

HF Transceiver Family



R&S® XK 2000



HF Modem R&S® GM 2200

Fast and reliable data transmission up to 9600 bit/s

- ◆ Multistandard HF modem
- ◆ Single-tone modem technology
- ◆ Short preamble (Rohde & Schwarz waveforms)
- ◆ Forward error correction (FEC)
- ◆ Remote control (ASCII code)
- ◆ CW suppression
- ◆ Compact plug-in module
- ◆ Built-in test (BIT)
- ◆ Software available for:
 - Rohde & Schwarz advanced waveforms
 - STANAG 4285
 - MIL-STD-188-110 A, Section 5.3
 - STANAG 4529
 - MIL-STD-188-110 B, App. C/
 - STANAG 4539, Annex B, Section 4

The multimode HF Modem R&S®GM 2200 is currently the most advanced serial HF data modem and is fully integrated in the R&S®XK 2000 radio equipment family. This modem can form the backbone of a fast and reliable data transmission system.

Thus large volumes of data such as fax, color video still pictures and electronic mail from PC to PC can be sent rapidly anywhere in the world.

The modem makes it possible to transmit data economically and reliably via short-wave at high speed (up to 9600 bit/s) in contrast to traditional data transmission techniques such as radioteletype (RTTY) that allow 50 Bd or 100 Bd only.

The software is available for the following waveforms:

- ◆ Rohde & Schwarz advanced waveforms
- ◆ STANAG 4285
- ◆ MIL-STD-188-110A, Section 5.3
- ◆ STANAG 4529
- ◆ MIL-STD-188-110B, App. C/
STANAG 4539, Annex B, Section 4

These waveforms can be ordered in any combination, i.e. separately and independently of each other, and enabled in the R&S®XK 2000.

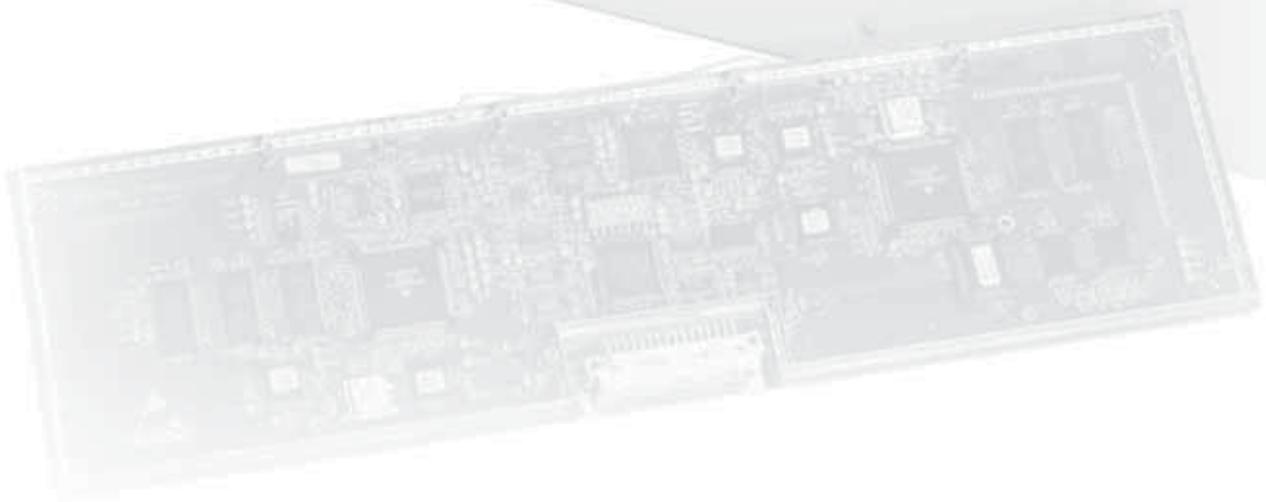
Of course, they are interoperable with the corresponding waveforms of the earlier R&S®GM 2000 and R&S®GM 2100 modems, thus enabling problem-free communication with existing systems and with modems of other makes.

In conjunction with a system processor/communication server and appropriate software and interfaces from Rohde & Schwarz, office communication terminals such as fax machines, color video cameras/monitors or PCs may be connected and the associated data (in compressed form to save time) is transmitted via shortwave.

A system with the HF Modem R&S®GM 2200 and a system processor coupled with ARQ-supported RSX.25 data protection yields 100 % error-free data when taking all software error correction facilities and data compression techniques into account. The transfer time for an A4-size text page is only about 3 s to 6 s and that for a color picture including compression less than half a minute, using the 5400 bit/s waveform.

The waveforms constitute the basis for reliable and error-free HF data transmission. An ARQ data link protocol ensures error-free data flow. Owing to our information technology and software solutions such as COM2000 or R&S®PostMan II, the Rohde & Schwarz 2700 bit/s and 5400 bit/s waveforms are used in connection with the ARQ RSX.25 protocol. Used for the ALIS or ALE link establishment method, this protocol is specially adapted to the Rohde & Schwarz 2700 bit/s and 5400 bit/s waveforms.

However, waveforms in line with STANAG and MIL-STD such as the new 9600 bit/s high-speed waveform (STANAG 4539, Annex B, Section 4) cannot be used together with the RSX.25 protocol. For these waveforms, radio protocols such as STANAG 5066 are available on request.



Ordering information

| HF Modem | | |
|---|--------------|--------------|
| Multimode HF modem, plug-in type for R&S®XK 2000 series of equipment; to be ordered together with Software R&S®GM 2200S through R&S®GM 2204S | R&S®GM 2200 | 6117.5500.02 |
| Software for R&S®GM 2200 | | |
| Rohde & Schwarz 2700 bit/s + 5400 bit/s useful data rate (with FEC ¹⁾ , autobaud capability but without interleaving) from 900 bit/s to 4500 bit/s; 5400 bit/s with FEC switched off | R&S®GM 2200S | 6117.6006.02 |
| MIL-STD-188-110 A Section 5.3 Single Tone useful data rate (with FEC, interleaving) from 75 bit/s to 2400 bit/s; 4800 bit/s with FEC and interleaving switched off | R&S®GM 2201S | 6117.6258.02 |
| STANAG 4285 useful data rate (with FEC, interleaving but without autobaud capability) from 75 bit/s to 2400 bit/s; 1200 bit/s, 2400 bit/s and 3600 bit/s even with FEC and interleaving switched off | R&S®GM 2202S | 6117.6506.02 |
| STANAG 4529 useful data rate (with FEC, interleaving but without autobaud capability) from 75 bit/s to 1200 bit/s; 600 bit/s, 1200 bit/s and 1800 bit/s even with FEC and interleaving switched off; occupies half the bandwidth of the STANAG 4285 waveform | R&S®GM 2203S | 6117.6758.02 |
| MIL-STD-188-110 B Appendix C or STANAG 4539, Annex B, Section 4 useful data rate (with FEC, interleaving capability) from 3200 bit/s to 9600 bit/s; 12800 bit/s with FEC and interleaving switched off | R&S®GM 2204S | 6117.7002.02 |

¹⁾ FEC: forward error correction.

More information at
www.rohde-schwarz.com
(search term: GM2200)



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