IOVU series PPC



IOVU RISC-based PPC

IOVU (Input and Output Viewer) series enables the great embedded flexibility for RISC-based panel PC. Built with a XScale or Alchemy CPU, LCD display, touch screen, I/O peripherals, and pre-installed Windows® CE 5.0 or embedded Linux, the IOVU series provides the most cost-effective and stable solution for a diverse range of embedded RISC-based panel PC application. The supported software includes thin client technology, remote management tool , embedded OS SDK (software development kit) and BSP (board support package).

▸▸Equipped with RISC CPU and Windows® CE embedded OS, the IOVU Series panel PCs are with high-performance computing power, fan-less design, low-power consumption, wide operating temperature, and wide-input-voltage range.

▸▸The IOVU is designed for highly durable in harsh environments, due to its rugged, compact, low power consumption, and embedded system hardware design without failure-prone hard disk and fan. Each IOVU equips with a IP 65 or IP 64 compliant front panel to protect against accidental contacts of foreign bodies and against water.

▸▸Each IOVU is driven by an powerful RISC CPU with built-in WDT (Watchdog Timer) functions, has a touch screen TFT display, and comes with a series of integrated external peripheral connectors including Ethernet ports, Serial ports, USB ports, Audio ports,CompactFlash™ slot, and optional wireless communication modules supporting WiFi 802.11 b/g, Bluetooth, GPS, or GSM/GPRS.



Applications



Industrial Automation



Building Automation



Vehicle PC



Multi-media Applications



Power Monitoring, Power Demand Controller and Report Generator

Diversified Mounting Support and Rigorous Environmental Test

IOVU series panel PC have several mounting holes compliant with the VESA mounting standard (VESA 75 / 100) on the rear panel for stand mounting and other mounting methods.

Wall Mount





Requires no cut out in the wall surface.It mounts directly on the existing wall or desk.

Panel Mount



Requires a cut out in the wall surface. With four clamps to tighten the screws that pass through the panel mounting clamps

IP64 / 65 dustproof and waterproof front panel

The IOVU front panel is IP64 / IP65 compliant. IP64 / 65 compliance guarantees the front panel is dustproof and water-proof. The IOVU front panel can withstand any industrial environment where dust and drizzle is encountered.





Rugged design





The IOVU is directly mounted internally to a metal main frame rather than a fragile plastic cover. In addition, the IOVU case is made from ABS/PC (Acrylonitrile Butadiene Styrene/ Polycarbonate Alloy), which improves the stiffness over conventional material and makes the system more solid and durable.

IOVU Intelligent Panel PC

Introduction

IOVU series enables the great embedded flexibility for RISC-based panel PC applications. Built-in XScale or Alchemy CPU, LCD display, touch screen, I/O peripherals and pre-installed Windows CE5.0, the IOVU series provide the most cost-effective and stable solution for a diverse range of embedded RISC-based panel PC application. IOVU provides an easy way to collect, transfer, process, access and manage data which is generated or inquired in various applications such as Factory Automation, Home Automation, Medical, Transportation management, POS…etc.

