



## Main Features

- ♦ 4:3 19" SXGA fanless panel computer
- ♦ Powerful 4th generation Intel® Core™ i processor
- ♦ Two expansion slots for add-on PCI or/and PCIe cards
- ♦ Optional 3.5G/Wi-Fi module/2.5" HDD/2 x COM/GPIO/DIO/dimming control button
- ♦ Front accessible USB 2.0 for easy of field maintenance
- ♦ Inside USB 2.0 type A connector for license key
- ♦ Metal housing with robust aluminum IP66 compliant front bezel for harsh environment
- ♦ Two FBI ports support fieldbus module, JMobile HMI and CODESYS SoftLogic (optional)
- ♦ Wide range 12~30VDC power input

## Product Overview

IPPC A1970 series is a heavy industrial panel PC to support powerful 4th generation Intel® Core™ i processor, TFT LCD panel with LED backlight and user-friendly touch screen. It provides two expansion slots to support PROFINET, PROFIBUS, DeviceNet, EtherNet/IP and EtherCAT protocols. The IP66 rated heavy-duty aluminum front bezel and the vibration-resistant rugged chassis are specifically designed for outdoor and harsh industrial environments. IPPC A1970 series is ideal for use in oil and gas rig, wind farms, chemical factories, pharmaceutical factories, and hazardous working area.

## Specifications

### Panel

- ♦ LED size: 19", 4:3
- ♦ Resolution: SXGA 1280 x 1024
- ♦ Luminance: 350cd/m<sup>2</sup>
- ♦ Contrast ratio: 1000
- ♦ LCD color: 16.7M
- ♦ Viewing angle: 80(U), 80(D), 85(L), 85(R)
- ♦ Backlight: LED

### Touch

#### For IPPC A1970T Series

- ♦ 5-wire resistive (Flush panel type)
- ♦ Light transmission: 80±3%
- ♦ Interface: USB

#### For IPPC A1970P Series

- ♦ Ten points P-Cap (projected capacitive touch)
- ♦ Light transmission: 87±2%
- ♦ Interface: USB
- ♦ Anti-scratch surface: >= 6H hardness

### System

- ♦ CPU (optional): support 4th gen. Intel® Core™ i processor family, LGA1150 socket type
  - