

## Embedded Systems

VIA

### ART-3000

Compact Fanless Embedded System with VIA Nano™ E CPU, 2 Gigabit LAN, 2 LVDS, 4 COM, DC-in 7~36V



### Features

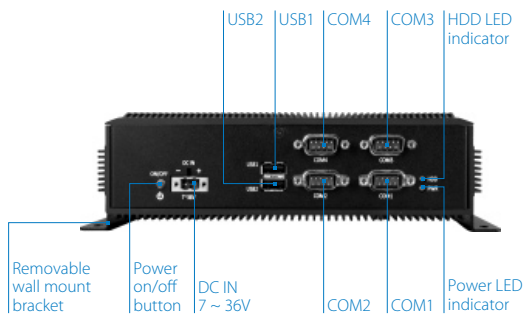
- Fanless operation in sealed construction
- Built-in VIA Nano™ E processor with 1MB L2 Cache and low power consumption
- Dual-sided multiple I/O connectors for easy access
- Two 24-bit single channel LVDS ports and one VGA port for triple concurrent display with dual independent display
- Built-in two Gigabit Ethernets, four USB 2.0 ports, and four COM ports (two RS-232 and two RS-232/422/485, configured via BIOS setup), enabling comprehensive communication and connective capability
- Accepts a wide range of DC power inputs from 7 V~36 V
- Easy integration  
Quick setup  
Convenient maintenance

### Specifications

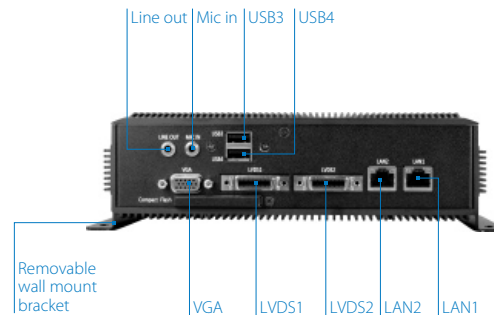
Part Number	ART-3000-1N13A3	
<b>Processor System</b>	<b>Processor</b>	1.3GHz VIA Nano™ E
	<b>Front Side Bus Speed</b>	800 MHz
	<b>L2 Cache</b>	1 MB
	<b>System Chipset</b>	VIA VX800 Unified Digital Media IGP chipset
	<b>BIOS</b>	Award BIOS 8MBit SPI Flash BIOS Supports Diskless Boot to BIOS ROM (Free DOS operation system environment)
	<b>System Power Management</b>	Times Power on, ACPI supported
<b>System Memory</b>	<b>Technology</b>	1 x DDR2 533/667 200-pin SDRAM SODIMM socket
	<b>Max. Capacity</b>	Up to 2GB memory size
<b>Graphic</b>	<b>Controller</b>	Integrated VIA Chrome 9™ HC3 DX9 3D/2D graphics with MPEG-2, WMV9 video decoding acceleration
	<b>Display Memory</b>	Optimized Unified Memory Architecture (UMA) Supports up to 256 MB frame buffer using system memory
	<b>CRT Interface</b>	Supports one VGA connector Pixel resolution support up to 1920 x 1200
	<b>LVDS Interface</b>	Supports two 24-bit single channel LVDS with inverter control interface Supports panel resolution up to 1280 x 1024 for single channel LVDS LCD Built-in inverter control signals into the DB-26 connectors Built-in system internal 5V/3.3V LCD power switch (default at 3.3V)
	<b>Triple Display</b>	Supports triple concurrent display of CRT, LVDS1 and LVDS2 at the same timing and same resolution
	<b>Dual Independent Display</b>	Dual independent display support of CRT + LVDS 2, LVDS1 + LVDS2
<b>Ethernet</b>	<b>Controller</b>	2 x VIA VT6130 Gigabit Ethernet controllers
	<b>Interface</b>	Supports two RJ-45 connectors as LAN1 and LAN2 Supports Wake On LAN (WOL) Supports Preboot Execution Environment (PXE)
<b>HD Audio</b>	<b>Controller</b>	VIA VT1708B High Definition Audio Codec
	<b>Interface</b>	Supports Line-out and Mic-in connectors
<b>Serial</b>	<b>USB</b>	4 x USB ports as USB1, USB2, USB3 and USB4. USB 2.0 compliant
	<b>Serial Ports</b>	Fintek F81865 LPC I/O controller Supports 4 COM ports: <ul style="list-style-type: none"> <li>• 2 x RS-232/422/485 as COM 1 and COM 2, configurable via BIOS setup</li> <li>• 2 x RS-232 by 2 x DB-9 connectors of COM 3 and COM 4</li> </ul> Supports RS-485 AutoFlow Control functions of COM1 ~ COM2
<b>Storage interface</b>	<b>HDD</b>	1 x 2.5" SATA interface hard disk drive bay
	<b>SSD</b>	1 x Socket support type I/II CompactFlash disk



## Front Panel External IO



## Rear Panel External IO



## Specifications

<b>Part Number</b>	<b>ART-3000-1N13A3</b>	
<b>Watchdog Timer</b>	<b>Output</b>	System reset
	<b>Interval</b>	Programmable 1~255 sec
<b>System Indicator</b>	<b>Power Status LED</b>	1 x Green color LED
	<b>HDD Activity LED</b>	1 x Red color LED
<b>Front Panel External I/O ports</b>	<b>LED Indicator</b>	1 x PWR LED, and 1 x HDD LED
	<b>Quad COM</b>	2 x RS-232/422/485 ports as COM 1 and COM2 by 2 DB-9 connectors 2 x RS-232 ports as COM3 and COM4 by 2 DB-9 connectors
	<b>Dual USB 2.0</b>	2 x mini-DIN connectors as USB 1 and USB2
	<b>Power Input Connector</b>	1 x 2-pole Phoenix power input connector
	<b>Power On/Off Switch</b>	1 x ATX Power On/Off button
<b>Rear Panel External I/O ports</b>	<b>Dual Gigabit Ethernet</b>	2 x RJ45 connectors as LAN1 and LAN2
	<b>Dual LVDS</b>	2 x DB-26 connectors as LVDS1 and LVDS2
	<b>VGA</b>	1 x VGA port by a D-Sub 15-pin connector
	<b>Audio</b>	2 x 3.5Φ Audio Jack connectors as Line-out, and Mic-in
	<b>Dual USB 2.0</b>	2 x mini-DIN connectors as USB3 and USB4
<b>Power Supply</b>	<b>Power Consumption</b>	Typical 18.5 W, Maximum 25.8 W
	<b>Input Voltage</b>	Accepts wide range of power input of 7V <sub>DC</sub> ~ 36V <sub>DC</sub> Typical power input 7 V <sub>DC</sub> @ 2.64A 12 V <sub>DC</sub> @ 1.54A 16 V <sub>DC</sub> @ 1.15A 19 V <sub>DC</sub> @ 0.97A 24 V <sub>DC</sub> @ 0.77A 36 V <sub>DC</sub> @ 0.51A
<b>Mechanical</b>	<b>Construction</b>	Aluminum alloy
	<b>Mounting</b>	VESA mounting Table/wall mounting
	<b>Dimensions (W x H x D)</b>	With table/wall-mounting bracket: 233 x 65.2 x 123.5 mm Without table/wall-mounting bracket: 206.5 mm x 58 mm x 123.5 mm
	<b>Weight</b>	Net 1.5 Kg
<b>Environmental Specification</b>	<b>Operation Temperature</b>	With CompactFlash disk only: -20°C up to 60 °C With 2.5-inch hard disk drive: 0°C up to 45 °C
	<b>Relative Humidity</b>	0% ~ 90% @ 45 °C, non-condensing
	<b>Vibration Loading During Operation</b>	With CompactFlash disk only: 5Grms, IEC 60068-2-64, random, 5 ~ 500Hz, 1 Oct./min, 1hr/axis With 2.5-inch hard disk drive: 1Grms, IEC 60068-2-64, random, 5 ~ 500Hz, 1 Oct./min, 1hr/axis
	<b>Shock During Operation</b>	With CompactFlash disk only: 50G, IEC 60068-2-27, half sine, 11ms duration With 2.5-inch hard disk drive: 20G, IEC 60068-2-27, half sine, 11ms duration
	<b>EMC Approved</b>	CE/FCC Class A, CCC
	<b>Safety Approved</b>	CB, CCC
<b>Software Compatibility</b>	<b>Operation System</b>	Microsoft Windows XP, Windows 7, Microsoft Windows XP Embedded Standard, Windows Embedded Standard 7, Linux Debian 5.0.3 (Kernel 2.6.32)

## Ordering Information

Part Number	System Built-in CPU	Description
ART-3000-1N13A3	1.3GHz Nano™ E	Fanless Embedded System with 1.3GHz Nano™ E CPU, 1 x VGA, 2 x LVDS, 2 x RS-232/422/485 , 2 x RS-232, 2 x GigaLAN, 4 x USB DC-in 7~36V

## Optional Accessories

### External AC-to-DC Adapter and Power Cable

Part Number	Description
99G63-020186	AC-to-DC adapter, DC 19V, 90W with Phoenix Power Plug
99G33-02058C	Power Cord, 2-pin, 180 cm, USA type
99G33-02057C	Power Cord, 2-pin, 180 cm, Europe type

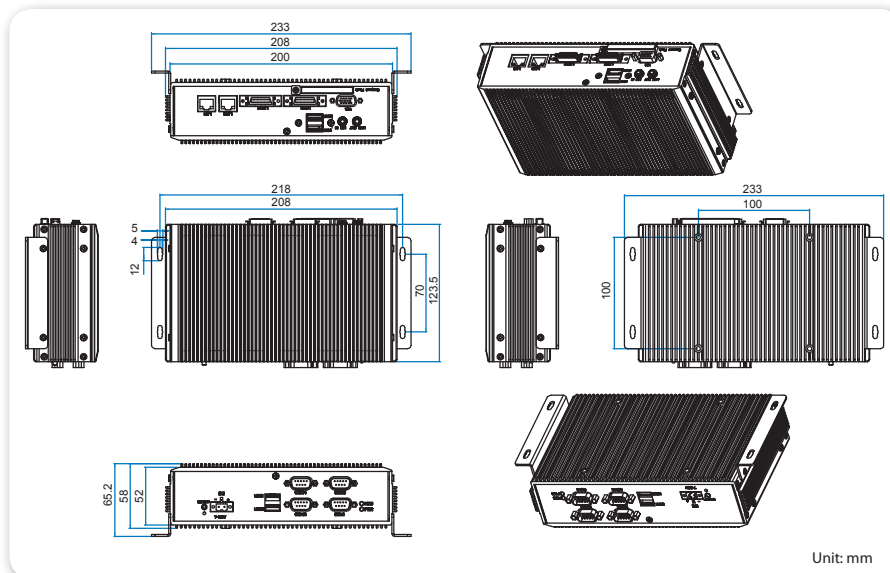
### Certificated RAM Module, Flash Disk, and 2.5" Hard Disk Drive

Part Number	Description
99G06-010408	2GB DDR2 667MHz, 128Mx8 SDRAM SODIMM, Industrial Grade, for using at environmental temperature up to 50 °C
99G06-010398	1GB DDR2 667MHz, 128Mx8 SDRAM SODIMM, Industrial Grade, for using at environmental temperature up to 50 °C
99G06-010578	2GB DDR2 667MHz, 128M x8 SDRAM SODIMM, Industrial Grade , -40°C ~ 85°C
99G06-010648	1GB DDR2 667MHz, 128M x8 SDRAM SODIMM, Industrial Grade , -40°C ~ 85°C
99G61-060011	1GB Compact Flash Disk, industrial grade, -40 °C ~ 85 °C
99G61-060021	2GB Compact Flash Disk, industrial grade, -40 °C ~ 85 °C
99G61-060031	4GB Compact Flash Disk, industrial grade, -40 °C ~ 85 °C
99G61-020146	250GB, TOSHIBA 2.5" SATA HDD 5400RPM
99G61-020156	320GB, TOSHIBA 2.5" SATA HDD 5400RPM

### Embedded OS (Only available for OEM service)

Part Number	Description
POS-MEXSLI-ENS01	Windows XP Embedded Standard Image & License For ART-3000 English Version
POS-ME7SLI-ENS01	Windows Embedded Standard 7 Image & License For ART-3000 English Version (Require minimum 4G Compact Flash)
POS-MXPPLI-ENS01	Windows XP Professional SP3 Image & License For ART-3000 English Version
POS-ME7CLI-ENS01 (available soon)	Windows Embedded Standard 7 Compact size Image & License for ART-3000 English Version (Require minimum 2G Compact Flash)
POS-DLNCLI-ENS05 (available soon)	Debian Linux Image & License for ART-3000 English Version (Require minimum 2G Compact Flash)

## Dimensions



## Packing List

- 1 x ART-3000 unit
- 1 x Driver & Utility CD
- 1 x SATA cable
- 1 x SATA power cable
- 1 x Power cable, 2-pole Phoenix plug to DC-Jack
- 1 x Heatsink for SODIMM
- 1 x 0.5cc Thermally Conductive Dispensable Gel in tube syringe