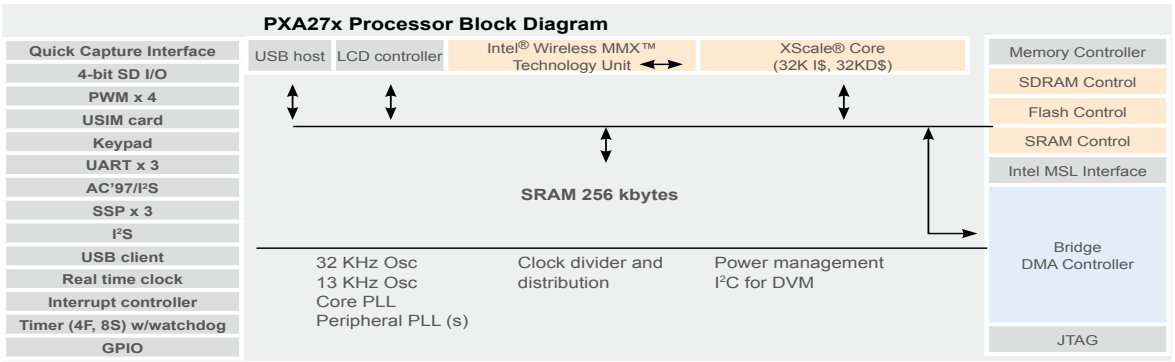
IOVU Open HMI series

RISC-based Solutions : The best platform for embedded system and Panel PC

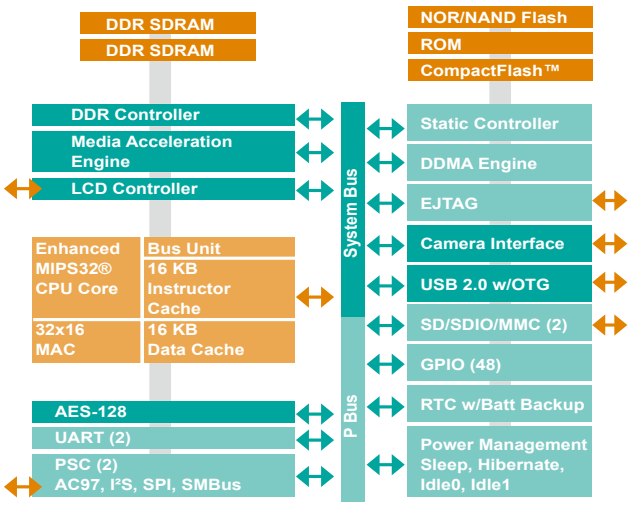
	4.3	5.7"	7"	10.4"	15"
Model Name	IOVU-430M	IOVU-570M IOVU-571N	IOVU-700M IOVU-751R	IOVU-1000M IOVU-1051R	IOVU-1500M
CPU	XScale® PXA270 416 MHz	Xscale® PXA 520 MHz Winbond Nuvoton 200 MHz	Xscale® PXA 520 MHz Alchemy AU1250 500 MHz	Xscale® PXA 520 MHz Alchemy AU1250 500 MHz	Xscale® PXA 520MHz Alchemy AU1250 500MHz
Memory	128MB	128MB	256MB	128MB	128MB
Feature	1. Projected- capacitor type multi touch screen 2. Built-in WiFi 802.11b/g function 3. GPIO and CAN bus control	1. Compact form factor 2. Built-in WiFi 802.11b/g function	1. PoE available 2. MPEG 1/2/4 support 3. Built-in WiFi 802.11b/g function	1. The whole plane touch panel PC 2. Hardware decode MPEG 1/2/4, WMV9	1. Large display 2. Built-in digital input/ output function 3. Dual display function

MARVELL XScale® PXA270 and RMI Alchemy™ AU1250

High performance, ultra low power, lower cost, faster time-to-market, ARM V5TE compliant and robust tool chains make XScale® technology a compelling choice for applications ranging from smaller multimedia portable devices to high performance I/O or network applications.



IEI provides RMI Alchemy™ RISC-based technology to enable users to play DVD quality video efficiently at full-frame rates with low power consumption. The integrated MAE (Media Acceleration Engine) supports common digital video media including MPEG1, 2, 4, DivX, and WMV9 scaled up to 1024 x 768 pixel resolution , and delivers full D1 resolution without the need for a DSP or specialized coding.

