

# PPC-5350GS/A311

## Pentium® M/Celeron® M Panel PC with 15" TFT LCD and Touchscreen

The new PPC-5350/A311 with mobile Intel® 915GM Express chipset is a new upgrade industrial Panel PC system from PPC-5350/A300. Featuring the Intel® Graphics Media Accelerator 900, the 915GM chipset in PPC-5350/A311 enables 2x the graphics performance of the previous generation of platforms based on the Intel® 855GME chipset in PPC-5350/A300. The new PPC-5350/A311 also supports Intel® High Definition Audio (Intel® HD Audio), which is a new enhanced audio specification for high quality audio enabling a premium audio experience. Additionally new PPC-5350/A311 supports up to 2 GB of DDR2 system memory which enables up to 60% increase in peak memory bandwidth and power benefits over DDR memory and PCI Express bus architecture, a highly scalable general purpose I/O for the latest industry peripherals like ExpressCard and PCIe mini card support.

**New upgrade model from PPC-5350/A300 !**  
**High speed express card support !**



## Specifications

### ◆ 15" High luminance TFT LCD display

- Resolution : 1024 x 768 (XGA)
- Brightness : 350 cd/m2
- Contrast Ratio : 400:1
- Backlight MTBF : 50000hrs
- Interface : LVDS

### ◆ Main board A311

- CPU : Socket-479 base Intel® Pentium M / Celeron M up to FSB 400/533 MHz or onboard
- System Chipset : Intel® 915GME + ICH6M-
- System Memory : 2 x DDR2 400/533 DIMM socket up to 2GB
- VGA : Chipset integrated, Intel® Extreme Graphic 2, dual display supports
- DVI : Chronitel CH7307C
- Ethernet : 2 x Realtek RTL8111CP Gigabit Ethernet controller
- Audio : HD Audio Realtek ALC-888

### ◆ I/O

- 1 x RS-232/422/485 port- 5 x RS-232 ports (2 connectors, 3 pin-headers)
- 6 x USB 2.0 ports (2 connectors, 4 pin-headers)
- 1 x IrDA- 4 x Digital in, 4 x digital out- 2 x Serial ATA ports- 1 x ATA100 channels
- 2 x PS/2 ports (KB/MS)

### ◆ Expansion Interface

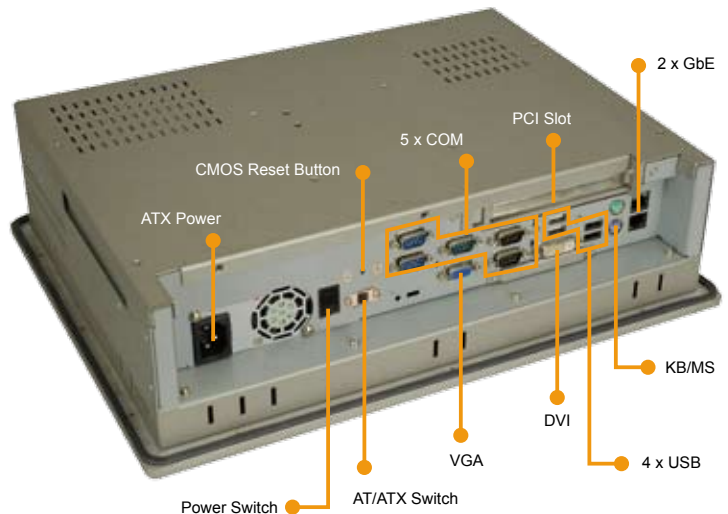
- 1 x PCI slot
- 1 x PCIe mini socket
- 1 x Compact Flash type II socket
- 1 x ExpressCard socket

### ◆ Drive Bay

- 1 x 2.5" SATA HDD bay
- 1 x slim type CD-ROM bay

## Features

1. 15" TFT LCD touch Panel PC
2. New upgrade model from PPC-5350/A300 model
3. Aluminum die-casting IP 65
4. Intel® Pentium® M / Celeron® M mobile CPU with 400/533 MHz FSB supported
5. Two DDR2 400/533 MHz SDRAM DIMM support up to 2GB
6. 2x SATA connector supported by ICH6M
7. Dual PCIe Gigabit Ethernet support
8. High speed express card and PCIe mini card support
9. Optional 802.11 b/g PCIe mini wireless kit



## New PPC-5350 features

Serial ATA is the next -generation internal storage interconnect, designed to replace parallel ATA technology. Serial ATA was introduced at **150Mbytes/sec**. New PPC-5350/A311 supports two native SATA ports without additional driver requirement which is highly increasing device compatibility in all different OS

