IPPC-9151G
IPPC-9171G

15" XGA/17" SXGA LED backlight TFT LCD Intel® Core™ i7/i5/i3 Celeron® Mobile Processor Industrial Panel PC with 1 x PCIe Slot

NEW

Features

- Intel® Core™ i7/i5/i3 Celeron® µFC-PGA988 processor with Intel® QM67 chipset
- 15" XGA/17" SXGA LED backlight LCD with low power consumption
- Front access USB connector
- Supports 1 xPCIe x1 or 4 (Gen2) (PCI optional)
- Heavy-duty stainless steel chassis with aluminum front panel
- Strengthened glass protects the front panel from shock damage and s IP65 compliant
- Supports dual display of HDMI, LVDS, VGA
- Supports 1 x 2.5" SATA II or SATA III HDD and 1 x CFast
- Hard anodic coating to prevent panel abrasion and acid corrosion
- Supports embedded software APLs and Utilities

Introduction

IPPC-9151G/IPPC-9171G is a fully functional computer system with front USB access, with Intel® mobile Core i7-2710QE 2.1GHz/Core i5-2510E 2.5 GHz/Core i3-2330E 2.2 GHz /Celeron® B810 1.6 GHz processors up to 6 MB L3 cache and DDR3 SO-DIMM 1066/1333 up to 8 GB and a resolution up to 1024 x 768 to meet the demands of today's high-end industrial software. The IPPC-9151G/IPPC-9171G is a rugged unit with an aluminum panel,15"/17" TFT LCD with LED backlight, a stainless steel structure and a Pcie slot. The IPPC-9151G/9171G is rugged enough to handle the toughest industrial operating environments. With optional mounting accessories, from panels to racks, it can be mounted anywhere.

Specifications

General

BIOS	AMI EFI 64 Mbit SPI
Certification	BSMI, CCC, CE, FCC, UL
Cooling System	2 x 10.1 CFM fans w/50,000 hrs MTBF
Dimensions (W x H x D)	
IPPC-9151G:	428 x 310 x 96.5 mm (16.35" x 12.2" x 3.79")
IPPC-9171G:	482 x 354.8 x 98 mm (18.98" x 13.97" x 3.86")
Disk Drive Bay	Supports 1 x 2.5" SATA II or SATA III HDD
Enclosure	Stainless steel back case, 10 mm aluminum front panel
Mounting	Panel, rack
Power Input	100~240 V_{AC} @ 4A 50~60hz
Power Supply	180 W, MTBF: 100,000 hrs
Weight (Gross)	IPPC-9151G: 10.52 Kg (23.19 lbs) IPPC-9171G: 14 Kg (30.86 lbs)

System Hardware

CPU	Supports uFC-PGA988 Intel® mobile Core i7-2710QE 2.1 GHz/Core i5-2510E 2.5 GHz/Core i3-2330E 2.2 GHz/Celeron® B810 1. 6GHz processor
Chipset	Intel® 6 series chipset (QM67)
Audio Ports	Mic-in, Line-out, Line-in
Expansion Slots	Supports 1 x PCIe x1 or x4 (PCI optional)
PS/2	1 x keyboard and 1 x mouse
LAN	2 x 10/100/1000 Mbps
Memory	2 x 204 pin DDR3 1066/1333 SODIMM sockets supports up to 8GB (2 x 4GB)
Cfast	1 x CFast slot
I/Os	1 x VGA; 1 x HDMI; 5 x USB 2.0 (one at front); 4 xRS-232

LCD Display

LCD Display Type	IPPC-9151G: XGA TFT LCD with LED Backlight IPPC-9171G: SXGA TFT LCD with LED Backlight
Display Size	IPPC-9151G: 15"; IPPC-9171G: 17"
Max. Resolution	IPPC-9151G: 1024 x 768; IPPC-9171G: 1280 x 1024
Max. Colors	IPPC-9151G: 16.2M or 256K Color IPPC-9171G: 16.7M colors (RGB 6-bits +Hi-FRC data)
Viewing Angle (H/V°)	IPPC-9151G: 160/140; IPPC-9171G: 170/160
Luminance	IPPC-9151G: 350 cd/m²; IPPC-9171G: 380 cd/m²
Backlight Life	50,000hrs
Contrast Ratio	IPPC-9151G: 700:1; IPPC-9171G: 400:1

