



HF and V/UHF Communications Products  
for Naval and Strategic Platforms

REACHING  
**BEYOND**  
BOUNDARIES



Naval and strategic operations require interoperability among a diverse set of radio communication systems to operate in synergy and successfully manage complex missions. RapidM knows the ropes and can assist system integrators in navigating their way through this dynamic domain with our continually expanding range of maritime communication products.

## RM Product Family

The RM product family comprises high-performance, best-in-class products that fully comply with the current standards for beyond-line-of-sight (BLOS) strategic, maritime, narrowband and wideband HF and VHF/UHF data communications in satellite-denied environments. This family includes HF and VHF/UHF data modems (conforming to MIL-STD-188-110A, B, C and D, STANAG 5069, 4285, 5065, 4529, 4415, 4539 and 4691), Automatic Link Establishment (ALE) functions for 2G ALE, 3G ALE and 4G ALE (conforming to MIL-STD-188-141A, B, C and D and STANAG 4538 FLSU) and 3G Packet Data Modems (conforming to STANAG 4538 xDL).

## RC Product Family

The RC product family consists of PC software products and dedicated hardware units that provide standards-based Automatic Repeat Request (ARQ), IP data solutions and network controllers to systems integrators of red side equipment. These products are used with our RM modems and external link encryptors to deliver error-free data (email, chat, position) over HF and VHF/UHF links in severely degraded channel conditions. The PC software conforming to STANAG 5066 for email and chat over HF and VHF/UHF radio links is used with STANAG 4539/MIL-STD-188-110 HF data modems. The dedicated hardware units offer the STANAG 5066 ARQ stack, STANAG 4691 MARLIN TDMA controller and the emerging STANAG 5070 wideband ARQ stack.