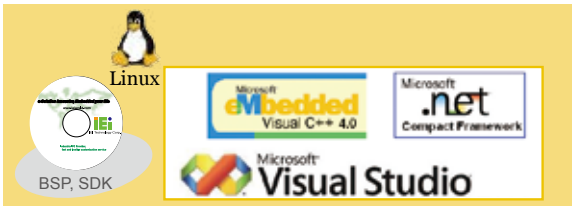


	XScale PXA270	Alchemy™ Au1250™	AMD® LX800
CPU Speed	520MHz	500 MHz	500MHz
Companion Chipset	No need	No need	AMD® CS5536
Super I/O	No need	No need	Winbond W83627EHG
System Memory	SDRAM	DDR I/II	DDR
Multimedia Support	MPEG1/2 with Software codec	Built-in Hardware MAE	MPEG1/2 with Software codec
H.D.D I/F	CompactFlash™	IDE	IDE
LCD I/F	18-bit TTL	24-bit TTL	24-bit TTL
Power Consumption	747 mW	492 mW	4W
Working Temperature	-20°C ~ 85°C	-40°C ~ 100°C	0°C ~ 50°C or -10°C ~ 70°C
Embedded OS Support	Windows® CE and Embedded Linux	Windows® CE and Embedded Linux	Windows® XP/XPe/CE

Software Support

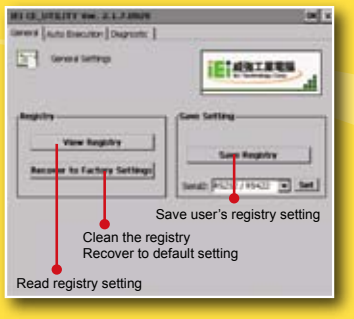
SDK (Software Development Kit)

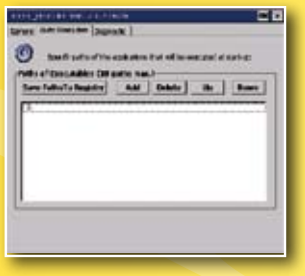
- Attached Software Development Kit (SDK) for eMbedded Visual C++ to program Windows® CE application.
- Built-in .NET Compact Framework support with related SDK
- Thin Client Technology, Microsoft RDP (Remote Desktop Protocol), to enable IOVU series to access Microsoft Windows® based applications installed on Microsoft Terminal Service server.
- Attached SDK including GUI, Sample Code, and Tool chain make users program application readily.



IEI WinCE Utility

- Free pre-installed utilities for configuring and diagnosing your IOVU series panel PC





Easy to set programs for auto execution



Quickly verify peripheral function and check OS / Boot_loader version

RMT (Remote Management Tool)

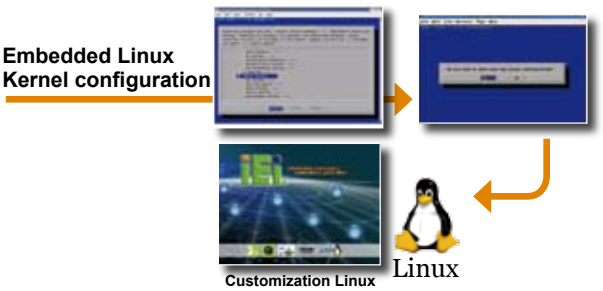
- Free pre-installed utilities for configuring and diagnosing your IOVU series panel PC



BSP (Board Support Package)

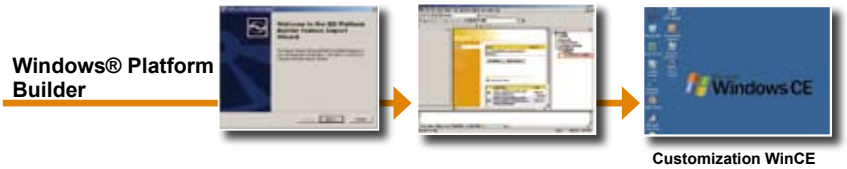
Linux Kernel 2.6.18

- GNU standard Embedded Linux 2,6,18 bootloader and OS image.
- Secure Shell (OpenSSH) providing 128-bit, 192-bit or 256-bit encryption between the IOVU series and another system
- Built-in web browser and X-window system
- Related Linux drivers for onboard peripheral I/O, network and audio
- Optional Board Support Package (BSP) includes kernel source code for customers to customize their own OS image.