### Native serial ATA interface support

**NEW**



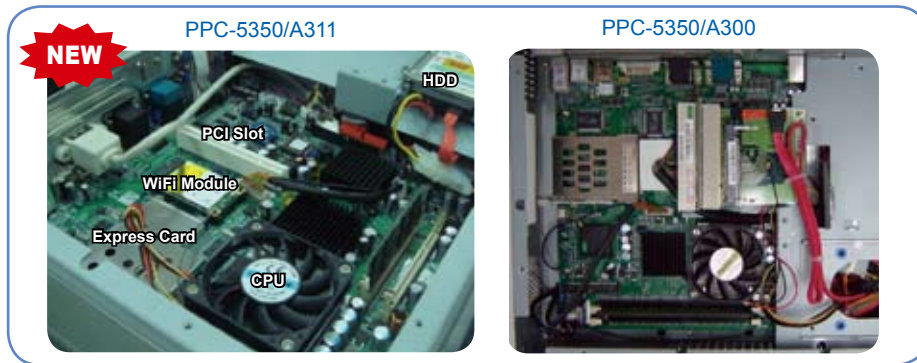
PPC-5350/A311



PPC-5350/A300

## New PPC-5350/A311 Placement

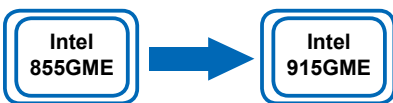
All new PPC-5350/A311 system board design with native SATA, PCIe support from chipset directly with no extra driver requirement. All internal connector placements are redesigned for easy installation and better internal air flow inside.



Model	PPC-5350GS/A311	PPC-5350GS/A300
LCD	Socket 479 with 400/533 MHz FSB Intel® Pentium® M Processor Intel® Celeron® M processor	Socket 479 400 MHz FSB Intel® Pentium® M Processor Intel® Celeron® M processor
NB	Mobile Intel® 915GME Express Chipset	Mobile Intel® 855GME Express Chipset
SB	ICH6M	ICH4
Display	CRT integrated in 915GME -- D-SUB CONNECTOR Chrontel CH7307C -- DVI CONNECTOR 915GME for LVDS Panel Interface	CRT integrated in 855GME -- D-SUB CONNECTOR Silicon image -- DVI CONNECTOR 855GME for LVDS Panel Interface:
Memory	Two DDR2 400/533MHz, Up to 2GB	Two DDR 266/333MHz, Up to 2GB
SSD	CF Type II	CF Type II
Audio	HD Audio Realtek ALC888	Realtek ALC655 with AC'97 codec
LAN	Dual PCIe Realtek RTL8111CP GbE chipsets	Dual Realtek RTL8110S GbE chipsets
COM	6 COM ports (5x RS-232, 1x RS-232/422/485)	6 COM ports (5x RS-232, 1x RS-232/422/485)
USB 2.0	8x USB 2.0 (4 by pin header, 2 for external, 2 for Express card and Mini PCIe)	6x USB 2.0
IDE	1 X IDE 40 pin connector. (From ICH6M) 1 x CF type II (From ICH6M)	2 X IDE 40 pin connector. 1 x CF type II
SATA	2 x SATA connector by ICH6M	2 x SATA connector by ALIM5283
FAN connector	4pin Smart fan	3pin fan
Expansion	ExpressCard x 1 PCI x1 PCIe mini card on board x1	PCMCIA X 1 PCI x1 mini PCI x1

Transition to New Generation

## Upgrading Performance



Featuring the Intel® Graphics Media Accelerator 900, the 915GM chipset in PPC-5350/A311 enables 2x the graphics performance of the previous generation of platforms based on the Intel® 855GME chipset in PPC-5350/A300.

### Extra CPU support list :

Package Type	Brand Name	CPU No.	Clock Speed	FSB (MHz)	L2	TDP	Chipset	
Socket 479	90nm	Pentium M	780	2.26G	533	2M	27W	915GME
			770	2.13G		2M	27W	
			760	2G	2M	27W		
			755	2G	2M	27W		
			750	1.86G	2M	27W		
			740	1.73G	2M	27W		
			730	1.6G	2M	27W		

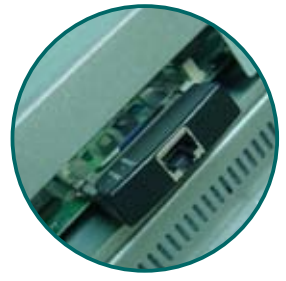
### Comparison Graphic Core

Chipset	915M	855GME
DirectX Support	9	7.1
OpenGL Support	1.4	1.3
Core Clock	333/320 MHz 200 MHz 166/160 MHz 133 MHz	250 MHz 200 MHz 166 MHz 133 MHz
Pixel Pipes	4	1
Display Support	Dual Independent	Dual Independent
Video Memory	DVMT 3.0	DVMT 2.0
Memory Bandwidth	8.5 GB/sec	2.6 GB/sec
Max. Resolution	QXGA 75 Hz 2048x1535	QXGA 60 Hz 2048x1535