Touchscreen

Lifespan	36 million with a silicone rubber of R8 finger, writing rate is by 250g at 2 times/s
Light Transmission	> 80%
Type	Analog resistive (5-wire)

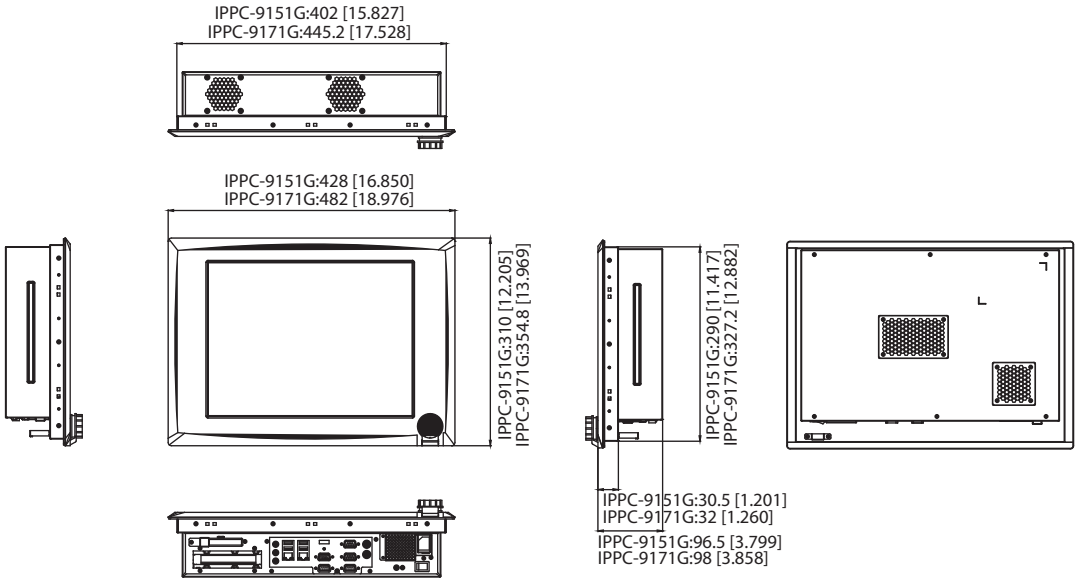
Environment

Humidity	5 ~ 85% @ 40°C (non-condensing)
Ingress Protection	Front panel: IP65
Operating Temperature	0 ~ 50°C (32 ~ 122°F)
Storage Temperature	-20 ~ 60°C (-4 ~ 140°F)
Vibration Protection	5 ~ 500 Hz, 1 G_{RMS} random vibration

All product specifications are subject to change without notice

Dimensions

Unit: mm



Panel Cut-out Dimensions: IPPC-9151G: 404 x 292mm (15.90" x 11.49")
IPPC-9171G: 447.5 x 329.5mm (17.618" x 12.972")

Ordering Information

- **IPPC-9151G-R1AE** 15" XGA Intel® Core™ i7/i5/i3 Celeron with TS
- **IPPC-9171G-R1AE** 17" SXGA Intel® Core™ i7/i5/i3 Celeron with TS

Accessories

- **IPPC-9151G-RMKE** (IPPC-9151G) Mounting Kit for standard 19" industrial rack
- **IPPC-9151G-EPRE** IPPC-9151G/9171G-R1AE PCI Riser card

Notes:

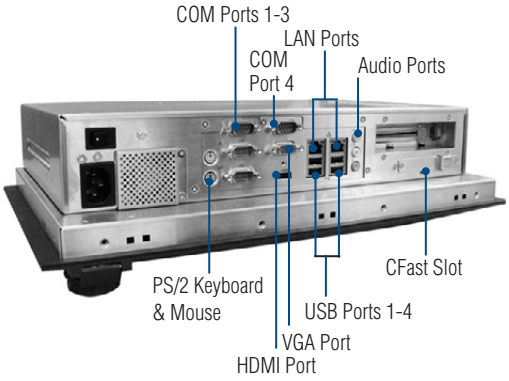
1. When used in a panel mounted environment, the panel's thickness can not be over 10mm.