Windows® CE5.0

- Standard Windows® CE5.0 professional version license.
- Optional Board Support Package (BSP) for customers to customize their own OS image.



IOVU RISC-based Panel PC specifications



Model Name	IOVU-430M	IOVU-570M	IOVU-571N	IOVU-700M	IOVU-1000M	IOVU-1500M	IOVU-751R	IOVU-1051R
SYSTEM								
CPU	XScale® PXA270 416 MHz	XScale® PXA 520 MHz	Nuvoton (Winbond) W90P910CBG 200 MHz	XScale® PXA 520 MHz	XScale® PXA 520 MHz	XScale® PXA 520 MHz	Alchemy™ AU1250 500 MHz	Alchemy™ AU1250 500 MHz
Bootloader Storage	2 MB	2 MB	N/A	2 MB	2 MB	2 MB	2 MB	2 MB
RAM	128 MB SDRAM	128 MB SDRAM	128MB SDRAM	256 MB SDRAM	128 MB SDRAM	128 MB SDRAM	256 MB DDR2	128 MB DDR2
OS/Program Storage	1GB Mini secure digital card	1GB secure digital card	64MB NAND flash	128MB compact flash card	128MB compact flash card	256MB compact flash card	1GB secure digital card	256MB compact flash card
DISPLAY								
LCD Size	4.3"	5.7"	5.7"	7"	10.4"	15"	7"	10.4"
LCD Color	262 K	262 K	262K	262 K	262K	262K	262 K	262K
Display Resolution	WQVGA	VGA	VGA	WVGA	SVGA	XGA	WVGA	SVGA
LCD Brightness (cd/m^2)	500	400	400	400	230	350	400	230
Dot Pitch (mm)	0.066(H) x 0.198(V)	0.06(H) x 0.18(V)	0.06(H) x 0.18(V)	0.064(H) x 0.191(V)	0.264 x 0.264	0.297 x 0.297	0.064(H) x 0.191(V)	0.264 x 0.264
Viewing Angle (H-V)	100 / 60	140 / 100	140/ 100	140 / 100	120 / 100	120 / 100	140 / 100	120 / 100
Backlight MTBF	10000	25000	25000	50000	20000	50000	50000	20000
Touch Screne	Projective-Capacitor Type	Resistor Type	Resistor Type	Resistor Type	Resistor Type	Resistor Type	Resistor Type	Resistor Type
Multimedia Support	MPEG 1	MPEG 1	MPEG 1	MPEG 1	MPEG 1	MPEG 1	MPEG 1/2/4 and WMV9	MPEG 1/2/4 and WMV9
I/O and COMMUNICATION								
I/O Interface	1 x RS-232/422/485 (software controllable) 1 x Reset button 1 x 10/100Mbps LAN 1 x USB1.1 host 1set CAN bus 6sets GPIO 1 x 2pin Terminal block DC input	1 x RS-232/422/485 (software controllable) 2 x 10/100Mbps LAN 2 x USB1.1 host 1 x SD card slot 1 x Reset button 1 x On/Off power switch 1 x 2pin Terminal block power input	1 x USB2.0 host 1 x USB client 1 x SD card slot 1 x 10/100Mbps LAN 1 x RS-232 1 x RS-422/485 1 x On/Off power switch	1 x RS-422/485 (Software Controllable) 1 x RS-232 1 x 10/100Mbps LAN 1 x USB1.1 host 