

# AN/USC – 61(C) Software Defined Radio (SDR) System

*Communications information and knowledge full speed ahead.*



Our expertise in Software Defined Radio (SDR) technology draws on our experience in Speakeasy and the SDR Forum and has culminated in our Wireless Information Transfer System (WITS) technology.

These WITS-enabled™ solutions with embedded reprogrammable INFOSEC have led to the development of the U.S. Navy's Digital Modular Radio (DMR) set, which is being delivered to the U.S. Navy today for surface, subsurface and fixed sites. Approximately 750 software-defined channels capable of 2 MHz to 2 GHz operation have been delivered.

The system is controlled, either locally or across the

network, by a user-friendly, Windows®-based Human Machine Interface (HMI). Our DMR system integrates 2 MHz-2 GHz communications, security, peripheral control, ancillaries, computing and networking into one compact system. This open architecture technology aids the Navy in the transition to its IT21 FORCENet vision of Network Centric Warfare.

For complete details, visit our Website:

[www.gdds.com/radiosystems](http://www.gdds.com/radiosystems) or call us toll-free today: 1-800-424-0052. Give us your email address and we'll send you future product and news releases.

From DMR...to the future. Right now.

**GENERAL DYNAMICS**  
C4 Systems

# AN/USC – 61(C) SDR System

## Technical Specifications

### Benefits/Features

#### Software Redefinable for Flexibility and Growth

- On-site or remote programming via dedicated LAN or WAN
- Controlled from a Windows NT laptop
- Programmable RF channels require no hardware slices or hardware changes
- No special modules required for certain functions
- Software selectable features

#### Migration/Interoperability

- Diverse legacy and emerging networks interoperate via an RF connection

#### Secure

- 4-Channel, full duplex gateway system allows independent security configuration

#### Versatile

- Flexible infrastructure
- Implements national and international standards
- Allows operational characteristics of each channel to be redefined as required by changing communications needs
- Stores all DMR-developed waveforms
- Multiple units can be networked and controlled by one SNMP Manager
- Software upgradeable over the network
- Utilizes open standards to promote third-party application software and portability
- Common HMI controls associated 100/200W PAs via Ethernet

#### Reduced Cost of Ownership

- Lowers training, maintenance, inventory, installation, development and field upgrade costs
- Extensive COTS utilization

### Communicating

#### 4 Channel Simultaneous Wireless Operation

(Call for Availability of Software-defined Waveforms.)

- SATCOM – 181B, 182A and 183A
- SINCGARS SIP/ESIP
- Havequick I/II\*
- UHF Link-11, Link-4a
- HF SSB, ISB, AM and Link-11 (serial tone modem 110A and ALE 141A)
- VHF/UHF LOS
- AM Civil and Military Aviation
- FM Voice and Data
- FSK/BPSK/SBPSK/QPSK

#### Reconfigurable Wireline Interface Supporting

- EIA/TIA 530A
- JMINI
- Ethernet
- Analog

#### Reprogrammable Voice and Data Security Options\*\*

(Available as released and with specific U.S. Government approval. Call for details.)

- KY-57/58    • KYV-5
- KGV-10/11    • DES
- KG-84A/C    • KWR-46
- KG-194    • Others as Required

#### Networking

- Configurable IP Addressing
- #### Configuring, controlling, and operating
- Selectable Operational Modes and Parameters
  - Download of Network Configuration and SW Updates\*\*
  - Download of Security Keys and Updates\*\*

#### Evolving

- Open Architecture and Custom Control Options
- Future Waveforms and Third Party Software Applications

### Certifications

- JITC
- NSA
- Navy, Technical and Operational evaluations

### System Characteristics

(Call for complete system characteristics.)

#### Frequency Range

- 2 MHz – 2 Ghz, contiguous

#### AM Sensitivity

- -106 dBm  
Typical (10 dB S/N, 3.5 kHz BW)

#### FM Sensitivity

- -108 dBm  
Typical (10 dB SINAD, 10 kHz BW)

#### Spurious and Image Rejection

- >60 dB

#### Transmit Power

- 100 mW Nominal per Channel  
(50 mW AM)

#### Size

- 17.5"W x 19.25"H x 22"D  
(EIA-310-D Clearance)  
(44.45 x 48.90 x 55.9 cm)

#### Weight

- 210 lbs (95.3 kilograms)

#### Input Power

- 100 - 140 VAC  
(47 - 63 Hz)

#### Operating Temperature

- 0° to 55° C

#### Vibration

- MIL-STD-167

#### Shock

- MIL-STD-901

\*For U.S. Government use only.

For other uses, call for details.

\*\*Upgradeable. Call for availability.

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## GENERAL DYNAMICS

8220 E. Roosevelt Street, M/D R7211 • P.O. Box 9040, Scottsdale, AZ 85257  
Toll-free: 800-424-0052 • Phone: (480) 441-4079 • Fax: (480) 441-0006  
Web Site: www.gdc4s.com/radiosystems

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