

► Multifunction Naval Console

Description

The Multifunction Naval Console (MNC) provides a sophisticated, graphically-orientated, human-machine interface 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 soft keys and on-screen menus.

Features

The features of the MNC are as follows :

- dual 19" or 21,5" high-resolution flat-panel displays
- display of multiple digital video inputs on either display
- display of multiple analog 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 PSUs, temperature sensors, fans, smoke detectors
- integral console insert for internal communications link and split operator headphone
- dual redundant hot swap power supply units (PSUs)
- 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 V7 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
- Air Defence Tracking Radar Displays
- Air Defence Optronic Displays



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Specifications	
Height	1 600 mm
Width	670 mm
Depth (Desk Depth)	600 mm (600 mm)
Housing Material	3CR12 Stainless Steel
Mass	80 kg +/- 20 kg
Displays	2 x 19" or 21,5" flat-panel displays 1 x 8" touch-entry flat-panel display
Resolution	1 280 x 1 024 pixels
Colours	256
Processors	2 x Pentium IV @ 2,4 MHz or Power PC7448 @ 1,7 GHz
Networking	1 x Dual Channel 1 000 Mbps Gigabit Ethernet PMC Adapter 1 x Dual Channel 10 000 Mbps Gigabit Ethernet PMC Adapter (optional) 1 x Dual Attached 100 Mbps FDDI PMC Adapter
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 8,5" 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
Temperature	-15 C to +75 C
Shock	30 g for 5 ms, ½ sine 20 g for 10 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	RE, CE, RS, CS i.a.w. MIL-STD-461C (Table 5 for Class A4 equipment for surface ships)
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
Operating Systems	VxWorks, WRS Hypervisor, Linux, R-T Linux, Windows V7