1 x Reset button 1 x On/Off power switch 1 x 2pin Terminal block power input 1set CAN bus	1 x RS-232/422/485 1 x RS-232 2 x 10/100Mbps LAN 2 x USB1.1 host 1 x Reset button 1 x On/Off power switch 1 x AC input (IOVU-1000M) 1 x 12V DC input (IOVU-1002M) 1 x 24V DC input (IOVU-1004M)	3 x RS-232/422/485 2 x 10/100Mbps LAN 2 x USB2.0 host 1 x Reset button 1 x On/Off power switch 8 x Digital input 8 x Digital output 1 x VGA output 1 x 2pin Terminal block power input	1 x RS-232/422/485 (Software Controllable) 1 x RS-232 2 x 10/100Mbps LAN (one supports POE) 2 x USB2.0 host 1 x Reset button 1 x On/Off power switch 1 x 2pin Terminal block power input 1 x Power jack	1 x RS-232/422/485 1 x RS-232 2 x 10/100Mbps LAN 2 x USB1.1 host 1 x Reset button 1 x On/Off power switch 1 x AC input
Audio	1.5W Speaker x 2	1.5W Speaker	1 x Line-out	1.5W Speaker	1 x Mic-in, 1 x Line-out	1 x Line-out	1.5W Speaker	1 x Mic-in, 1 x Line-out
Wireless LAN	802.11 b/g	802.11 b/g	N/A	802.11 b/g	N/A	KAMIO-WL01 optional module (802.11 b/g)	N/A	N/A
DIMENSION								
Construction Material	ABS + PC Plastic	ABS + PC Plastic	ABS + PC Plastic	ABS + PC Plastic	ABS + PC Plastic	Aluminum	ABS + PC Plastic	ABS + PC Plastic
Net Weight (kg)	0.6	0.7	0.8	0.85	2.62	4	0.8	2.62
Front Panel Colco	Black	Black	Black	Black	Cool Gray	Sliver	Black	Cool Gray
Dimension (W x H x D mm)	145 x 104 x 34	180 x 135 x 45	180 x 132 x 40	226 x 140 x 41	312.5 x 242.6 x 68	410 x 309 x 85.2	226 x 140 x 41	312.5 x 242.6 x 68
ENVIRONMENTAL / POWER								
Operating Temperature (°C)	-20°C~60°C	-20°C~60°C	0°C~50°C	-20°C~60°C	0°C~50°C	0°C~50°C	-20°C~60°C	0°C~50°C
Front Panel Protection	IP65 Compliant	IP64 Compliant	IP64 Compliant	IP64 Compliant	IP65 Compliant	IP65 Compliant	IP64 Compliant	IP65 Compliant
Power Mode	AT	AT	AT	AT	AT	ATX	AT	AT
Power Requirement	12~36V DC input	12~36 V DC-IN	9~28 V DC-IN	12~36 V DC-IN	100~240 V AC-IN	9~36 V DC-IN	6~30 V DC-IN	100~240 V AC-IN
Power Consumption	7 W	8 W	8 W	10 W	13 W	24W	8.5 W	13 W
Vibration and Shock	MIL-STD-810F 1. Axes: 3 axes (Vertical / Transverse / Longitudinal) 2. 10 ~ 500Hz, 60min/axis 3. Equivalent to Z: 2.18Grms, X: 1.6Grms, Y: 1.96Grms							
Humidity	5%-90%RH	5%-90%RH	5%-90%RH	5%-90%RH	5%-90%RH	5%-90%RH	5%-90%RH	5%-90%RH

