1 Automation

2 Point of Service

3 Digital Signage

4 RISC-based Solutions

5 Medical Solutions

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.

| Watchdog Timer | RS-232 /422/485 | Touch Screen | Wireless 802.11 b/g |
| Dual LAN | Integrated audio | Fanless | Wide Temperature |

Windows CE 5.0 Linux

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.

Water proof device   PIFA antenna inside

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.
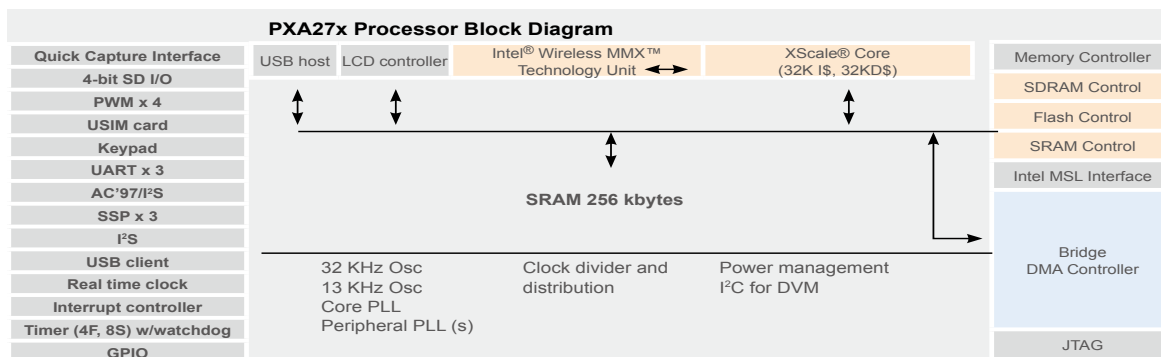
IOVU Open HMI series

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, WMV	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.

PXA27x Processor Block Diagram

Quick Capture Interface	USB host LCD controller	Intel® Wireless MMX™ Technology Unit ↔ XScale® Core (32K I$, 32KD$)	Memory Controller
4-bit SD I/O			SDRAM Control
PWM x 4			Flash Control
USIM card			SRAM Control
Keypad			Intel MSL Interface
UART x 3		SRAM 256 kbytes	
AC'97/I²S			
SSP x 3			
I²S			Bridge DMA Controller
USB client	32 KHz Osc	Clock divider and	
Real time clock	13 KHz Osc	distribution	Power management
Interrupt controller	Core PLL		I²C for DVM
Timer (4F, 8S) w/watchdog	Peripheral PLL (s)		JTAG
GPIO			

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.
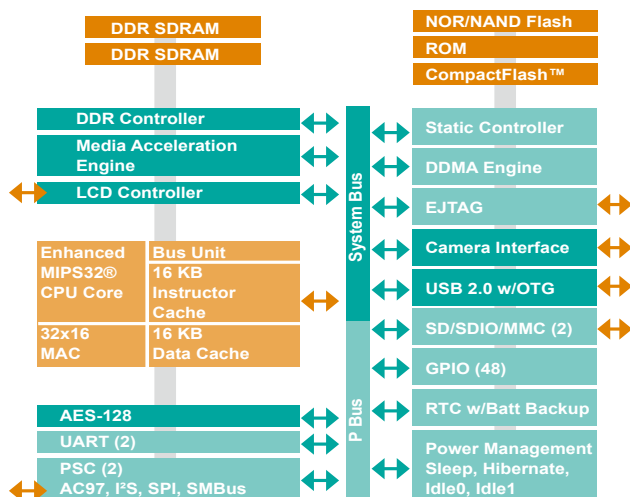
	XScale PXA270	Alchemy™ Au1250™	AMD® LX800
CPU Speed	520MHz	500 MHz	500MHz
Companion Chipset	No need	No need	AMD® CS5536
Super I/O	No need	No need	Winbond W83627EHG
System Memory	SDRAM	DDR I/II	DDR
Multimedia Support	MPEG1/2 with Software codec	Built-in Hardware MAE	MPEG1/2 with Software codec
H.D.D I/F	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

DDR SDRAM
DDR SDRAM
NOR/NAND Flash
ROM
CompactFlash™

DDR Controller
Media Acceleration Engine
LCD Controller

Static Controller
DDMA Engine
EJTAG
Camera Interface
USB 2.0 w/OTG
SD/SDIO/MMC (2)
GPIO (48)
RTC w/Batt Backup

System Bus

Enhanced MIPS32® CPU Core | Bus Unit
32x16 MAC | 16 KB Instructor Cache
| 16 KB Data Cache

AES-128
UART (2)
PSC (2)
AC97, I²S, SPI, SMBus

P Bus

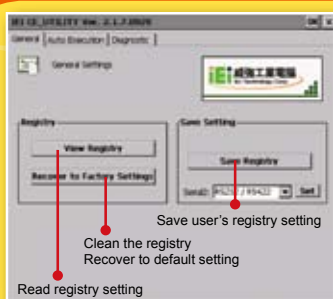Power Management Sleep, Hibernate, Idle0, Idle1

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.
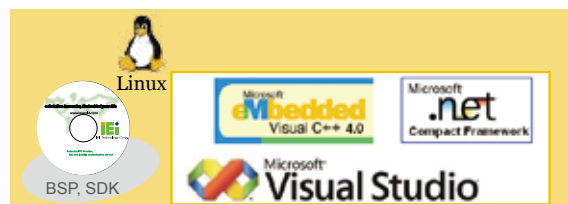
IEI WinCE Utility

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

Save user's registry setting
Clean the registry
Recover to default setting
Read registry setting

