

FEATURES & BENEFITS:

- HF Data Modem up to 9,600 bps (3 kHz)
- Best in Class Modem Performance
- Ethernet Interface to PC or Laptop
- Rugged MIL-STD Design
- Optional 2G ALE (MIL-STD-188-141B)
- Optional VHF Data Modem Capability

HF DATA MODEM STANDARDS:

- MIL-STD-188-110A & MIL-STD-188-110B
- STANAG 4539 (QAM)
- STANAG 4285 (PSK)
- STANAG 4529 (NB PSK)
- STANAG 4415 (robust)

RM5 RUGGED HIGH-SPEED DATA MODEM

The **RM5** is a MIL-STD-188-110A/B HF data modem with a rugged, field-hardened enclosure. The modem is created with disaster relief agencies in mind. These agencies often need standardised interoperability in harsh and unpredictable environments. The unit also fits well with military and paramilitary organisations.

2G ALE OPTION

Second Generation Automatic Link Establishment (2G ALE) according to MIL-STD-188-141B is optionally available .

VHF DATA MODEM OPTIONS

The **RM5** can host either narrowband or wideband VHF data modems. The narrowband modem has a fixed 3 kHz bandwidth. The wideband modem offers bandwidths up to 24 kHz.

STANAG 5066 COMPLIANT EMAIL SOFTWARE

The **RM5** typically interfaces with a rugged PC or Laptop via an Ethernet port. The optional RC50 Email software provides email service using STANAG 5066 compliant ARQ.

RM5 HARDWARE

PHYSICAL CHARACTERISTICS	
SIZE & WEIGHT	163 x 96 x 41 mm (w x d x h), 800 g
POWER	6 – 36V DC, MIL-STD-1275 Vehicle Power & polarity protection
TEMPERATURE	Operating: -40°C to +70°C; Storage: -55°C to +85°C
ENVIRONMENTAL	MIL-STD-810F Shock, Vibration, Splash, Dust
COLOUR	Black (RAL 9002)
INTERFACES	
J1: RADIO (BERNIER PAM17SNE1C1)	Audio: 600Ω balanced TX & RX, COMMON, PTT, GND, Power input 6 – 36 VDC Radio Control: RS-232 levels. RxD, TxD.
J3: ETHERNET (AMPHENOL S2 4-PIN)	10/100 Base-T (IEEE 802.3U compatible), embedded TCP/IP Stack, Auto cross-over detection. TX+ [1], TX- [2], RX+ [3], RX- [4]
J2: POWER (AMPHENOL 62IN-57A-8-4P)	6 – 36 VDC, MIL-STD-1275 Vehicle power & polarity protection.
ON / OFF	Rugged Momentary Switch
FRONT LEDs	PWR: Green LED indicating power supply OK. Flashing LED indicated power problem. TX/RX: Green LED indicates Radio TX, Green LED indicates radio RX. ALE: Flashing green LED indicated ALE scanning. ETH: Green LED indicates connection. Flashing green LED indicated Data flow.

HF MODEM SPECIFICATIONS

WAVEFORM STANDARDS	MODULATION	DATA RATES & CHARACTERISTICS	INCLUDED
			M2
MIL-STD-188-110B APP C	PSK/QAM	[3200, 4800, 6400, 8000, 9600 bps] (Coded)	✓
STANAG 4539	PSK/QAM	[75, 150, 300, 600, 1200, 2400, 3200, 4800, 6400, 8000, 9600 bps] (Coded)	✓
MIL-STD-188-110B	PSK/QAM	[75, 150, 300, 600, 1200, 2400, 3200, 4800, 6400, 8000, 9600 bps] (Coded)	✓
MIL-STD-188-110A § 5.3	PSK	[75, 150, 300, 600, 1200, 2400 bps] (Coded), 4800 bps	✓
STANAG 4415	PSK	NATO robust: 75 bps (Coded)	✓
STANAG 4285	PSK	[75, 150, 300, 600, 1200, 2400 bps] (Coded), 1200, 2400, 3600 bps	✓
STANAG 4529	PSK	[75, 150, 300, 600, 1200 bps] (Coded), 600, 1200, 1800 bps	✓
STANAG 4481 PSK	PSK	300 bps (Coded)	✓
STANAG 4481 FSK	FSK	75 bps; (single channel / multi-channel, selectable carrier)	✓
FSK VARIABLE	FSK	50, 75, 100, 150, 200, 300, 400, 600, 1200 bps; Mark & Space Frequency: 350 to 3000 Hz	✓

HF 2G ALE SPECIFICATIONS

2 ND GENERATION AUTOMATIC LINK ESTABLISHMENT AND LINKING PROTECTION			OPTION
			2G
STANDARD	Automatic Link Establishment: Linking Protection:	MIL-STD-188-141C App A MIL-STD-188-141C App B, FED-STD 1049	✓
RADIO CONTROL	RAP1/RIPC, or Transceiver Protocol (custom implementation possible)		✓


VHF MODEM SPECIFICATIONS

BANDWIDTH	DATA RATE [BPS] (CODED)										INTERLEAVER [MS]			OPTION			
	MODULATION										ULTRA SHORT	MEDIUM	LONG	L1	L2	L3	L4
	256-QAM	128-QAM	64-QAM	32-QAM	32-QAM	16-QAM	8-PSK	Q-PSK	BPSK	BPSK							
24 kHz	128000	96000	76800	64000	32000	25600	19200	9600	4800	2400	20	960	4800	✓			
18 kHz	96000	76800	57600	48000	25600	19200	9600	4800	2400	1200	40	960	4800	✓			
12 kHz	64000	51200	38400	32000	16000	12800	9600	4800	2400	1200	40	960	4800	✓	✓		
9 kHz	48000	38400	28800	24000	12800	9600	4800	2400	1200	600	80	960	4800	✓	✓		
6 kHz	32000	25600	19200	16000	8000	6400	4800	2400	1200	600	80	960	4800	✓	✓	✓	
3 kHz	16000	12800	9600	8000	4800	3200	2400	1200	600	300	160	960	4800	✓	✓	✓	✓

ACCESSORIES: Contact RapidM for a list of connecting cables and mounting accessories

ORDERING INFORMATION	STOCK NUMBER	DESCRIPTION
RM5 RUGGED HIGH-SPEED MODEM M2	RME-M5-RE-M2V06	SDM: RM5 Rugged M2 S4285, S4539, ETH V06
ALE 2G OPTION	RM5-SW-O-2G-V06	SW MDL-2G ALE / MS 141B, App. A, B V06
VHF MODEM OPTION L1	RM5-SW-O-L1-V06	SW MDL-L1 (VHF B≤24kHz ≤128kbps) V06
VHF MODEM OPTION L2	RM5-SW-O-L2-V06	SW MDL-L2 (VHF B≤12kHz ≤64kbps) V06
VHF MODEM OPTION L3	RM5-SW-O-L3-V06	SW MDL-L3 (VHF B≤6kHz ≤32kbps) V06
VHF MODEM OPTION L4	RM5-SW-O-L4-V06	SW MDL-L4 (VHF B≤3kHz ≤16kbps) V06
STANAG 5066 EMAIL SOFTWARE*	STOCK NUMBER	DESCRIPTION
RC50 EMAIL SOFTWARE FOR WINDOWS	RMS-PC-RC50-2.3	S/W: RC50 G/Sec Email Suite Win V2.3

* Contact RapidM for a datasheets

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