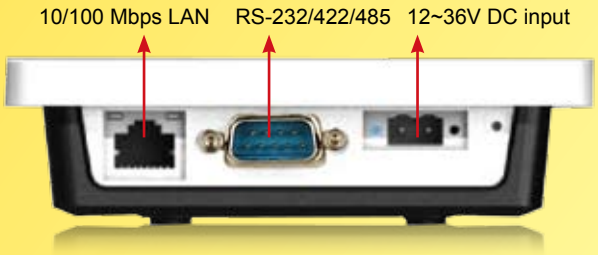
IOVU-430M

ARM-based Panel PC

While touch sensor is commonplace for single points of contact, IOVU-430M's multi-touch sensor enables a user to interact with the system with more than one finger at a time. IOVU-430's RISC-based system provides high performance, lower power consumption, wide operating temperature, rugged compact form factor and cost-effective. Built-in WiFi module, GPIO (general purpose input/output) and CAN bus control have varied applications be flexible.



NEW



IOVU RISC-based PPC | Multi-touch | Wide Temperature -20°C~60°C | Wireless 802.11 b/g | XScale® PX270 solution | ARM | Windows CE 5.0

Whole plane multi-touch panel PC

Features:

- RISC-based processor provides high performance and extremely low power consumption
- 4.3" widescreen WQVGA TFT LCD with projected-capacitor touch screen
- Multi-touch function provides flexible touch control
- Compact design with plastic housing and fan-less system
- Built-in 1.5w speakers
- Built-in 802.11b/g WiFi function
- CAN bus and GPIO provide flexible industrial control
- The whole plane multi-touch screen and IP65 compliant
- Mini secure digital card slot for storage extension

Application



Mini secure digital card preinstalled Windows® CE5.0 operating system provides storage extension.

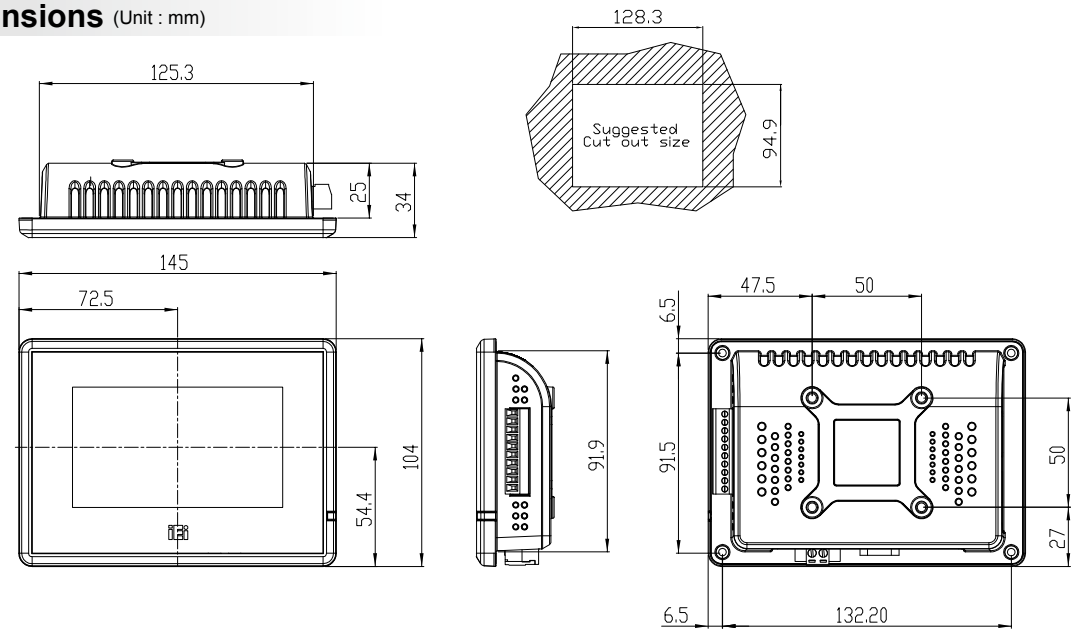


IOVU-430M Specifications

Model	IOVU-430M
LCD size	4.3"
Max. Resolution	480 x 272
Brightness (cd/m²)	400
LCD Color	262K
Pixel Pitch (mm)	0.066(H) x 0.198(V)
Backlight MTBF	10000 hrs
Touch Screen	Projected-Capacitor
CPU	MARVELL XScale PXA270 416MHz
RAM	128MB SDRAM
Bootloader Storage	2MB boot ROM
OS/Program Storage	1GB Mini Secure Digital card
I/O Ports and Switches	1 x RS-232/422/485 COM port (software controllable) 1 x Reset button 1 x 10/100Mbps LAN 1 x USB1.1 host 1set CAn bus 6sets GPIO 2pin Terminal block DC input