1702002600	Power Cable US Plug 1.8 M
1702002605	Power Cable EU Plug 1.8 M
1702031801	Power Cable UK Plug 1.8 M
1702031836	Power Cable China/Australia Plug 1.8 M

2. Dual Display

Primary Display	LCD
Second Display	CRT or HDMI

I/O Overview



Value-Added Software Services

Software API: An interface that defines the ways by which an application program may request services from libraries and/or operating systems. Provides not only the underlying drivers required but also a rich set of user-friendly, intelligent and integrated interfaces, which speeds development, enhances security and offers add-on value for Advantech platforms. It plays the role of catalyst between developer and solution, and makes Advantech embedded platforms easier and simpler to adopt and operate with customer applications.

Software APIs

Control

GPIO

General Purpose Input/Output is a flexible parallel interface that allows a variety of custom connections. It allows users to monitor the level of signal input or set the output status to switch on/off a device. Our API also provides Programmable GPIO, which allows developers to dynamically set the GPIO input or output status.

Hardware Control

The Hardware Control API allows developers to set the PWM (Pulse Width Modulation) value to adjust fan speed or other devices; it can also be used to adjust the LCD brightness.

Monitor

Watchdog

A watchdog timer (WDT) is a device that performs a specific operation after a certain period of time if something goes wrong and the system does not recover on its own.
A watchdog timer can be programmed to perform a warm boot (restarting the system) after a certain number of seconds.

Hardware Monitor

The Hardware Monitor (HWM) API is a system health supervision API that inspects certain condition indexes, such as fan speed, temperature and voltage.

Display

Brightness Control

The Brightness Control API allows a developer to interface with an embedded device to easily control brightness.

Backlight

The Backlight API allows a developer to control the backlight (screen) on/off in an embedded device.

Power Saving

CPU Speed

Make use of Intel SpeedStep technology to reduce power power consumption. The system will automatically adjust the CPU Speed depending on system loading.

System Throttling

Refers to a series of methods for reducing power consumption in computers by lowering the clock frequency. These APIs allow the user to lower the clock from 87.5% to 12.5%.

CPU Compatibility

CPU Family	Speed	Spec.	Core Stepping	TDP	L3 cache	Advantech PN
Intel i7-2710QE	2.1 GHz	SR02T	D-2	45 W	6 MB	96MPI7M-2.1-6M9T
Intel i5-2510E	2.5 GHz	SR02U	D-2	35 W	3 MB	96MPI5M-2.5-3M9T
Intel i3-2330E	2.2 GHz	SR02V	D-2	35 W	3 MB	96MPI3M-2.2-3M9T
Intel Celeron B810	1.6 GHz	-	D-2	35 W	2 MB	96MPCM-1.6-2M9T

