

## MILSYNAPSE 1000 RUGGED EMBEDDED COMPUTER



### ABOUT

Powered by Quad Core 3rd Gen Intel® Core™ i7 Processor (6M Cache, up to 3.30 GHz), MILSYNAPSE 1000 integrates 2 GbE LAN, 4 GigE PoE+ ports, and one PCIe x16 expandable slot. With maximum dual channel 16GB memory, DVI-D/HDMI and VGA triple display, two 2.5" SATA 6Gp/s HDD/ SSD, one SATA 3Gp/s SSD/ HDD supports SATA DOM, one of 2 Mini PCIe supports SIM card for WiFi, 3G/GPRS, and still keep outstanding thermal design for -25°C to +70°C industrial operating temperature range. MILSYNAPSE 1000 provides 2 fully integrated Gigabit Ethernet interfaces for either 1000 Mb/s or 10/100 Mb/s operation rates by each and jumbo frames up to 9018 bytes.

Enabling accurate time synchronization, wake-up function, and boot up through the extensible firmware interface (PXE), MILSYNAPSE 1000 integrates fully power management function to optimize voltage efficiency. Empowering 4 GigE IEEE 802.3at PoE+ ports, MILSYNAPSE 1000 is the ideal option for GigE cameras required efficient power supply and distances connection. Improving network traffic load-balancing by optimized parallel and pipelined architectures, the 2 gigabit Ethernet controllers of MILSYNAPSE 1000 enables to smooth the network traffic loading for most demanding occasions.

### FEATURES

- Intel® Quad-Core Atom™ E3845 Processor
- 2x GbE LAN ports
- Rugged, -25°C to 70°C operating temperature
- Fanless and compact form factor
- Supports DC-IN, 9 ~ 28V
- 6x COM (2 RS-232 and 4 RS-232/422/485) with Auto Flow Control
- 3G/4G, GPS/GPRS, WiFi support
- 2x Isolated RS-232/422/485
- Dual Display: VGA and 2 HDMI



## System

<b>Processor</b>	3rd Generation Intel® Quad Core™ i7/i5/i3 Ivy Bridge Processors (6M Cache, up to 3.30 GHz)
<b>Chipset</b>	Intel® QM77
<b>BIOS</b>	AMI
<b>SIO</b>	IT8783F
<b>Memory</b>	DDR3 1066   1333   1600 MHz, DDR3L 1066   1333 MHz Max. 16GB 2x 204-pin SO-DIMM Sockets

## I/O Interface

<b>Serial</b>	3x COM RS-232, 1x COM RS-232 / 485 / 422
<b>USB</b>	4x 4 USB 3.0, 2x USB 2.0, 2x Internal USB 2.0
<b>Isolated DIO</b>	8x DI, 8x DO, 5 - 24V input
<b>LED</b>	Power/Suspend, HDD and CFast, and WDT LEDs
<b>GPIO</b>	16x GPIO

## Expansion

<b>PCIe</b>	AC to DC 60W (optional) 1x miniPCIe Socket (PCIe +USB+ SIM Card Socket), Optional with mSATA
<b>Mini PCIe</b>	1x miniPCIe Socket (PCIe +USB), Optional with mSATA
<b>JST Connector</b>	1x Internal 6-pin (2x Internal USB 2.0)

## Storage

<b>SATA HDD</b>	2x SATA III 6Gbps 1x SATA II 3Gbps - Support Horizontal Type SATA DOM
<b>mSATA</b>	2x SATA II 3Gbps (Optional)
<b>Storage Expansion</b>	CFast Slot, External Hot-Swap, Push In/Out Ejector

## Ethernet

<b>LAN1</b>	Intel® 82579LM Gigabit LAN, Wake on LAN, PXE Support
<b>LAN2</b>	Intel® 82574L Gigabit LAN, Wake on LAN, PXE Support
<b>LAN3-6</b>	Gigabit IEEE 802.3at (25.5W/48V) PoE Ports by Intel® with Power On/Off Control

## Power

<b>Power Input</b>	1 Mini DIN One 3-pin Terminal Block for DC-IN : V+, V-, Frame Ground ATX: 2-Pin Remote Power On/Off Switch
<b>Input Voltage</b>	DC-IN 6 ~ 36V
<b>Power Adapter</b>	AC to DC +24V / 5A 120W Max. (Optional)
<b>Protection</b>	On-board LT4356 for Power Input High Voltage Surge Protection

## Graphics

<b>Chipset</b>	Intel® GMA HD 4000
<b>Display Memory</b>	Up to 1.7Gb, shared 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.
<b>Interface</b>	

## Audio

<b>Audio Codec</b>	Realtek® ALC892, 5.1 Channel HD Audio
<b>Audio Interface</b>	Line-In, Line-Out, Mic-In, Front Audio Header

## Mechanical

<b>Size (W x D x H)</b>	260mm x 215mm x 79mm (10.2" x 8.5" x 3.1")
<b>Weight</b>	1.4 lbs. (3.1Kg)
<b>Chassis</b>	Aluminum
<b>Mounting</b>	Wallmount by mounting bracket

## Environmental

<b>Operating Temperature</b>	-13°F to 158°F (-25°C to 70°C)
<b>Storage Temperature</b>	-40°F to 185°F (-40°C to 85°C)
<b>Humidity</b>	5 to 95%, Non-condensing
<b>Relative Humidity</b>	95% at 70°C

## Designed to Meet

<b>MIL-STD-901D</b>	Shock
<b>MIL-STD-461E</b>	EMI (Electromagnetic Interference)
<b>MIL-STD-167-1A</b>	Vibration
<b>MIL-STD-810G</b>	Temperature/Immersion/Humidity