Audio	1.5W speaker x 2
Construction Material	ABS + PC Plastic
LED Function	1 x Power ON/OFF LED on front panel
Mounting	Wall, Stand, Vstand and Arm (VESA 50 x 50)
Front Panel Color	Black
Dimension (W x H x D mm)	145 x 104 x 34
Operation Temperature (ºC)	-20ºC ~ 60ºC
Storage Temperature (ºC)	-20ºC ~ 80ºC
Net Weight (kg)	0.7
IP Level (front panel)	IP 65
Power Requirement	12~36V DC input
Power Consumption	7W

Dimensions (Unit : mm)



Packing List

- 1 x IOVU-430M
- 1 x Null modem cable
- 1 x Screw kits
- 1 x Utility CD includes SDK, utilities, and technical document
- 1 x Touch pen

Ordering Information

Part No.	Description
IOVU-430M-CE5/-R10	4.3" TFT, WQVGA, 262K color, Multi-touch Panel PC with built-in Windows® CE 5.0 license

Options

Part No.	Description
63000-FSP0601AD101C760-RS	12V DC 60W power adapter with bare wire, 90~264V AC input

IOVU-570M ARM-based Panel PC

NEW



Built-in WiFi function

WiFi function supports 802.11b/g



SD card

Preinstalled Windows® CE5.0 or ARM-Linux boot from secure digital card



IOVU RISC-based PPC

Wide Temperature -20°C~60°C

Wireless 802.11 b/g

XScale® PX270 solution

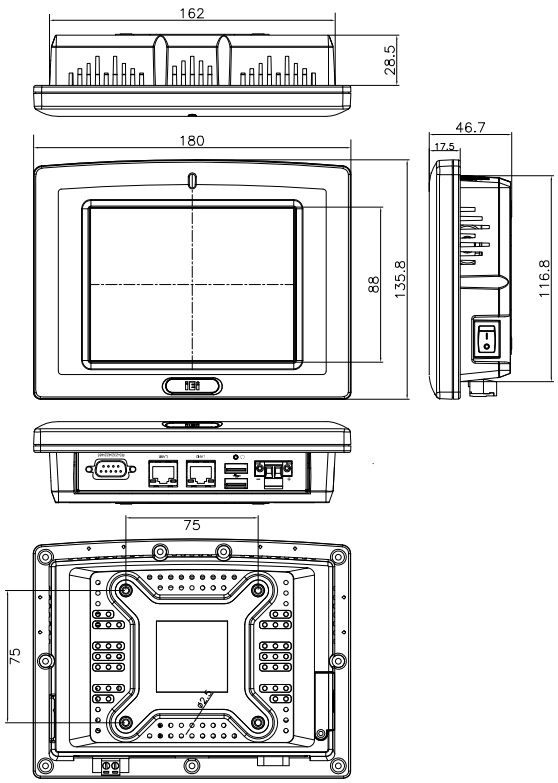
ARM

Windows CE 5.0

Features:

- 5.7" TFT VGA LCD with resistive touch screen
- MARVELL XScale PXA270 520MHz processor and 128MB SDRAM
- Default 1GB secure digital card for OS and user data/programs
- Built-in 802.11b/g Wireless LAN
- Built-in 1.5W speakers
- IP64 compliant front panel
- Fan-less design for rigorous environments
- Preinstalled Windows® CE5.0 operating system.
- Windows® CE5.0 SDK for user application software development.

