**RUGGED SCIENCE**

# MILCORTEX 2000 OPERATOR INTERFACE PANELS



## ABOUT

Our MILCORTEX OIP (Operator Interface Panels) are designed for tough environments, and feature an innovative and cost-effective "box-in-box" design. The OIP is powered by a Rugged Science MILCORTEX 2000 Series Embedded Computer, which is internally mounted within the OIP enclosure. This "box-in-box" design keeps price and obsolescence issues in check.

MILCORTEX Series embedded computers are powered by 5th Gen Intel® Quad Core™ i7 series processors and a maximum 32 Gb RAM. They come with 2 Copper LANs standard, and can be configured for 2 Fiber Ethernet LANs (optional).

The aluminum chassis of MILCORTEX Series OIPs doubles as a heat sink to passively disperse heat to the ambient environment. The MILCORTEX Series Operator Interface Panels features a 19, 20.1, or 24-inch LED backlit displays with 1280 x 1024 resolution, a 5:4 aspect ratio, and 250 nits standard brightness for a clear and sharp display.

## FEATURES

- **Rugged solid state fanless design**
- **5th Gen Intel® Quad-Core™ i7 Series Processors (up to 3.6 GHz)**
- **Ideal for shipboard control applications**
- **Backlit LED Touchscreen Displays**
- **19, 20.1, and 24-inch models available**
- **16x General Purpose I/O**
- **8x Isolated Digital I/O**
- **Display Memory up to 1.7 Gb (shared)**
- **PS/2 Keyboard & Mouse**
- **Military Qualified:**
    - **MIL-STD-901D Shock**
    - **MIL-STD-461F Vibration**
    - **MIL-STD-167-1A EMI**

# MILCORTEX 2000 OIP SPECIFICATIONS

## System

| | |
|---|---|
| Internal Embedded Computer | MILCORTEX 2000 Series |
| Processor | 5th Gen Intel® Quad-Core™ i7 series processors (up to 3.60 GHz) |
| Chipset | Intel® Mobile QM87 |
| BIOS | AMI |
| Memory | 32GB Max., 2 204-pin SO-DIMM Sockett<br>DDR3 1066 \| 1333 \| 1600 MHz, DDR3L 1066 \| 1333 MHz |

## External I/O

| | |
|---|---|
| Serial Interface | 3 COM RS-232, 1 COM RS-232 / 485 / 422 |
| USB | 4 External USB (4 USB 3.0 or 2 USB3.0+2 USB2.0) |
| Inline Mouse | Sealed USB inline pointing device on front bezel |
| OSD Brightness Control | Four button Screen Brightness Control and OSD Menu |
| Isolated Digital I/O | 8 Digital Input, 8 Digital Output |
| PS/2 (optional) | PS/2 keyboard & mouse |
| Touchscreen | 5-wire Resistive Touch (standard) Optional: Capacitive, IR, SAW |

### Ethernet

| | |
|---|---|
| Copper LAN 1 | 1 Intel® 82579LM Gigabit LAN, Wake on LAN, PXE Support ; Intel® AMT 8.0 |
| Copper LAN 2 | 1 Intel® 82574L Gigabit LAN, Wake on LAN, PXE Support |
| Fiber LAN 1, 2 (optional) | 2 100 Base FX Fiber LAN via commercial ST connector<br>(FIber Gigabit Ethernet option via SFP Module also available) |

## Expansion

| | |
|---|---|
| Mini-PCIe | 1x Mini PCIe socket (PCIe + USB + SIM card socket) |
| | 1x miniPCIe socket (PCIe +USB), compatible with mSATA |

## Graphics, Video & Audio

| | |
|---|---|
| Display Size | 19, 20.1, 24-inch Diagonal Viewing Area |
| Resolution/Aspect | 1280 x 1024 resolution, 4:3 Aspect ratio |
| Backlight | LED-backlit |
| Graphics Chipset | Intel® GMA HD 4000 |
| Display Memory | Shared Memory, Up to 1.7GB |
| Display Interfaces | DB-15 VGA / 1920 x 1200 Max. DVI-D \| 1920 x 1200 Max. |
| Display Port 1 | 2560 x 1600 Max. |
| Display Port 2 | 1920 x 1200 Max. |
| LVDS | Dual Channel 24-bit \| 1920 x 1200 Max. |
| Audio | Realtek ALC892, 5.1 Channel HD Audio with 93 dB Speaker Line-out, Mic-in, Front Audio Header |

## Power

| | |
|---|---|
| Power Input | 90-264 VAC, 60Hz, 1 Ø via MIL-Circular Power Connector |

## Storage

| | |
|---|---|
| SATA/SSD | 1 SATA II Ports at 3.0Gb/s for 2.5" SSD |

## Mechanical

| | |
|---|---|
| Size (W x D x H) | 473mm x 457mm x 200mm (18.63" x 18.0" x 7.86") |
| Weight | 43.3 lbs. (without bracket) |
| Chassis | 0.125" Aluminum Alloy 5052-H32 chemically treated IAW MIL-DTL-5541, Type II, Class 1A |

## Environmental

| | |
|---|---|
| Operating Temperature | 0°C to 50°C (32°F to 122°F) |
| Storage Temperature | -25°C to 85°C (-13°F to 185°F) |
| Humidity | 10% to 95%, Non-Condensing |

## Additional

| | |
|---|---|
| Trusted Mobile Platform | Infineon SLB9635, LPC Interface (Optional) |
| Watchdog Timer | Reset: 1 to 255 sec / min Per Step |
| HW Monitor | Temperature \| Voltages Auto Throttling Control When CPU Overheats |

## Designed to Meet

| | |
|---|---|
| Shock | MIL-STD-901D |
| EMI | MIL-STD-461F |
| Vibration | MIL-STD-167-1A |