Memory Compatibility

Brand	Size	Speed	Type	ECC	Vendor PN	Memory	Advantech PN
Transcend	1GB	DDR3 1066	SODIMM DDR3	N	TS128MSK64V1U/TS2KSU28200-1S	SEC K4B1G0846D-HCF8 (128x8)	96SD3-1G1066NN-TR
	1GB	DDR3 1066	SODIMM DDR3	N	TS128MSK64V1U	SEC HCH9 K4B1G0846D (128x8)	96SD3-1G1066NN-TR
	2GB	DDR3 1066	SODIMM DDR3	N	TS256MSK64V1U/TS5KSU28400-1S	SEC K4B1G0846D-HCF8 (128x8)	96SD3-2G1066NN-TR
	2GB	DDR3 1066	SODIMM DDR3	N	TS128MSK64V1U	SEC HCH9 K4B1G0846D (128x8)	96SD3-2G1066NN-TR
	4GB	DDR3 1066	SODIMM DDR3	N	TS7KSN28420-1Y	HYNIX H5TQ2G83BFR (256x8)	96SD3-4G1066NN-TR
Apacer	1GB	DDR3 1066	SODIMM DDR3	N	78.02GC3.420	ELPIDA J1108BDBG-DJ-F (128x8)	96SD3-1G1066NN-AP
	2GB	DDR3 1066	SODIMM DDR3	N	78.A2GC3.421	ELPIDA J1108BABG-AEE (128x8)	96SD3-2G1066NN-AP
	4GB	DDR3 1066	SODIMM DDR3	N	78.B2GC8.AF1	HYNIX H5TQ2G83BFR (256x8)	96SD3-4G1066NN-AP
Kingston	2GB	DDR3 1066	SODIMM DDR3	N	KVR1066D3S7/2G	KVR1066D3S7/2G (256x8)	-
DSL	1GB	DDR3 1066	SODIMM DDR3	N	-	ELPIDA J1108BASEDJ-E (128x8)	-
	4GB	DDR3 1066	SODIMM DDR3	N	D3SH56082XH18AB	HYNIX H5TQ2G83BFR (256x8)	-
Micron	1GB	DDR3 1066	SODIMM DDR3	N	MT8JSF12864HZ-1G1F1	Micron 9FF27 D9KPT (128x8)	-
Samsung	2GB	DDR3 1066	SODIMM DDR3	N	M471B5673DH1-CF8	SEC 904 HCF8 K4B1G0846D (128x8)	-
G.SKILL	4GB	DDR3 1066	SODIMM DDR3	N	F3-8500CL7S-4GBSQ	HYNIX H5TQ2G83AFRG7C (256X8)	-
Transcend	1GB	DDR3 1333	SODIMM DDR3	N	TS128MSK64V3U	SEC 849 HCH9 K4B1G0846D (128x8)	-
	2GB	DDR3 1333	SODIMM DDR3	N	TS256MSK64V3U	SEC 904 HCF8 K4B1G0846D (128x8)	-
	4GB	DDR3 1333	SODIMM DDR3	N	TS512MSK64V3N	HYNIX H5TQ2G83BFR (256x8)	-
Apacer	1GB	DDR3 1333	SODIMM DDR3	N	78.02GC6.420	ELPIDA J1108BDBG-DJ-F (128x8)	96SD3-1G1333NN-AP
	2GB	DDR3 1333	SODIMM DDR3	N	78.A2GC6.421	ELPIDA J1108BDBG-DJ-F (128x8)	96SD3-2G1333NN-AP
	4GB	DDR3 1333	SODIMM DDR3	N	78.B2GC9.AF1	HYNIX H5TQ2G83BFR (256x8)	-
DSL	1GB	DDR3 1333	SODIMM DDR3	N	D3SE28081XH15AA	ELPIDA J1108BDSEDJ-F (128x8)	-
	2GB	DDR3 1333	SODIMM DDR3	N	D3SE28082XH15AA	ELPIDA J1108BDSEDJ- F (128x8)	-
	4GB	DDR3 1333	SODIMM DDR3	N	D3SH56082XH15AA	HYNIX H5TQ2G83BFR (256x8)	-
Kingston	1GB	DDR3 1333	SODIMM DDR3	N	KVR1333D3S9/1G	E LPIDA J1108BDBG-DJ-F (128x8)	-
	2GB	DDR3 1333	SODIMM DDR3	N	KVR1333D3S9/2G	E LPIDA J1108BDBG-DJ-F (128x8)	-
ATP	4GB	DDR3 1333	SODIMM DDR3	N	AW12M64F8BKH9S	SEC 019 HCH9 K4B2G0846C (256x8)	-