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

Remotely control
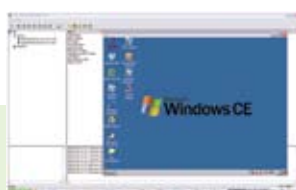
BSP (Board Support Package)

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.
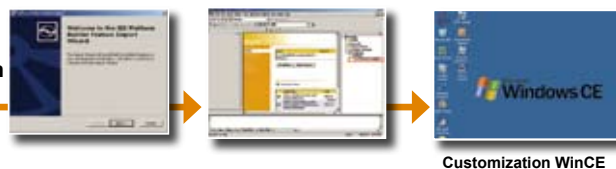
Embedded Linux Kernel configuration

Customization Linux Linux
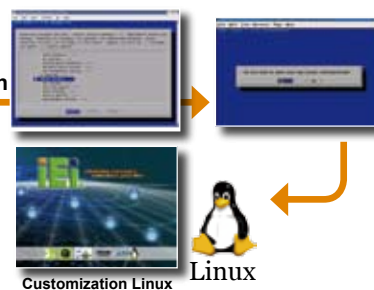
Windows® CE5.0

- Standard Windows® CE5.0 professional version license.

- Optional Board Support Package (BSP) for customers to customize their own OS image.

Windows® Platform Builder

Customization WinCE

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/m²)	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 (ºC)	-20ºC~60ºC	-20ºC~60ºC	0ºC~50ºC	-20ºC~60ºC	0ºC~50ºC	0ºC~50ºC	-20ºC~60ºC	0ºC~50ºC
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

1 Automation

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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.

1set CAN bus
6sets GPIO function

Built-in WiFi function

Mini SD card socket

USB1.1 host

10/100 Mbps LAN   RS-232/422/485   12~36V DC input

NEW

IOVU RISC-based PPC   LV

Multi-touch

Wide Temperature -20ºC~60ºC

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

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

Application

WiFi function supports 802.11b/g

CAN bus

CAN network devices

GPIO (General Purpose Input/ Output) control

Sensor   Lighting   Smart relay   Security   Data collector

Remotely control

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)
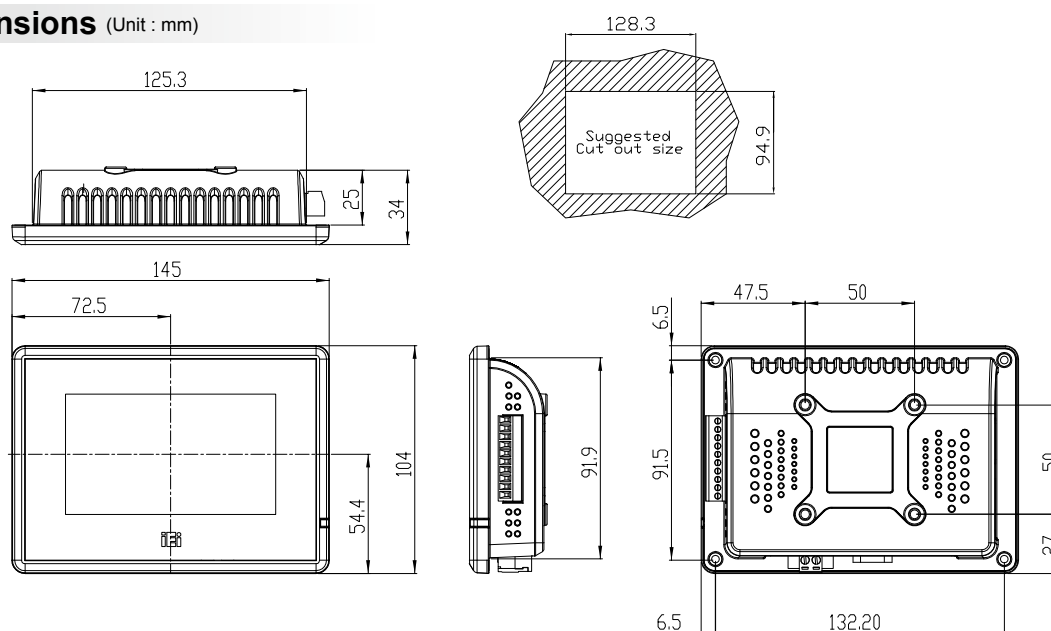
Packing List

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

b/g **WiFi**

WiFi function supports 802.11b/g

SD card

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

2 x USB1.1 host

12~36 V DC-IN

Reset button

10/100Mbps LAN
RS-232/422/485
(software controllable)

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

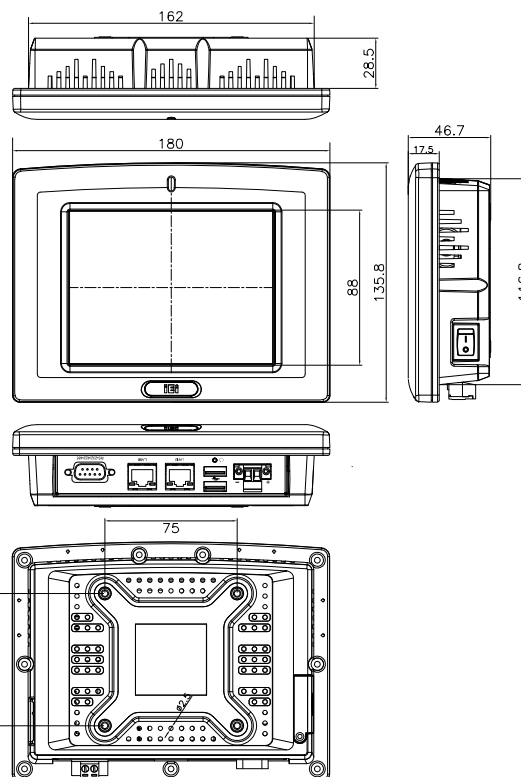| |
|---|
| 1 x IOVU-570M |
| 1 x Utility CD includes application tools, SDK, and technical document. |
| 1 x Null modem cable |
| 1 x Touch pen |

