

Digital Modular Radio (DMR)

Software-Defined Communication System



Certified. Proven. Fielded.

Complete HF, VHF, UHF, and SATCOM waveform capability

Programmable embedded Type 1 encryption

Multiple Independent Levels of Security (MILS) certification

Waveform and encryption algorithm upgradeability

Full qualification for U.S. Navy shipboard environment

Overview

The Digital Modular Radio (DMR), AN/USC-61(C), is the first software defined radio to have become a communications system standard for the U.S. Military. The compact, multi-channel DMR provides multiple waveforms and multi-level information security for voice and data communications from the core of the network to the tactical edge.

DMR Today

Digital Modular Radios currently operate aboard U.S. Navy surface and subsurface vessels, fixed-sites and other Department of Defense communication platforms using frequencies ranging from 2 MHz to 2 GHz. Certified to pass secure voice and data at Multiple Independent Levels of Security (MILS) over HF, VHF, UHF, and SATCOM channels, the DMR system was developed to the U.S. Navy's specifications and meets all the stringent environmental, EMI and performance requirements for use in the U.S. Fleet. DMR is also certified by the Joint Interoperability Test Command (JITC) to be compliant with the U.S. government's MIL-STD-188-181B/182A/183A requirements for UHF SATCOM.

Next-Generation Communications Capability

Built using open architecture standards, General Dynamics' Digital Modular Radios continue to provide improved functionality and interoperability while setting the stage to incorporate next-generation communications, including forthcoming waveforms and advanced network connectivity.

Digital Modular Radio

Benefits

- Single radio for the entire 2 MHz - 2 GHz band
 - Lower spares cost and inventory
 - Single depot and common logistics
 - Common operations and maintenance training
 - Common manuals
 - Single point of control
 - Low life-cycle costs
- Dramatically simplified shipboard communications system architecture
 - Embedded Type 1 Encryption
 - Embedded red/black baseband switching and routing
- Superior co-site performance
- Reduced manpower requirements
 - Single point of control for entire HF/VHF/UHF/SATCOM system
 - High reliability
 - Built-In Test (BIT)
- Full logistical support in the U.S. Navy system



Technical Specifications Communication

- Reprogrammable Waveform Capabilities
 - SATCOM – MIL-STD-188-181B, 182A, and 183A
 - SINGARS SIP/ESIP
 - Havequick I/II*
 - HF/UHF Link-11
 - UHF Link-4A
 - MIL-STD-188-110B HF Modem
 - MIL-STD-188-141B HF ALE
 - VHF/UHF LOS
 - AM Civil and Military Aviation (WB/NB)
 - FM Voice and Data (WB/NB)
 - FSK/BPSK/SBPSK/QPSK/CPM
 - Others as Required**
- Reprogrammable Voice and Data Security Options
 - KY-57/58
 - KGV-11
 - KGV-10
 - KG-84A/C
 - KYV-5 (ANDVT)
 - KY-99A
 - KWR-46
 - Others as Required**
- Key Fill Devices
 - DS-101
 - DS-102
- Configuring, controlling, and operating
 - Single HMI can control up to 128 DMR channels
 - Single DMR can be controlled from up to 15 networked operator stations

System Characteristics

Frequency Range:	2 MHz – 2 GHz, contiguous
Size:	17.5"W x 19.25"H x 22"D (EIA-310-D Clearance) (44.45 x 48.90 x 55.9 cm)
Input Power:	100 - 140 VAC, (47 - 63 Hz)
Operating Temperature:	0° to 55° C
Vibration	MIL-STD-167
Shock	M-S-901
EMI	MIL-STD-461, and MIL-STD-1399

Call for complete system characteristics

* For U.S. government use only.

** Upgradeable. Call for availability.

GENERAL DYNAMICS C4 Systems

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