



VHF/UHF Airborne Transceiver Family R&S M3AR

R&S MR6000A

The R&S MR6000A transceiver of the R&S M3AR family is software-reprogrammable.

It is possible to download several EPM waveforms and use them alternately.

The R&S MR6000A comes in a standard housing to ARINC 600 and features optional embedded NATO-COMSEC with black key loading.

The transceiver can be controlled by the Remote Control Unit R&S GB6500 or a MIL-BUS control system.

- ◆ Multiple EPM waveform options
 - SATURN
 - HAVE QUICK I/II
 - SECOS
- ◆ Software-reprogrammable
- ◆ Embedded NATO-COMSEC
- ◆ 30 MHz to 400 MHz frequency coverage
- ◆ Voice and data
- ◆ 20 W AM to 30 W FM
- ◆ 8.33 kHz and 25 kHz channel spacing



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Specifications

EPM (electronic protection measures) (options)	
Have Quick I + II	(STANAG 4246)
SATURN	(STANAG 4372)
SECOS	
Frequency range	30 MHz to 87.975 MHz 108 MHz to 173.975 MHz 225 MHz to 399.975 MHz
Channel spacing	25 kHz, 8.33 kHz
Frequency accuracy	±0.5 ppm (−40°C to +55°C)
Modulation modes	A3E, F3E, A1D, F1D, MSK
COMSEC (options)	embedded NATO-COMSEC (VINSON KY-58 compatible), proprietary embedded
Interfaces	
RF ports	single port TX/RX
Radio control	MIL-STD-1553B RS-485
Data input/output	MIL-STD-1553B RS-422
GPS time interface	
Sonobuoy control	
LINK-11 interface	
SATURN data interface acc. to RS-422	
Transmitter	
RF output power	
AM/HAVE QUICK I/II	≥20 W
FM/FSK/SATURN MSK/LINK-11 ¹⁾	≥30 W
Duty cycle	1 min/2 min at 15 W/20 W 1 min/5 min at 20 W/30 W
Distortion	≤10%, m = 0.8, f _{mod} = 1 kHz
Broadband noise/fixed frequency mode	
±100 kHz from carrier	≤−83 dBm (1 Hz)
±1 MHz from carrier	≤−100 dBm (1 Hz)
≥±10 MHz from carrier	≤−120 dBm (1 Hz)
Main receiver	
Sensitivity	
AM	−101 dBm, m = 0.3, f _{mod} = 1 kHz, (S+N)/N = 10 dB
FM	−107 dBm, 2.4 kHz dev., f _{mod} = 1 kHz, (S+N)/N = 10 dB
Selectivity	6 dB 60 dB
ICAO 8.33 kHz	>7 kHz <11 kHz
ICAO 25 kHz	>22 kHz <50 kHz
Squelch	8 dB to 15.5 dB adjustable
Guard receiver	
Frequency	
FM	40.5 MHz
AM	121.5 MHz
AM	243.0 MHz
FM (GMDSS channel 70)	156.525 MHz
Sensitivity	≤−99 dBm, 30% modulation, f _{mod} = 1 kHz
Selectivity	6 dBm 60 dBm
	≤28 kHz ≥100 kHz
Squelch	adjustable to 8 dB to 15.5 dB

Power supply (EN 2282)	+28 V DC
Power consumption	
Transmit	<300 W
Receive	<50 W
Standby	<250 W
Environmental conditions	
Rated temperature range ²⁾	−30°C to +71°C
Operating temperature range ²⁾	−40°C to +85°C
Storage temperature range ²⁾	−40°C to +85°C
Shock/vibration	MIL-STD-810 E
EMC	MIL-STD-461 D
Dimensions	3 HU, length 320 mm (to ARINC 600)
Weight	<7.9 kg
Accessories supplied	remote control unit mounting tray EPM management system

¹⁾ LINK-11 forced-air cooling to ARINC 600 min. 66 kg/h at 55°C max.

²⁾ To MIL-HDBK-5400, class 2, modified.

Ordering information

Designation	Type	Order No.
Basic module		
ARINC 600 housing; RF 20 W AM/30 W FM Plain – no EPM		
	R&S AR6000	6113.6501.02
Mandatory options		
Control Interface (Standard)	R&S CI6000A	6111.3540.02
Frequency Range	R&S FR6000	6111.3563.xx
VHF tact. (30 MHz to 88 MHz)		.02
VHF (108 MHz to 174 MHz)		.03
UHF (225 MHz to 400 MHz)		.04
Available options		
EPM Hardware	R&S GP6000	6112.9007.xx
HPP-600		.03
SKM 4 (for embedded NATO-COMSEC and black key loading)		.04
EPM Software	R&S GS6000	6113.0503.xx
HAVE QUICK I		.02
HAVE QUICK I/II		.03
SATURN/HAVE QUICK I/II		.04
Embedded NATO-COMSEC		.05
SECOS Voice		.06
SECOS Voice & Data		.07

Certified Environmental System
ISO 14001
REG. NO 1954

Certified Quality System
ISO 9001
DQS REG. NO 1954



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