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

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5 Medical Solutions

IOVU-571N   *ARM-based Panel PC*

NEW

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

1GB

1 x USB client

9~28V DC-IN

RS-422/485

RS-232

10/100 Mbps LAN

Switch for RS-232/422/485

1 x USB host2.0

Power Switch

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

Packing List

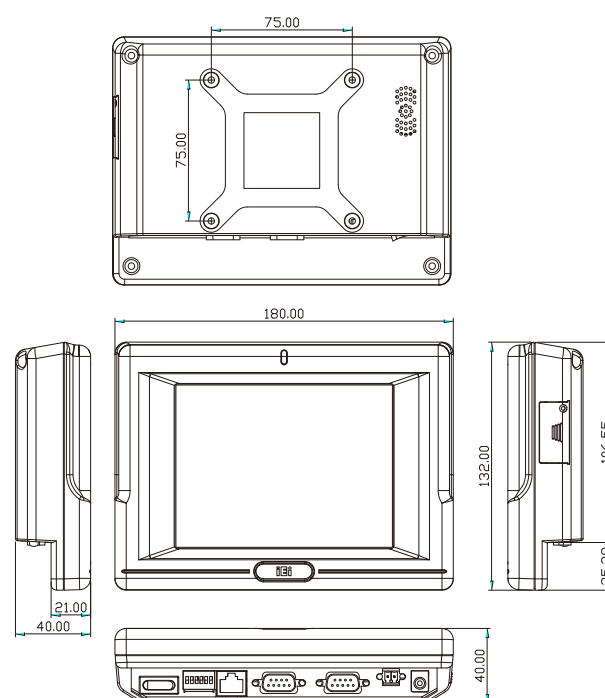| |
|---|
| 1 x IOVU-571N |
| 1 x Utility CD includes application tools, SDK, and technical document. |
| 1 x Null modem cable |
| 1 x Touch pen |
| 1 x Screw kits |

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

Dimensions (Unit : mm)

75.00

75.00

180.00

132.00

106.55

25.39

21.00

40.00

40.00

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

IOVU-700M *ARM-based Panel PC*
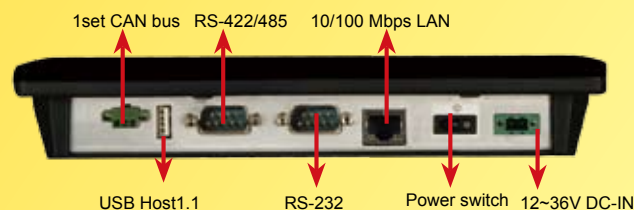
NEW

Built-in WiFi function

b g **WiFi**

WiFi function supports 802.11b/g

1set CAN bus   RS-422/485   10/100 Mbps LAN

USB Host1.1   RS-232   Power switch   12~36V DC-IN

IOVU RISC-based PPC

Wide Temperature -20°C~60°C

Wireless 802.11 b/g

XScale® PX270 solution

ARM

Microsoft **Windows CE** 5.0

Features:

- 7" TFT WVGA LCD with resistive touch screen
- MARVELL XScale PXA270 520MHz processor and 256MB SDRAM
- Default 256MB CompactFlash® card for OS and user data/programs
- Internal WiFi controller provides 802.11b/g protocol
- Provide one set of CAN bus for industrial application
- 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)

213.55
128.58
20   20
24
11.5
226
151.4
75.7
45.22
90.44
40.18
15.68
20
125.27
140
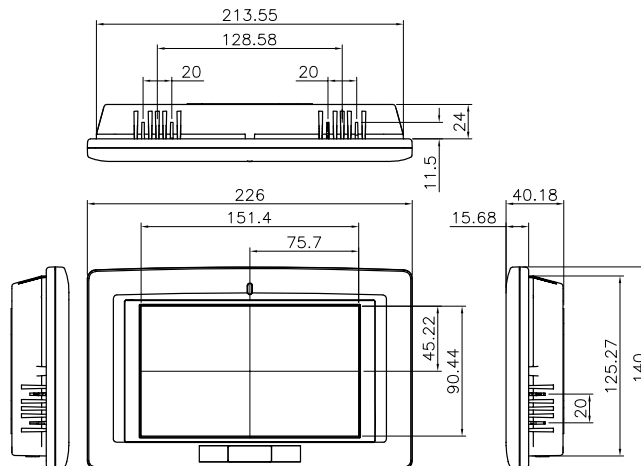
Packing List

| 1 x IOVU-700M |
| 1 x Utility CD includes application tools, SDK, and technical document. |
| 1 x Null modem cable |
| 1 x Touch pen |

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

Ordering Information

Part No.	Description
IOVU-700M-CE5/-R10	7", WVGA fan-less touch panel PC with MARVELL XScale PXA270 CPU, 256MB SDRAM, 802.11b/g WiFi function and built-in Windows® CE 5.0 Operating System