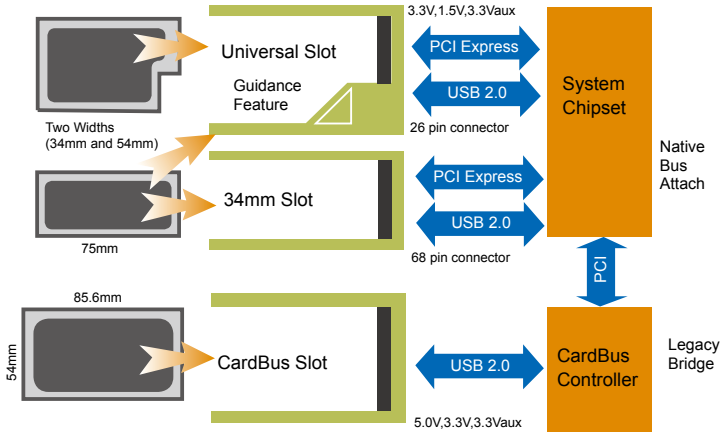
Features / Options	DDR	DDR2	DDR2 Advantages
Voltage	2.5V / 2.5V I/O	1.8V / 1.8V I/O	Reduces memory system power demand
Densities	128MB-1GB	256MB-4GB	High-density components enable large memory subsystems
Speed (data pin)	200, 266, 333, 400	400, 533, 667	Migration to higher speed IO
Read Latency	2, 2.5, 3 CLK	CL + AL / CL = (3,4,5)	Eliminating one-half clock helps speed internal DRAM logic and improves yields
Additive Latency	N/A	AL options (0,1,2,3,4)	Mainly used in Server applications to improve command bus efficiency
Write Latency	1 clock	read latency-1	improves command bus efficiency
Data Strobes	Single-ended	Differential or single-ended	Improves system timing margin by reducing strobe cross-talk

## New ExpressCard features

**ExpressCard** is a hardware standard replacing PC cards (also known as PCMCIA cards), both developed by the Personal Computer Memory Card International Association (PCMCIA). The host device supports both PCI Express and USB 2.0 connectivity through the Express Card slot, and each card uses whichever the designer feels most appropriate to the task. The cards are hot-pluggable.



### ExpressCard Technology vs. CardBus



ExpressCard Modules	Brand
FireWire	Abcom, Addonics, Belkin, SIIG
Memory Card Adapter	Atech Flash, Buffalo, Delkin, Griffin, Hagiwara
TV tuners	AverMedia, HP
WLAN/WWAN/Smart Card/SATA	Abcom, Addonics, Belkin, SIIG, Atech Flash, Buffalo, Delkin, Gemplus, Hagiwara, Novatel, Rotoc, SCM
Bluetooth device	Newton
Expansion chassis and docking stations	Belkin
Remote control devices	HP, Interlink

## Optional WiFi Connection



**PCI express mini WiFi Module**  
 \* Wireless IEEE 802.11 b/g Module  
 \* PCI-Express Mini-Card interface  
 \* 30 x 50 mm Dimension

#### Benefit

- Without cables installation
- Not hinders worker movement, without lessens man-hour productivity
- Without additional purchase of proprietary cables for specific devices

The PCI Express Mini Card replaces the Mini PCI card, which is a small internal card functionally identical to standard desktop computer PCI cards. Mini PCI cards are used mainly to add communications functions to portable computers that are built- or customized-to-order. The PCI Express Mini Card is half the size of the Mini PCI card.

#### Benefit

- Half the size of Mini-PCI
- Higher bandwidth interface
- Rigid mechanical spec.



**802.11 b/g Support**



	802.11a	802.11b	802.11g
Data Rate (Mbps)	54	11	54
Range (Radius indoor)	150feet	150feet	150feet

802.11b/g Wi-Fi, which gives you up to broadband-speed browsing and connectivity, compared to traditional wired LAN.

#### Benefit

- Simple configuration
- Without hinders worker movement
- Without lessens man-hour productivity
- Without additional purchase of proprietary cables for specific devices
- Without the barrier to space

## New PPC-5350/A311 Expansions

**Flexible extension interface: 1 x PCI slot, 1 x PCIe mini slot, 1 x ExpressCard**

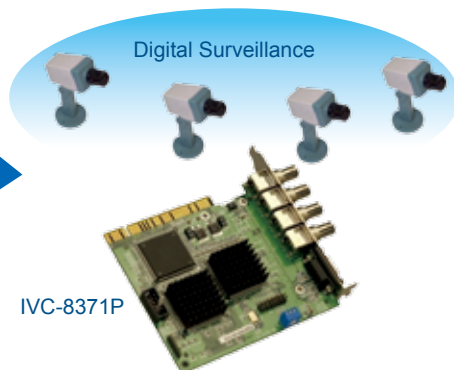
PPC-5350 provides most rich expansion interfaces, including one standard 32 bit PCI slot for various PCI add-on card, one PCIe mini card socket for small form factor extender like wireless module, and one express slot for expansion.