## Standards-Compliance for Military Interoperability

MIL-STD-188-110A, B, C and D

MIL-STD-188-141A, B, C and D

STANAG 4285

STANAG 4415

STANAG 4481

STANAG 4529

STANAG 4538

STANAG 4539

STANAG 4691

STANAG 5065

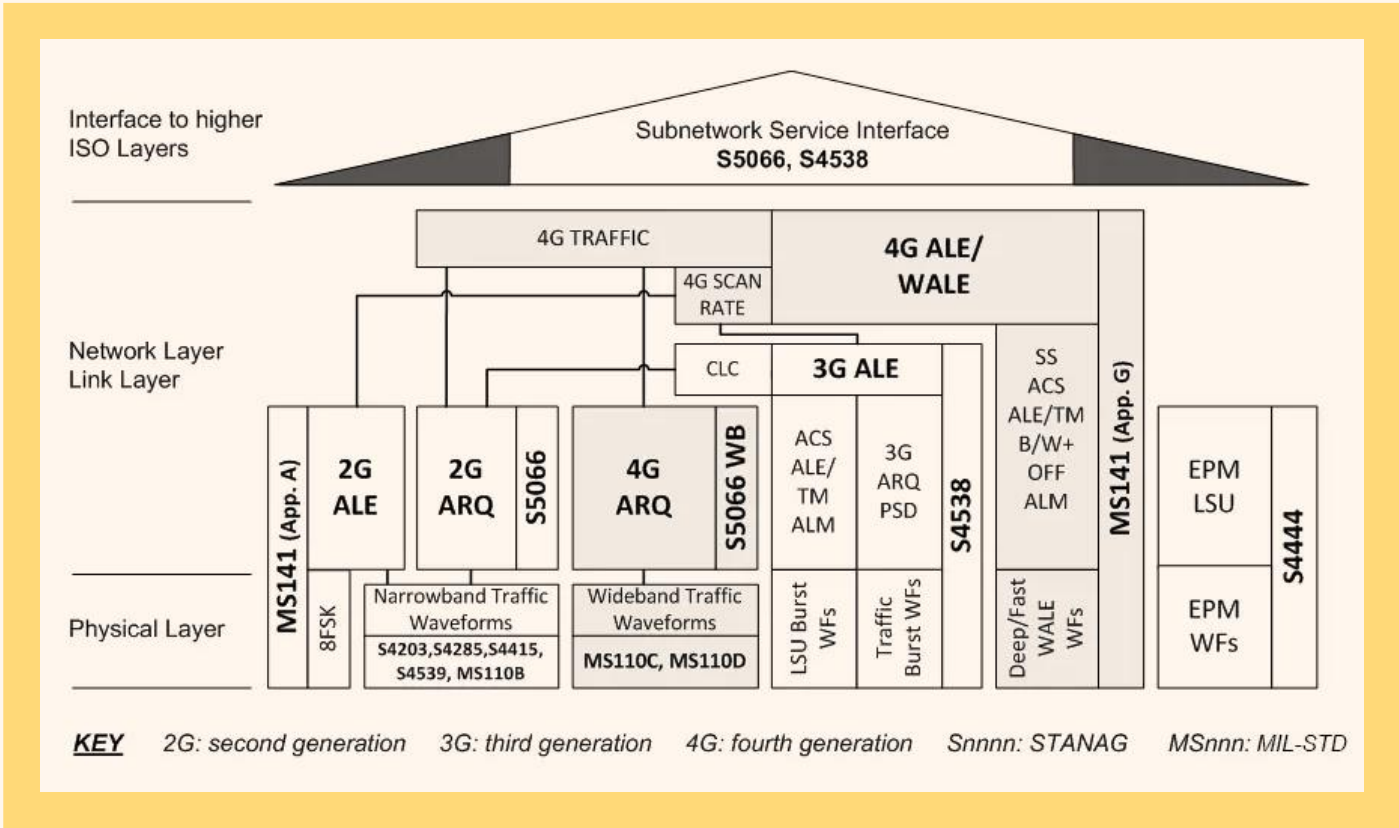
STANAG 5066

STANAG 5069

STANAG 5070

## Integrated NATO HF House

The wideband HF house shows the second (2G), third (3G), and fourth-generation (4G) standards. It also highlights the possible interactions between the modem, ALE, ARQ and 2G, 3G, and 4G standards.



## Users

Naval communications in the HF band can be grouped as point-to-point, ship-to-shore, ground-to-air and broadcast.

- Navies, Split-Site Shore Stations, or Ship/Submarine/Airborne Platforms
- Long-Range BLOS Communication for Satellite-Denied Environments
- Coast Guards
- Offshore Drilling Operations
- Tactical Data Link Platforms
- Commercial and Industrial Users Requiring Standards-Compliant BLOS Communication
- Other Maritime Usages, Including Ship-to-Shore, Ship-to-Ship and Shore-to-Ship

## Applications

- Digital Voice Notes (Non-Real Time)
- HF Chat
- Messaging (Serial/COSS, Military/TMMHS)
- HF Email (CFTP/HMTP, HF POP)
- File Transfer (FTP PEP/RCOP)
- C2 Situational Awareness (IP Client)
- Web Browsing (HTTP PEP/RCOP)
- Video Broadcast (Bypass Modes)

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# PRODUCT RANGE



**RM34**  
Ultra-Wideband SDM – 70 mHz



**RM12**  
Wideband SDM & ALE – 48 kHz



**RM10**  
Wideband SDM & ALE – 24 kHz



**RC34**  
Ultra-Wideband Network Controller



**RC12**  
Wideband ARQ Server & IP Controller – 240 kbps



**RC10**  
Wideband ARQ & IP Controller – 120 kbps



**RM8**  
Software Defined Modem & ALE – 3, 6 kHz



**RM8X4**  
Quad Software Defined Modem & ALE – 3, 6 kHz



**RM6-A**  
Data Modem & ALE – 3, 6 kHz



**RC8**  
ARQ Server & IP Controller – 19.2 kbps



**RC8X4**  
Quad ARQ Server & IP Controller – 19.2 kbps



**RI10**  
IP-TO-SYNC Controller – 120 kbps