IOVU-1000M

ARM-based Panel PC
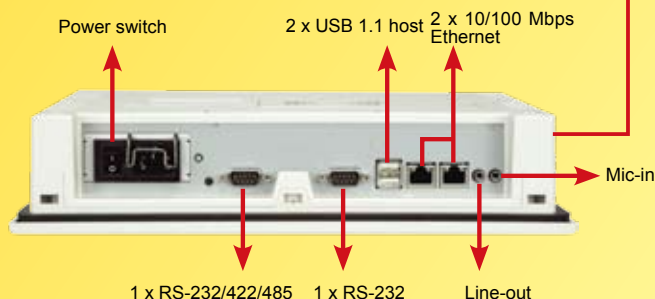
The Whole Plane Touch Screen and IP65 compliant

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

CF card

Power switch

2 x USB 1.1 host

2 x 10/100 Mbps Ethernet

Mic-in

1 x RS-232/422/485

1 x RS-232

Line-out

Features:

- 10.4" TFT SVGA LCD with resistive touch screen
- MARVELL XScale® PXA270 520MHz processor and 128MB SDRAM
- Default 128MB CompactFlash® card for OS and user data/programs
- IP65 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)

312.5
212.1
6.8   58.3
160.0
242.6
223.6
221.5

294

292

Packing List

1 x IOVU-1000M
1 x Utility CD includes application tools, SDK, and technical document.
1 x Null modem cable
1 x Touch pen
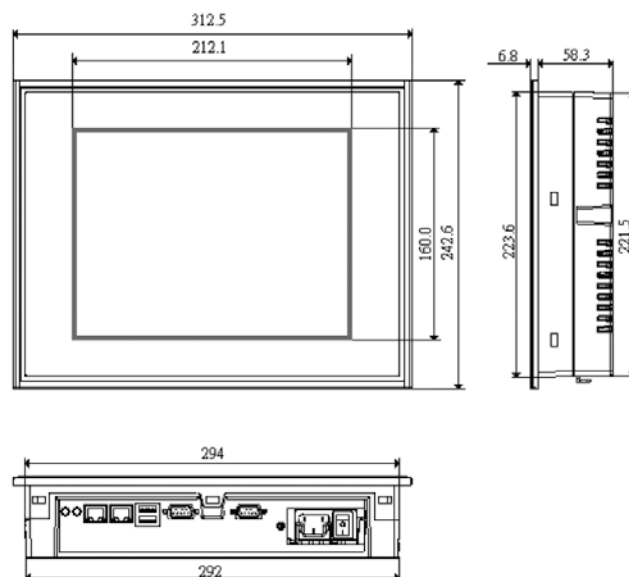
Ordering Information
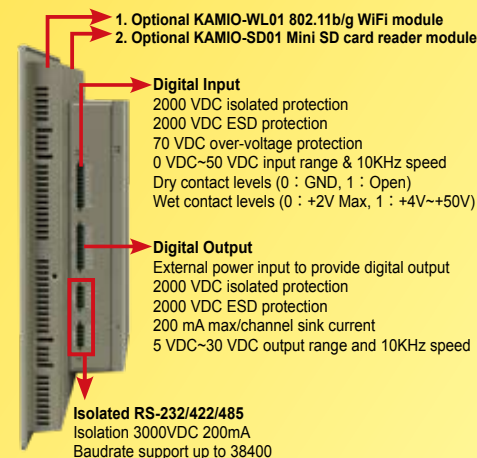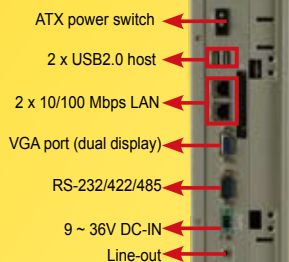
Part No.	Description
IOVU-1000M-CE5/-R12	10.4", SVGA fan-less touch panel PC with MARVELL XScale® PXA270 CPU, 128MB SDRAM, and built-in Windows® CE5.0 Operating System, power type is AC input
IOVU-1002M-CE5/-R12	10.4", SVGA fan-less touch panel PC with MARVELL XScale® PXA270 CPU, 128MB SDRAM, and built-in Windows® CE5.0 Operating System, power type is 12V DC input
IOVU-1004M-CE5/-R12	10.4", SVGA fan-less touch panel PC with MARVELL XScale® PXA270 CPU, 128MB SDRAM, and built-in Windows® CE5.0 Operating System, power type is 24V DC input

IOVU-1500M

ARM-based Panel PC

1. **Optional KAMIO-WL01 802.11b/g WiFi module**
2. **Optional KAMIO-SD01 Mini SD card reader module**

ATX power switch

2 x USB2.0 host

2 x 10/100 Mbps LAN

VGA port (dual display)

RS-232/422/485

9 ~ 36V DC-IN

Line-out

Digital Input
2000 VDC isolated protection
2000 VDC ESD protection
70 VDC over-voltage protection
0 VDC~50 VDC input range & 10KHz speed
Dry contact levels (0：GND, 1：Open)
Wet contact levels (0：+2V Max, 1：+4V~+50V)

Digital Output
External power input to provide digital output
2000 VDC isolated protection
2000 VDC ESD protection
200 mA max/channel sink current
5 VDC~30 VDC output range and 10KHz speed

Isolated RS-232/422/485
Isolation 3000VDC 200mA
Baudrate support up to 38400

IOVU RISC-based PPC

ARM

XScale® PX270 solution

Windows CE 5.0

Features:

- 15" TFT XGA LCD with resistive touch screen
- MARVELL XScale PXA270 520MHz processor and 128MB SDRAM
- Default 256MB CompactFlash® card for OS and user data/programs
- IP65 compliant front panel
- Built-in Isolated Digital input/output
- Provide dual display function
- Fan-less design for rigorous environments
- Preinstalled Windows® CE5.0 operating system.
- Windows® CE5.0 SDK for user application software development

Dimensions (Unit : mm)

