

Matrix MXE-1000 Series

Intel® Atom™ Fanless Embedded Controller with Integrated I/O



Introduction

ADLINK's MXE-1000 series is an exceptionally rugged embedded controller for operating in harsh environments. Its -20 to 70°C temperature range allows it to operate outdoors in both hot summer days and cold winter nights. The Matrix can also be deployed in factory planes or on vehicles as it can withstand 5 Grms vibration. And, its fanless and cable-less structure ensures extensive durability for long-term usage.

The Matrix MXE-1000 series features the Intel® Atom™ N270 1.6 GHz processor to deliver adequate performance at low-power. The MXE-1000 also integrates versatile generic and special-purpose I/O features to support a wide variety of applications. The on-board Gigabit Ethernet and 1394b ports are designed for connecting cameras for surveillance and image recognition applications, while its COM ports fit requirements in most machine automation and facility management applications.

Combining rugged design and integrated I/O functions, the ADLINK MXE-1000 series offers the most versatile choice for your applications.

Features

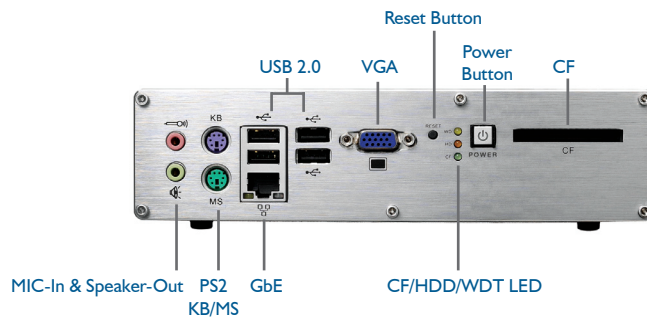
- Intel® Atom™ N270 1.6 GHz processor + 945GSE chipset
- Rugged, -20°C to 70°C fanless operation
- Built-in 6 Vdc to 36 Vdc wide-range DC power input
- Up to three 1000/100/10 Mbps Ethernet ports
- Two 1394b FireWire ports (MXE-1020 only)
- Two RS-232 ports and two RS-232/422/485 ports
- One internal PCIe Mini Card socket with an USIM socket
- One external CF socket

Applications

- Intelligent Transportation
- Facility Management
- Environment Monitoring
- Machine Automation
- Video Surveillance/Recognition
- Building Automation



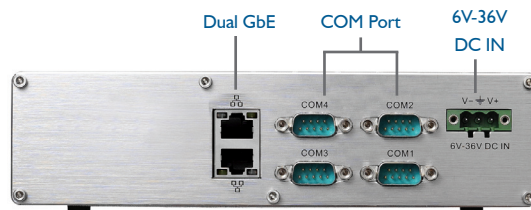
Inside MXE-1000 Series



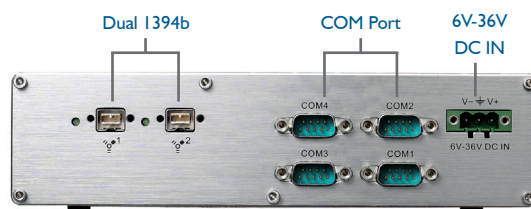
MXE-1000 Series Front Panel



MXE-1005 Back Panel



MXE-1010 Back Panel



MXE-1020 Back Panel

Specifications

Model Name	MXE-1005	MXE-1010	MXE-1020
System Core			
■ Processor	Intel® Atom™ N270 1.6 GHz CPU		
■ Chipset	Intel® 945GSE Graphic Memory Control Hub Intel® I/O Controller Hub 7 Mobile (ICH7-M)		
■ Video	Analog CRT, supports QXGA (2048 x 1536) Resolution		
■ Memory	1 GB DDR2 533 MHz SODIMM module		
I/O Interface			
■ Ethernet	1x GbE port (Realtek® 8111C)	3x GbE ports (Realtek® 8111C+Intel® 82574) (support teaming function)	1x GbE port (Realtek® 8111C)
■ 1394b	-	-	2x 1394b FireWire 800 Ports
■ Serial Port	2x RS-232/422/485 (jumper selectable, COM1 & COM2) 2x RS-232 (COM3 & COM4)		
■ USB	4x USB 2.0 Ports		
■ Mini-PCIe	1x Internal PCIe Mini Card Socket		
■ SIM	1x USIM Socket for 3G Communication (used with 3G Mini-PCIe Module)		
■ Audio	1x Mic-in and 1x Speaker-out		
■ KB/MS	1x PS/2 Keyboard and 1x PS/2 Mouse		
Power Supply			
■ DC Input	Built-in 6-36 Vdc Wide-range DC input 3P Pluggable Connector with Latch (V-, GND, V+)		
■ AC Input	Optional 40 W External AC-DC Adapter for AC input		
Storage Device			
■ SATA HDD	On-board SATA Port for 2.5" HDD/SSD Installation		
■ CompactFlash	1x Type I CF Socket, Supporting PIO and DMA Modes		
Mechanical			
■ Dimensions	210 mm (W) x 170 mm (D) x 53 mm (H)		
■ Weight	1.8 kg (3.96 lbs)		
■ Mounting	VESA 100 Wall Mounting Kit		
Environmental			
■ Operating Temperature	Standard: -10°C to 60°C Extended option: -20°C to 70°C		
■ Storage Temperature	-40°C to 85°C (excluding HDD/SSD/CF)		
■ Humidity	~95% @ 40°C (non-condensing)		
■ Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ CF or SSD) Operating, 0.7 Grms, 5-500 Hz, 3 Axes (w/ HDD)		
■ Shock	Operating, 100 Grms, Half-sine 11 ms Duration (w/ CF or SSD)		

Ordering Information

Model Name	CPU	GbE	1394b	COM	USB	Memory
MXE-1005	Intel® Atom™ N270 fanless embedded controller	1		4	4	1 GB DDR2
MXE-1010	Intel® Atom™ N270 fanless embedded controller	3		4	4	1 GB DDR2
MXE-1020	Intel® Atom™ N270 fanless embedded controller	1	2	4	4	1 GB DDR2

Optional Accessories

2 GB DDR2 Upgrade	Upgrade to 2 GB DDR2 Memory
160 GB HDD Option	Factory-installation of 160 GB SATA Hard Disk Drive (0 to 50°C)
32 GB SSD Option	Factory-installation of 32 GB SATA Solid State Disk (0 to 70°C)
8 GB Industrial SSD Option	Factory-installation of 8 GB Industrial-grade SATA Solid State Disk (-40 to 85 °C)
40 W AC Adapter	40W Industrial-grade AC Adapter (-20 to 70°C)
Extended Temperature Option*	Extend the operating temperature of the MXE-1000 series to -20 to 70°C

*This option guarantees cold boot of the system at -20°C and operation with 100% loading at 70°C