

Solution Ready Systems

VIA

ART-5450

Compact Fanless Embedded System with Nano™ E CPU, 2 Mini-PCIe Slots, 1 SIM Socket & DC-in 7~36V for Vehicle/ Fleet Management



Features

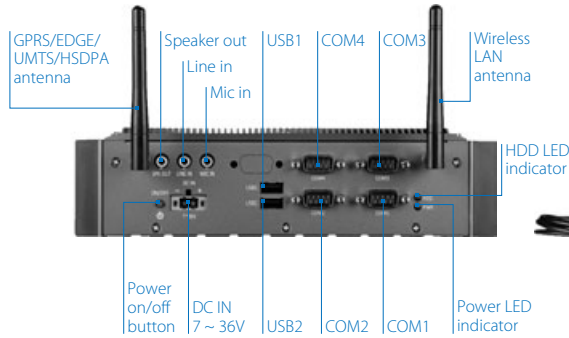
- Built in VIA Nano™ E processor (1MB L2 Cache)
- Compact, robust and sealed construction
- Vibration-resistant design to ensure maximum reliability
- Supports two LVDS and one CRT display interface with dual independent display
- Supports two Gigabit Ethernet and four USB 2.0 ports
- Supports four COM ports (two RS-232 and two RS-232/422/485, configurable via BIOS setup)
- Supports two Mini-PCIe interface sockets for optional WLAN/GPRS/EDGE/UMTS/HSDPA modules
- Supports one SIM socket
- Accepts a wide range of DC power inputs from DC 7 ~ 36V
- Optional in-vehicle power management adapter support ignition on/off delay function



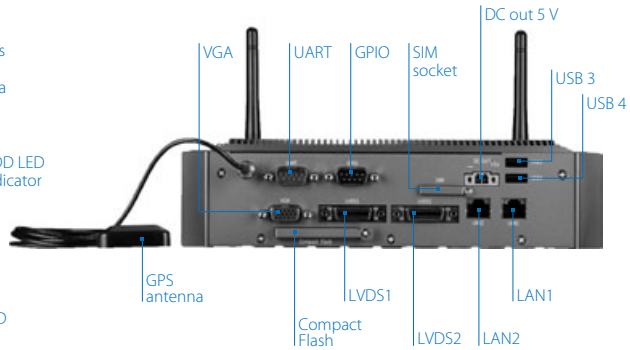
Specifications

Part Number	ART-5450-1N10A1	
Computing System	Processor	1.0GHz VIA Nano™ E
	Front Side Bus	800 MHz
	L2 Cache	1 MB
	Chipset	VIA VX800 Unified Digital Media IGP chipset
	BIOS	Award BIOS SPI 8Mbit Flash memory onboard
	System Power Management	Times Power on ACPI supported
Memory	Technology	1 x DDR2 533/667, 200-pin SDRAM SODIMM socket
	Max. Capacity	Up to 2GB memory size
Graphic	Controller	Integrated VIA C-9 HC3 DX9 3D/2D graphics with MPEG 2, WMV9 video decoding acceleration
	Display Memory	Optimized Unified Memory Architecture (UMA), supports up to 256 MB frame buffer using system memory
	CRT Interface	Onboard 1 x VGA connector Pixel resolution support up to 1920 x 1200
	LVDS Interface	Two 24 bit single channel LVDS interface connectors, up to 1280 x 1024 resolution Built in inverter control signals into the DB-26 connectors Onboard 5V/3.3V LCD power switch (default at 3.3V)
	Dual View	Supports CRT + LVDS2 and LVDS1 + LVDS2 at same resolution, same pixel depths, at same refresh rates
Ethernet	Controller	2 x Onboard VIA VT6130 Gigabit Ethernet controllers
	Interface	Support 2x RJ-45 connectors Supports Wake on LAN (WOL) Support Pre-boot Execution Environment (PXE)
	HD Audio	Controller VIA VT1708B High Definition Audio Codec Audio Amplifier Built-in onboard TI TPA1517, dual 6 W stereo audio power amplifier Interface Supports Line-in, Speaker-out, Mic-in connectors
Serial	USB	4 x USB ports, USB 2.0 compliant
	COM Ports	Built-in Fintek F81865 LPC I/O controller. Supports 4 COM ports of: • 2 x RS232/422/485 by 2xDB-9 connectors of COM 1 and COM2, configurable via BIOS setup • 2 x RS232 by 2xDB-9 connectors of COM 3 and COM4 Supports RS-485 AutoFlow control functions of COM1 and COM2
GPIO	Controller	Fintek F81865 LPC I/O Controller
	Interface	1 x D-Sub 9-pin connector 8-bit GPIO (4 GPI + 4 GPO)
	5V DC Output	1 x 2-Pole Phoenix connector (pitch=3.81 mm) with support power output of DC 5V @ maximum 500mA for external GPIO device
UART	Controller	Fintek F81865 LPC I/O Controller
	Interface	1 x D-sub 9-pin connector of UART port, supports Tx, Rx (2nd and 3rd pin) and GPO (9th pin) signal

Front Panel External IO



Rear Panel External IO



Specifications

Part Number	ART-5450-1N10A1	
Mini-PCle Slot	Interface	2 x Mini-PCle slots
SIM Socket	Interface	1 x SIM socket
Storage	Compact Flash	1 x Compact Flash socket support type I/II Compact Flash disk
System Indicator	Power Status LED	1 x Green color LED
	HDD Activity LED	1 x Red color LED
GPS Options (EMIO-1532)	Interface	Reserved UART serial interface socket supports optional EMIO-1532 module of SiRFstarIII® base 20-channel GPS receiver with external antenna
Wireless LAN Options (EMIO-1530)	Interface	Reserved USB interface socket supports optional USB based VIA EMIO-1530 wireless module
	Others	Supports IEEE802.11b/g
3.5G HSPA/WCDMA/EDGE/GPRS Module options (EMIO-1539)	Interface	Reserved Mini-PCle interface slots, support mobile broadband module
Front Panel External I/O Connectors	LED Indicator	1 x PWR LED 1 x HDD LED
	Quad COM	2 x RS-232/422/485 ports as COM1 and COM2 by 2 DB-9 connectors 2 x RS-232 ports as COM3 and COM4 by 2 DB-9 connectors
	Dual USB 2.0	2 x Mini-DIN connectors as USB1 and USB2
	Audio	3 x 3.5Φ Audio Jack as Line-in, Speaker-out and Mic-in
	Power Input Connector	1 x 2-Pole Phoenix power input connector
	Power on/off Switch	1 x ATX Power on/off button
	Antenna Hole	1 x Antenna hole to support Wireless LAN antenna 1 x Antenna hole to support WWAN antenna
	Rear Panel External I/O Connectors	VGA
Dual LVDS		2 x DB-26 connectors as LVDS1 and LVDS2
Dual Gigabit LAN		2 x RJ-45 connectors as LAN1 and LAN2
Dual USB 2.0		2 x Mini-DIN connectors USB3 and USB4
Digital I/O		1 x GPIO port by a DB-9 connector, supports 8-bit GPIO (4 GPI + 4 GPO)
UART (Plus GPO/GND)		1 x UART plus GPO & GND signal port by a DB-9 connector
SIM Slot		1 x SIM slot
Power Output Connector		1 x 2-pole Phoenix connector (pitch=3.81 mm) with support power output of DC 5V @ maximum 500mA for external GPIO device
Antenna Hole	1 x Antenna hole to support GPS antenna	

Specifications

Part Number	ART-5450-1N10A1		
Power Supply	Power Consumption	Typical 19.56W Maximum 31.15W	
	Power Input Voltage	7 VDC @ 2.50A 12 VDC @ 1.50A 24 VDC @ 0.81A 36 VDC @ 0.58A	
	Power Input Connector	1 x 2-pole Phoenix connector	
	Fuse Rating	7A @ 125V	
In-Vehicle Power Management Adapter Options (PWM-1000)		Support of ignition on/off delay function by connecting with VIA PWM-1000 in-vehicle power management adapter	
	Protection	OVP : Input Over Voltage Protection OCP : Over-Current Protection UVP : Input under Voltage Protection	
	Operating Principle	Power on delay Power on delay Schedule the maintenance of power on / off time Ignition / ACC status notice Inform the "Input Under Voltage Protection" event	
	Power Input/ Output Range	Input Voltage : DC 10~30V Input Current : 0~5A Output Voltage : +12V dc +/- 5% Output Current : 3.33A Output power : 40W	
	Power Input connector	DC Power input connector by 2-pole Phoenix connector	
	Mechanical	Construction	Aluminum alloy
Mounting		Default support wall/table mount	
Weight		Net 1.6 kg	
System Dimension		232.6 mm (W) x 60 mm (H) x 124.8 mm (D) (9.15" x 2.36" x 4.91")	
Environmental Specification	Operating Temperature	With Compact Flash Disk Only: -20°C up to 70 °C, With EMIO-1532 GPS module and EMIO-1530 WLAN USB module: -20°C up to 60 °C	
	Storage Temperature	-20°C ~75 °C@ 90%, non-condensing	
	Relative Humidity	0 ~ 90% @ 45°C, non-condensing	
	Vibration Loading During Operation	With Compact Flash disk only: 5Grms, IEC 60068-2-64, random, 5 ~ 500Hz, 1 Oct./min, 1hr/axis	
	Shock During Operation	With Compact Flash disk only: 50G, IEC 60068-2-27, half size, 11ms duration	
	EMC Approved	CE/FCC Class A, CCC	
	Safety Approved	CB, CCC	
	In-Vehicle Certificate	e-mark, e13	

Ordering Information

Part Number	CRT	LVDS 1,2	LAN	USB 2.0	Digital I/O	RS-232	RS-232/422/485	Expansion	GPS	WLAN	PWM-1000	Operation Temp.
ART-5450-1N10A1									NO	NO	NO	-20 up to 70°C
ART-5450-2N10A1									NO	NO	YES	-20 up to 70°C
ART-5450-3N10A1	1	24-bit	2 GE	4	8-bit	2	2	2 Mini-PCle, 1 SIM	20-Ch	802.11b/g (US)	YES	-20 up to 60°C
ART-5450-4N10A1									20-Ch	802.11b/g (EU)	YES	-20 up to 60°C

Optional Accessories

*Note: The optional accessories may have minimum ordering quantity limitation. Please contact VIA Sales representative for more details.

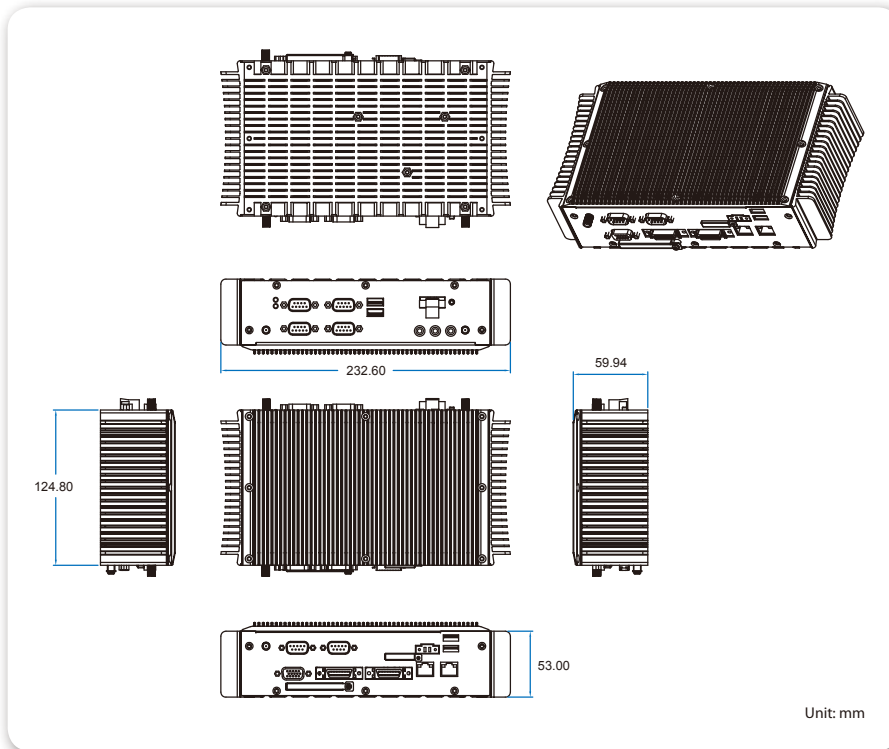
Optional Ordering Item

Part Number	Description
EMIO-1530-A0A1	802.11 b/g Wireless LAN USB module , USA type
EMIO-1530-A1A1	802.11 b/g Wireless LAN USB module , Europe type
EMIO-1532-00A1	RS-232 interface, SiRFStarIII base, of 20-ch GPS receiver
PWM-1000-00A1	In-Vehicle Power Management adapter supports schedule and maintenance for power ignition on/off delay time, DC input 7~30V

External AC-to-DC Adapter and Power Cable

Part Number	Description
99G63-020246	AC to DC power adapter, DC 19V/90W with 2-pole Phoenix power plug
99G33-02032C	Power cord, 2-pin 180cm, USA
99G33-02033C	Power cord, 2-pin 180cm, Europe

Dimensions



Packing List

- 1 x ART-5450 unit
- 1 x Wall mount bracket
- 1 x Power cable , 2-pole Phoenix plug to DC-jack
- 1 x Screw pack