

► Multifunction Naval Console

Description

The Multifunction Naval Console (MNC) provides a sophisticated, graphically-orientated, Human-Machine Interface (HMI) for any naval or marine application. The MNC can simultaneously display HMI graphics and text from multiple software applications as well as display images from several video sensors and overlay high-resolution graphics and symbology over the video images.

In addition, the MNC allows the human user to interact with the application using a combination of QWERTY keyboard, mini touch-entry colour LCD display, handgrip, rollerball, fast function keys, programmable softkeys and on-screen menus.

Features

The features of the MNC are as follows :

- dual 19" or 26" high-resolution flat-panel displays
- display of multiple digital video inputs on either display
- display of multiple analogue video inputs on either display (optional)
- high-speed synthetic graphics
- networked (dual 10 Gbps Gigabit Ethernet, dual 1 Gbps Gigabit Ethernet, dual 100 Mbps FDDI)
- reliable link failover with Gigabit Ethernet or FDDI
- integral Electronic Processor Unit (EPU) using rack-mount 19" version of Mechanical Housing Assembly (MHA)
- integral Environmental Monitoring and Control (EMAC) of power supply units (PSUs), temperature sensors, fans, smoke detectors
- integral console insert for internal communications link and split operator headphone
- dual redundant hot swap PSUs (optional)
- shockmounts
- water cooling (optional)
- Built-in Tests (BIT)

Functionality

The computing segment of the MNC uses an embedded VME or CompactPCI (cPCI) computing platform, with Pentium or PowerPC host processor cards.

The MNC supports the VxWorks, WRS Hypervisor, Linux, R-T Linux and Windows 10 software operating systems.

Graphics

Graphics symbologies are displayed on the MNC with a very fast update rate (20 ms or better).

This provides for very responsive operator interaction.

Applications

- Naval Multifunction Operator Consoles and Displays
- Naval Tracking Radar Displays
- Naval Optronic Displays
- Marine ECDIS Consoles
- Naval WECDIS Consoles
- Air Defence Tracking Radar Displays
- Air Defence Optronic Displays

Options

- Half-Height version
- customised versions
- 30 g Mechanical Shock for 11 ms, ½ sine
- -20 C to +75 C Operating Temperature



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Specifications	
Displays	2 x 19" to 26" flat-panel display 1 x 8,4" touch-entry flat-panel display
Resolution	1 280 x 1 024 pixels
Processors	1 x Pentium 5th Generation @ 2,6 MHz (2 x SBCs Optional)
Networking	1 x Dual Channel 1 Gbps Gigabit Ethernet PMC Adapter 1 x Dual Channel 10 Gbps Gigabit Ethernet XMC Adapter (optional) 1 x Dual Channel 100 Mbps FDDI PMC Adapter (optional)
HMI Controls	1 x QWERTY keyboard 1 x handgrip 1 x rollerball 1 x 16-way numeric keys 1 x 4-way cursor keys 2 x 6 x 4-way soft keys 1 x 8,4", colour touch entry LCD display (optional) 27 x desk keys (optional) 1 x firing pedal (optional)
Video Input	up to 6 x digital video inputs up to 6 x CCIR PAL inputs
Operating Systems	VxWorks, WRS Hypervisor, Red Hawk Linux, R-T Linux, Windows 10
Temperature	Operating : 0 C to +50 C Storage : -40 C to +85 C
Mechanical Shock	20 g for 11 ms, ½ sine i.a.w. MIL-STD-810F Method 516.5 Procedure I
Vibration	2 g (peak) 10 Hz to 100 Hz 0,04 g²/Hz at 15 Hz to 2 kHz i.a.w. MIL-STD-810F Method 516.5 Procedure II
EMC	conforms to RE, CE, RS, CS i.a.w. MIL-STD-461G for Naval Equipment
Acoustic Noise	< 45 dBA at 1 metre
Relative Humidity	0% to 95% i.a.w. MIL-STD-810F, Method 507.4
Water Ingress	IP53 i.a.w. IEC 60529
MTBF	1 000 hours i.a.w. MIL-HDBK-217F, Predicted, Naval Sheltered, T = 40 C
MTTR	1 hour onboard
Dimensions	Height x Width x Depth 1 200 mm x 670 mm x 600 mm
Desk Depth	600 mm
Mass	80 kg ± 20 kg