

LOCKHEED MARTIN



***AN/UYQ-70 Submarine
Workstation***





AN/UYQ-70 Submarine Workstation

The Submarine Workstation (SWS) variant AN/UYQ-70 is an integrated equipment and software group, functionally replacing the OJ-172 (DEAC).

The SWS is intended for use as the Data Processing Subsystem/Data Storage System (DPS/DSS) Workstation and Monitoring Subsystem (MS) Workstation on Trident Class Submarines (SSBN) and as the Data Storage System (DSS) for 688 Class Attack Submarines (SSN).

The SWS configuration uses standard Q-70 modules and components built on a flexible commercial off-the-shelf (COTS)-based open system architecture and housed in an air-cooled enclosure. Connectivity is provided by multiple topologies, including the MIL-STD 1397 Naval Tactical Data Standard (NTDS) interface. Upgrading the connectivity is only a matter of changing the interface card, cable, and software driver. The console is equipped with the Q-70 standard suite of operating, development, and maintenance software.

HP Single Board 6U VME Processor

Options:

- HP 744 - 165 MHz, SpecInt95 7.64, Specfp95 7.3
 - Support for up to four PMC cards
- Common features:
 - Up to 512 Mbytes of dual-ported error-correcting RAM
 - Graphics, 1280 x 1024, eight planes
 - Integrated SCSI II (8-bit), 802.3 AUI, RS-232 (2), PS2 (2), Centronics, and audio interfaces
 - VME/VME D64, master or slave
 - On-board timers, time-of-day
 - Y2K certified operating systems, HP-UX or HP-RT (real-time)
 - Up to eight processors per system

Mass Storage Devices

16 half-height drive bays with open interconnect provide flexibility to add or upgrade device types.

- 9-Gbyte hard drives
- Other Q-70 drives optional
- Erasable optical disk (2.6/2.3 Gbytes)
- CD-ROM (553 Mbytes)
- 4 mm (12 Gbytes) DAT

Networked Interconnect

- IEEE 802.3 LAN with internal transceivers
- Fiber Distributed Data Interface (FDDI) provides distributed network redundancy
- APFDDI, Asynchronous Transfer Mode (ATM), others optional

External Interfaces

- MIL-STD-1397 (NTDS) Type A, B, C, D, E, and G
- MIL-STD-1553
- EIA RS-232

Human-Machine Interface

- 20.1-inch AMLCD flat panels
- Retractable bullnose
 - Ruggedized 121-key keyboard includes 101-key functionality
 - Integral 2-inch sealed trackball with four switches

Power Systems

- 115 VAC, 60 Hz, 1 phase (3 phase optional) shipboard power system providing transient and EMI protection and battery-backed UPS (8 minutes, 1000 watts, with fully charged battery)
- 1000 watts of VME power

Packaging

- Q-70 20-slot VMEbus card enclosure, 15/5, 10/10, and 5/5/5/5 backplane split optional
- Architecture is supportive of cost-effective mechanical adaptation or repackaging to meet specific platform requirements

Environmental

- Qualified to shipboard environmental requirements.

Reliability and Maintainability

- MTBF configuration-dependent, exceeds 3000 hours
- MTTR less than 30 minutes
- Supported by extensive built-in-test (BIT) and diagnostics

Optional or Available Features

- BARCO graphics system with up to 1280 x 1024 resolution, double buffered 12 overlay + 12 underlay planes, off-screen memory, hardware anti-aliasing and pixel-by-pixel or total plane blinking. Integrates video frame grabber and radar scan converter inputs.
- Video frame buffer. Accepts multiple sources and several formats, including RS-170, RS-343, S-Video, NTSC, PAL and SECAM. Color and monochrome video processor options. Single 6U VME slot.
- Radar scan converter. 1024 x 1024 resolution. Variable range scales up to 2048 nautical miles, range marks and rings and display offset. Variable image decay IFF/SIF gate display. 8-scan history store.

For more information, contact:

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