 8-to-2 radios (for receiver or transmitter) for R&S®GV4000	R&S®KG42-Z90	6147.0870.02 ²⁾
Connector Board, 8-to-2 radios (for transceiver) for R&S®GV4000	R&S®KG42-Z90	6147.0870.03 ²⁾
Cable Set for connector board for R&S®GV4000	R&S®KG42-Z91	6147.0929.02 ²⁾
Cable Set for connector board (only for 16-to-2 radio systems) for R&S®GV4000	R&S®KG42-Z91	6147.0929.03 ²⁾
Control Cable Transmitter for R&S®GV4000	R&S®KG42-Z92	6147.0970.02 ²⁾
Control Cable Receiver for R&S®GV4000	R&S®KG42-Z92	6147.0970.03 ²⁾
Control Cable Transceiver for R&S®GV4000	R&S®KG42-Z92	6147.0970.04 ²⁾
Accessories for installing radios in the rack		
Installation Kit, mechanical, 1 × dummy plate, 19"/2 (24.13 cm)	R&S®BP4201	6130.2269.02
Installation Kit, mechanical, 1 × dummy plate, 19"/4 (12.07 cm)	R&S®BP4202	6137.1616.02
Blank panel, 1 HU, 19" (48.26 cm)	–	0078.3089.00 ²⁾
Blank panel, 2 HU, 19" (48.26 cm)	–	0088.4342.00 ²⁾
Blank panel, 3 HU, 19" (48.26 cm)	–	0088.4359.00 ²⁾
Blank panel, 4 HU, 19" (48.26 cm)	–	0088.4365.00 ²⁾
Blank panel, 5 HU, 19" (48.26 cm)	–	0088.4371.00 ²⁾
KRONE®LSA PLUS tool, automatic wire cutter	–	6137.1980.00 ²⁾
KRONE®LSA PLUS tool, simple version	–	6137.1974.00 ²⁾

¹⁾ Only if no DC option is ordered.

²⁾ On request.

Your local Rohde&Schwarz expert will help you determine the optimum solution for your requirements.

To find your nearest Rohde&Schwarz representative, visit

www.sales.rohde-schwarz.com

Radio station equipped with R&S®Series4200 radios and filters in R&S®KG4200 racks.



Service you can rely on

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

About Rohde & Schwarz

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Environmental commitment

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

Certified Quality System
ISO 9001

Certified Quality System
EN 9100

Certified Quality System
AQAP-2110

Certified Quality System
EN 9110

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