385.44
200
88.51
77.9
25.7
6
6.1
160.5
160.5

409.74
204.87
308.74
154.37
71.9
6.1
160
284.44

290
100
50
100
50
200
291.2

Packing List

1 x IOVU-1500M
1 x Utility CD includes application tools, SDK, and technical document.
1 x Null modem cable
1 x Touch pen

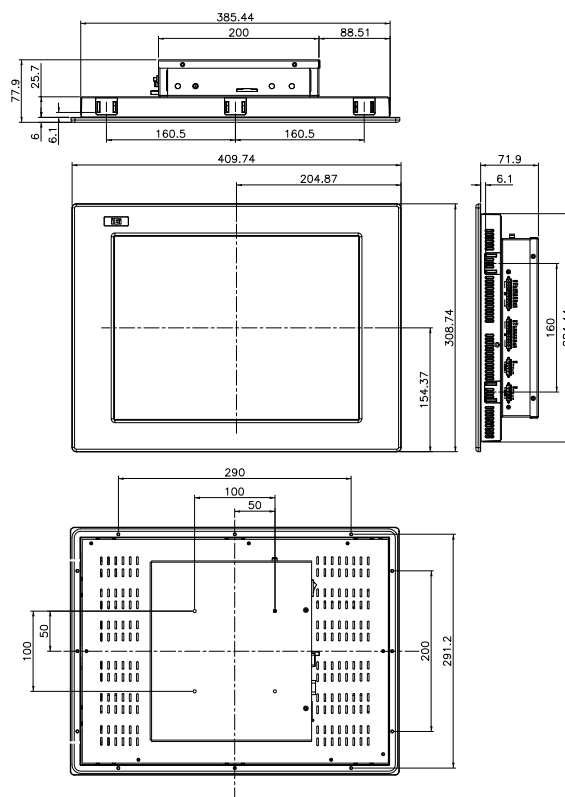## Ordering Information

Part No.	Description
IOVU-1500M-CE5/-R10	15", XGA fan-less touch panel PC with MARVELL XScale PXA270 CPU, 128MB SDRAM, built-in Windows® CE5.0 Operating System

Options

Part No.	Description
KAMIO-WL01-R20	Wireless LAN module supports 802.11b/g
KAMIO-SD01-R10	Mini SD card reader module
AFLPK-15	Panel mount kit
AFLWK-19	VESA 100 wall mount kit
ARM-31-RS	LCD Monitor/PPC Arm kit loading capacity from 7kg~14kg
STAND-A19-RS	LCD Monitor/PPC Stand kit for VESA 100 and support up to 7.5 Kg
AFLP-12BMSR-U	USB Magnetic Card Reader
AFLP-BRW01-U / AFLP-BRB01-U	USB Barcode Reader (White / Black)
AFLP-CDB01 / AFLP-CDW01	VFD Customer Display (Green) 5 x 7 dot matrix (Black / White)
63000-FSP0601AD101CT60-RS	12V DC 60W power adapter with bare wire, 90~264V AC input

1 Automation

2 Point of Service

3 Digital Signage

4 RISC-based Solutions

5 Medical Solutions

IOVU-751R

MIPS-based Panel PC

NEW

Multi-Media | MPEG1 MPEG2 MPEG4 WMV9 | DivX MPEG4 | Hardware Decode

Traditionally, Power over Ethernet (PoE) technology has been used to power low voltage devices such as wireless LAN Access Points, Voice over IP phones and IP-based cameras. However, the IOVU-751R is a 7" touch screen panel PC powered by Ethernet and with enhanced built-in hardware multimedia acceleration engine (MAE) to support MPEG1/2/4, DivX, and WMV9 in full D1 resolution. The power requirement is less than 13 W, and falls within the power specified in the IEEE 802.3af PoE industry standard.

Intranet Internet

Power Sourcing Ethernet Switch

Wireless LAN Access Point

IP Camera

VoIP Phone

Multi-Media | RMI Raza Microelectronics, Inc. | MPEG1 MPEG2 MPEG4 WMV9 | DivX MPEG4 | Windows CE 5.0 | Linux | MIPS TECHNOLOGIES

Applications

The IOVU-751R is a rugged, compact device that has low power consumption and is designed without failure-prone hard disks and fans; moreover, its high-performance multimedia support is a solution for diverse range of applications :

> POE supports Ethernet transmission for updating advertisement and doesn't need additional power supply.
> Compliant with varied digital video media including MPEG1, 2, 4, DivX, and WMV9.
> Internal speakers and fan-less feature for great audio presentation.

Home / Building Automation

● Update the latest information by Ethernet like cookbook, entertainment program…etc.
● Power meter, lighting control, and home-safety.

Slim POS

● PoE supports Ethernet service and power supply function directly.
● Easy to integrate optional barcode reader, magnetic card reader, and customer display.

Thin/Client

● Provide the service information to all passengers.
● Varied movies, games, and chat room for all passengers.

Digital Signage & Game Device

● Update advertisement programs by Ethernet and support multimedia functions.
● Access games, sport training programs and internet service. Users don't need an individual coach anymore.

Features:

- Processor includes MAE (Media Acceleration Engine) supports MPEG 1/2/4 and WMV9
- RISC-based processor provides high performance and extremely low power consumption
- POE (Power over Ethernet) function
- 7" widescreen WVGA TFT LCD with resistive touch screen
- Compact design with plastic housing
- Fanless system
- Built-in 1.5W speakers
- Secure Digital card slot for storage extension
- IP64 compliant front panel

Reset Button 2 x USB2.0 LAN 1 LAN 2 (POE)

Power Switch RS-232 RS-232/422/485 6~30V DC IN
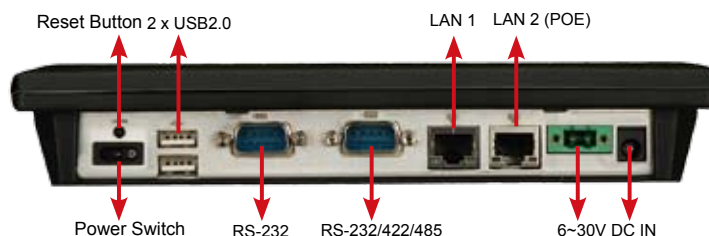
IOVU-751R Specifications

Model	IOVU-751R
LCD Size	7"
Max. Resolution	800 x 480
Brightness (cd/m2)	400
LCD Color	262K
Pixel Pitch (mm)	0.0635 (H) x 0.1905 (V)
Backlight MTBF	50000 hrs
Touch Screen	Resistive Type 4-wire
CPU	Alchemy™ Au1250™ 500 MHz
RAM	256 MB DDR2
Bootloader Storage	2 MB boot ROM
OS/Program Storage	1 GB Secure Digital card
I/O Ports and Switches	1 x RS-232 COM port 1 x RS-232/422/485 COM port (Software Controllable) 1 x Reset button 1 x On/Off power switch 2 x 10/100Mbps LAN (one supports POE) 2 x USB2.0 host

Audio	1.5W speaker x 2
Construction Material	ABS + PC Plastic
LED Function	1 x Power ON/OFF LED on front panel
Mounting	Panel, Wall, Stand, Vstand and Arm (VESA 75 x 75)
Front Panel Color	Gray 7C
Dimensions (W x H x D mm)	226 x 140 x 40
Operating Temperature (°C)	-20 ~ 60
Storage Temperature (°C)	-20 ~ 80
Net Weight (kg)	0.8
IP Level (front panel)	IP 64
Power Requirement	6~30 V DC
Power Consumption	8.5 W

Packing List

| |
|---|
| 1 x IOVU-751R |
| 1 x Utility CD includes application tools, SDK, and technical document. |
| 1 x Null modem cable |
| 1 x Touch pen |
| 1 x Screw kit |

Dimensions (Unit : mm)

Ordering Information

Part No.	Description
IOVU-751R-CE5/-R10	7", WVGA fan-less touch panel PC with RMI Alchemy AU1250 CPU, 256MB DDR2 SDRAM, LAN supports POE function and built-in Windows® CE5.0 Operating System
IOVU-751R-UX/-R10	7", WVGA fan-less touch panel PC with RMI Alchemy AU1250 CPU, 256MB DDR2 SDRAM, LAN supports POE function and built-in ARM-Linux 2.6.18 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-FSP0361 AD101C-RS	POWER ADAPTER, 90V-264V input and 12V/36W output; PLUG ψ2.5/ψ5.5/no lock
63000-FSP0601AD101C760-RS	12V DC 60W power adapter with bare wire, 90~264V AC input
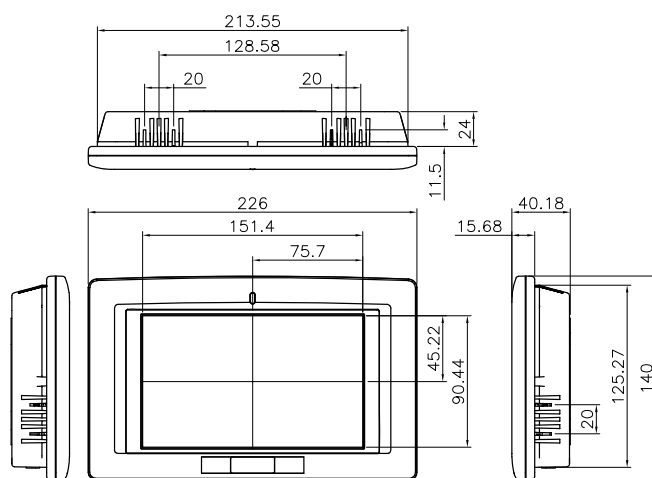
IOVU-1051R *MIPS-based Panel PC*

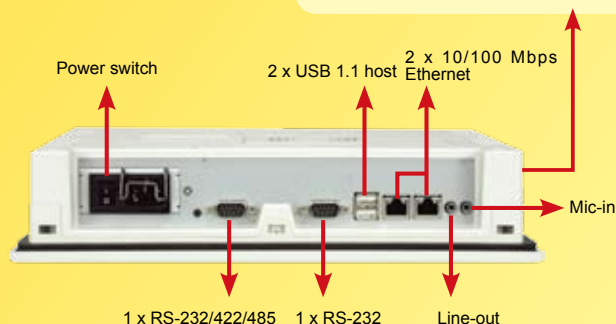**DivX** **hardware decode**
MPEG1 MPEG2
MPEG4 WMV9

The Whole Plane Touch Screen and IP65 compliant

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

iCF

CF card

Power switch

2 x USB 1.1 host

2 x 10/100 Mbps Ethernet

Mic-in

1 x RS-232/422/485   1 x RS-232   Line-out

IOVU **IVG** RISC-based PPC

RMI Raza Microelectronics, Inc.