Dimensions (Unit : mm)



Packing List

1 x IOVU-570M
1 x Utility CD includes application tools, SDK, and technical document.
1 x Null modem cable
1 x Touch pen

Ordering Information

Part No.	Description
IOVU-570M-CE5/-R10	5.7", VGA fan-less touch panel PC with MARVELL XScale PXA270 CPU, 128MB SDRAM, 802.11b/g wireless LAN and built-in Windows® CE5.0 Operating System

Options

Part No.	Description
ALFPK-08	Panel mount kit
AFLWK-07	VESA 75 wall mount kit
ARM-11-RS	LCD Monitor/PPC Arm kit loading capacity from 3kg~7kg
STAND-A08-RS	LCD Monitor/PPC Stand kit for VESA 75 and support up to 5 Kg
VSTAND-A07	LCD Monitor/PPC STAND V type for VESA 75, 0~90 degree adjustable hinge and support up to 2.5 Kg
AFLP-12BMSR-U	USB Magnetic Card Reader
AFLP-BRW01-U / AFLPBRB01-U	USB Barcode Reader (White / Black)
AFLP-CDB01 / AFLP-CDW01	VFD Customer Display (Green) 5 x 7 dot matrix (Black / White)
63000-FSP0601AD101C760-RS	12V DC 60W power adapter with bare wire, 90~264V AC input

IOVU-571N ARM-based Panel PC

NEW



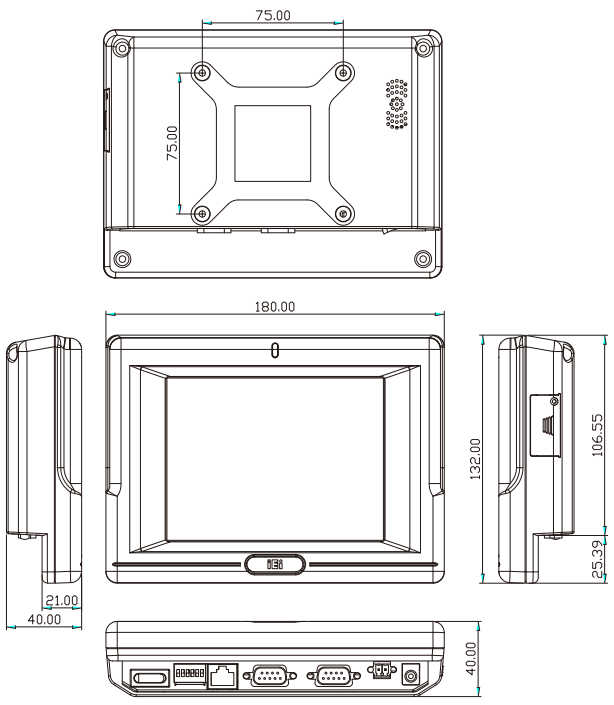
IOVU RISC-based PPC

ARM Windows CE 5.0

Features:

- Nuvoton(Winbond) W90P910CBG 200MHz processor
- Low power consumption
- Fanless design for rigorous environments
- 5.7" TFT VGA LCD with resistive touch screen
- Standard peripheral device interface connectors includeEthernet,serial ports,SD ,USB and Audio
- Preinstalled Windows® CE5.0 embedded operationg system
- Windows® CE5.0 SDK for user application software development
- Default 128MB Flash for OS and user data/programs
- DC input +9V~+28V DC

Dimensions (Unit : mm)



Packing List

1 x IOVU-571N
1 x Utility CD includes application tools, SDK, and technical document.
1 x Null modem cable
1 x Touch pen
1 x Screw kits

Ordering Information

Part No.	Description
IOVU-571N-CE5/-R10	5.7" VGA fan-less touch panel PC with Winbond W90P910CBG CPU, 128MB SDRAM and built-in Windows® CE5.0 Operating System

Options

Part No.	Description
ALFPK-08	Panel mount kit
AFLWK-07	VESA 75 wall mount kit
ARM-11-RS	LCD Monitor/PPC Arm kit loading capacity from 3kg~7kg
STAND-A08-RS	LCD Monitor/PPC Stand kit for VESA 75 and support up to 5 Kg
VSTAND-A07	LCD Monitor/PPC STAND V type for VESA 75, 0~90 degree adjustable hinge and support up to 2.5 Kg
63000-FSP0601AD101C760-RS	12V DC 60W power adapter with bare wire, 90~264V AC input