PCI



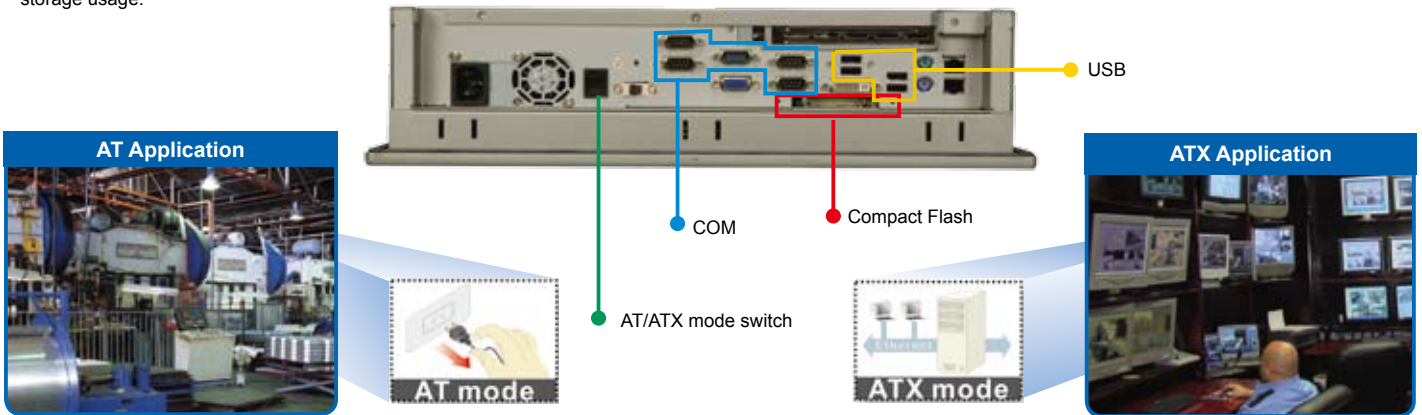
PPC-5350GS



IVC-8371P

## Rich I/O in PPC-5350/A311

**Fully I/O function support: 6 x COM (1 inside for Touch screen), 4 x USB, 1 x CF socket** PPC-5350 combines multiple traditional UART ports, 5 RS-232 ports and one RS-232/422/485 port, and 4 ports most popular USB 2.0 interface for IO extension. Additionally, PPC-5350 also support one Compact Flash type II socket for embedded storage usage.



AT power mode allows multiple panel PCs automatically start when the central power unit is connected.

The ATX power mode allows the panel PCs to be turned on/off remotely via network.

## Ordering Information

	Part No.	Description
AC Input	PPC-5350GS/A311-1GZ/4518AP/T-R/1GB-R10	15" 350 cd/m2 XGA panel PC with A311 system board, Intel® Celeron M 1GHz Zero Cache, 1GB RAM, Touch screen and ATX AC input power supply, ACE-4518AP
	PPC-5350GS/A311-CM370/4518AP/T-R/1GB-R10	15" 350 cd/m2 XGA panel PC with A311 system board, Intel® Celeron M 1.5GHz, 1GB RAM, Touch screen and ATX AC input power supply, ACE-4518AP
DC Input	PPC-5350GSD/A311-1GZ/815C/T-R/1GB-R10	15" 350 cd/m2 XGA panel PC with A311 system board, Intel® Celeron®M 1GHz Zero Cache, 1GB RAM, Touch screen and ATX DC input Power supply, ACE-815C(24VDC input. 100W), RoHS
	PPC-5350GSD/A311-CM370/815C/T-R/1GB-R10	15" 350 cd/m2 XGA panel PC with A311 system board, Intel® Celeron®M 1.5GHz, 1GB RAM, Touch screen and ATX DC input Power supply, ACE-815C (24VDC input. 100W) ,RoHS
	WL-KIT02-R10	802.11 b/g PCIe mini interface WiFi module with RF cable and antenna, RoHS

## Packing List

Part Number	Description	Amount
32000-000002-RS	Power Cord	1
	User Manual & Driver CD-ROM	1
19600-000078-RS	Screws Kits	1
19100-000039-RS	CPU Cooler ( Only for Socket-479 Model)	1
32000-069900-RS	HDD IDE Cable	1
WK-150MS-R10	Wall Mounting Kits	1
PK-150M	Panel Mounting Kits	1
	Touch Screen Driver CD / Touch Pen (For T-R model only)	1

## Options

RK-150MS-R10	Rack Mount kit
ARM-31-RS	LCD Monitor Arm
STAND-100-RS/STAND-210-RS	LCD Monitor Stand

## Dimensions (Unit: mm)