Microsoft **Windows CE 5.0**

MIPS TECHNOLOGIES

1 Automation

2 Point of Service

3 Digital Signage

4 RISC-based Solutions

5 Medical Solutions

Features:

- 10.4" TFT SVGA LCD with resistive touch screen
- RMI Alchemy™ AU1250 500MHz processor and 128MB DDR2 SDRAM
- Default 256MB CmpactFlash® card for OS and user data/programs
- Hardware decode MPEG1/2/4, and WMV9
- IP65 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)

312.5
212.1
6.8   58.3
160.0
242.6
223.6
221.5

294
292

Packing List

1 x IOVU-1051R
1 x Utility CD includes application tools, SDK, and technical document.
1 x Null modem cable
1 x Touch pen
1 x Screw kits
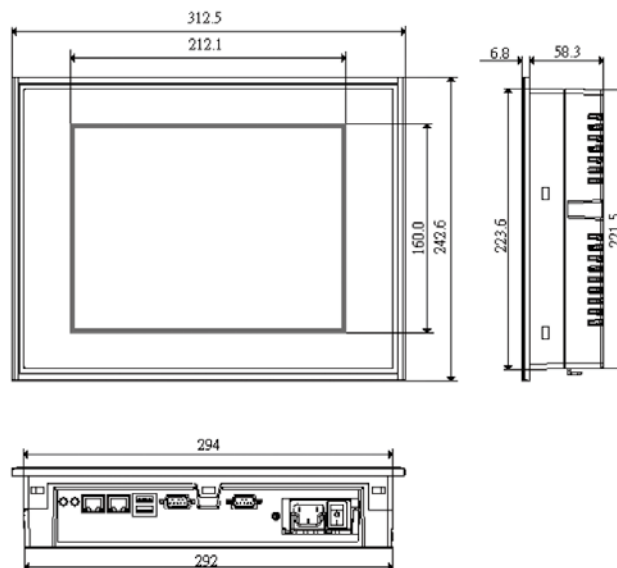
Ordering Information

Part No.	Description
IOVU-1051R-CE5/-R10	10.4", SVGA fan-less touch panel PC with RMI Alchemy AU1250 CPU, 128MB DDR2 SDRAM, and built-in Windows® CE5.0 Operating System, power type is AC input.

IOVU Aluminum Series   *ARM-based Panel PC*

▍Features:

- 5.6"~8.4" TFT LCD with resistive touch screen
- MARVELL XScale PXA270 520MHz processor and 128MB SDRAM
- Default 128MB CompactFlash® card for OS and user data/programs
- IP65 compliant front panel
- Fan-less design for rigorous environments
- Preinstalled Windows® CE5.0 operating system.
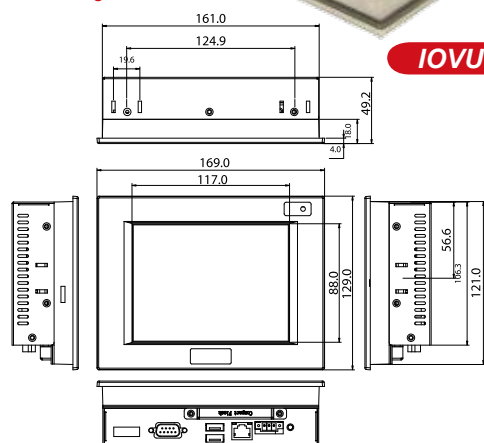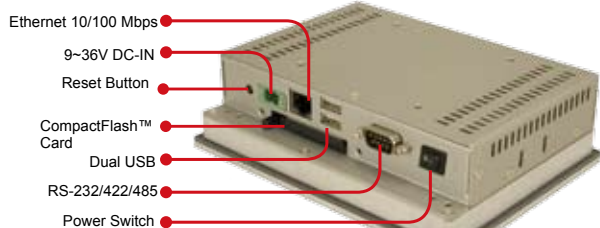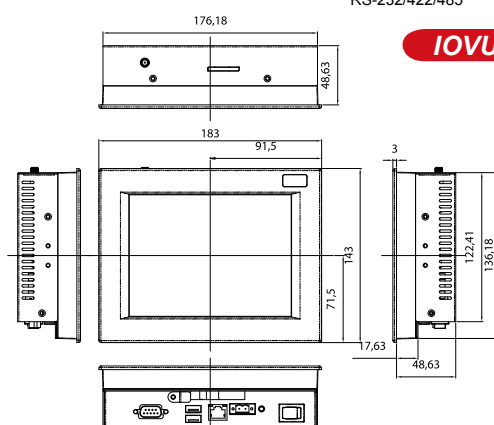- Windows® CE5.0 SDK for user application software development
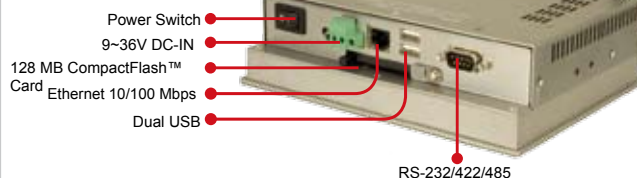
IOVU-700

IOVU-560

IOVU-650/WL

IOVU-840

Model Name	IOVU-560	IOVU-650 / 650WL	IOVU-700	IOVU-840
SYSTEM				
CPU	XScale PXA 520 MHz			
Bootloader Storage	2 MB			
RAM	128 MB SDRAM			
OS/Program Storage	128 MB CompactFlash®			
DISPLAY				
LCD Size	5.6"	6.5"	7"	8.4"
	262 K	262K	262 K	262K
Display Resolution	QVGA	VGA	WVGA	SVGA
LCD Brightness (cd/m²)	500	500	350	450
Dot Pitch (mm)	0.118(H) x 0.362(V)	0.069(H) x 0.207(V)	0.1905 (H) x 0.1905 (V)	0.213 x 0.213
Viewing Angle (H-V)	100 / 60	140 / 120	140 / 100	130 / 110
Backlight MTBF	30000	30000	50000	50000
Touch Screne	Resistive Type	Resistive Type	Resistive Type	Resistive Type
Multimedia Support	MPEG 1	MPEG 1	MPEG 1	MPEG 1
I/O and COMMUNICATION				
I/O Interface	1 x RS-232/422/485 1 x 10/100Mbps LAN 2 x USB2.0 host 1 x CF card slot 1 x Reset button 1 x On/Off power switch 1 x 2pin Terminal block power input	1 x RS-232/422/485 1 x 10/100Mbps LAN 2 x USB2.0 host 1 x CF card slot 1 x Reset button 1 x On/Off power switch 1 x 2pin Terminal block power input 1 x MiniSD slot (IOVU-650WL)	4 x RS-232/422/485 (RJ-45 connector) 1 x RS-232 1 x 10/100Mbps LAN 2 x USB2.0 host 1 x Reset button 1 x On/Off power switch 1 x 2-pin Terminal block power input	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 12V DC-input
Audio	N/A	N/A	Line-out	1 x Mic-in, 1 x Line-out
Wireless LAN	N/A	802.11b/g (IOVU-650WL)	N/A	N/A
DIMENSIONS				
Construction Material	Aluminum	Aluminum	Aluminum	Aluminum
Net Weight (kg)	1.08	1.24	1.12	2.08
Front Panel Color	Silver	Silver	Silver	Silver
Dimensions (W x H x D mm)	166 x 126 x 48.63	169 x 129 x 49.2	197.2 x 136.3 x 52.1	243.6 x 177.6 x 55.1
ENVIRONMENTAL / POWER				
Operating Temperature (°C)	0°C~50°C	0°C~50°C	0°C~50°C	0°C~50°C
Front Panel Protection	IP65 Compliant	IP65 Compliant	IP65 Compliant	IP65 Compliant
Power Mode	ATX	ATX	ATX	AT
Power Requirement	9~36 V DC-IN	9~36 V DC-IN	9~36 V DC-IN	12 V DC-IN
Power Consumption	15 W	14 W	13 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

1 Automation
2 Point of Service
3 Digital Signage
4 RISC-based Solutions
5 Medical Solutions

Dimensions (Unit : mm)

IOVU-560

- Ethernet 10/100 Mbps
- 9~36V DC-IN
- Reset Button
- CompactFlash™ Card
- Dual USB
- RS-232/422/485
- Power Switch

161.0 / 124.9 / 19.6 / 49.2 / 18.0 / 4.0
169.0 / 117.0 / 88.0 / 129.0 / 56.6 / 106.3 / 121.0

IOVU-650

- Power Switch
- 9~36V DC-IN
- 128 MB CompactFlash™ Card
- Ethernet 10/100 Mbps
- Dual USB
- RS-232/422/485

176,18 / 48,63 / 183 / 91,5 / 3 / 143 / 71,5 / 17,63 / 48,63 / 122,41 / 136,18

IOVU-700

- CompactFlash™ Card
- 12~36V DC-IN
- Line-out
- Power Switch
- 4 x RS-232/422/485
- RS-232
- Dual USB
- Ethernet 10/100 Mbps
- Reset Button
- UART Mode Switch

191.2 / 49.1
197.2 / 152.4 / 76.2 / 91.44 / 136.24 / 45.72 / 109.81 / 130.24 / 3 / 9 / 49.1

IOVU-840

- 2 x Ethernet 10/100 Mbps
- 2 x USB
- Power switch
- 12V DC input
- 1 x RS-232/422/485
- 1 x RS-232
- Line-out
- Mic-in
- CF CARD

243.57 / 170.38 / 55.10 / 27.20 / 127.78 / 177.57 / 147 / 164 / 230

Packing List

- 1 x IOVU-560 / 650 / 650WL / 700 / 840
- 1 x Utility CD includes application tools, SDK, and technical document.
- 1 x 12V, 25W power adapter (only for IOVU-840)
- 1 x Null modem cable
- 1 x Touch pen

Options

Part No.	Description
AFLWK-07	VESA 75 wall mount kit for IOVU-700 / 560
AFLWK-19	VESA 100 wall mount kit for IOVU-840 / 650
STAND-A08-RS	LCD Monitor/PPC Stand kit for VESA 75 for IOVU-700 / 560
STAND-A19-RS	LCD Monitor/PPC Stand kit for VESA 100 for IOVU-840 / 650
63000-FSP0601AD101C760-RS	12V DC 60W power adapter with bare wire, 90~264V AC input

Ordering Information

Part No.	Description
IOVU-560-R10	5.6", QVGA fan-less touch panel PC with MARVELL XScale PXA270 CPU, 128MB SDRAM, built-in Windows® CE5.0 Operating System
IOVU-650-R10	6.5", VGA fan-less touch panel PC with MARVELL XScale PXA270 CPU, 128MB SDRAM, built-in Windows® CE5.0 Operating System
IOVU-650WL-R10	6.5", VGA fan-less touch panel PC with MARVELL XScale PXA270 CPU, 128MB SDRAM, built-in mini SD reader, 802.11b/g wireless LAN module and Windows® CE5.0 Operating System
IOVU-700-R20	7", WVGA fan-less touch panel PC with MARVELL XScale PXA270 CPU, 128MB SDRAM, built-in Windows® CE5.0 Operating System.
IOVU-840-R12	8.4", XGA fan-less touch panel PC with MARVELL XScale PXA270 CPU, 128MB SDRAM, built-in Windows® CE5.0 Operating System

1 Automation
2 Point of Service
3 Digital Signage
4 RISC-based Solutions
5 Medical Solutions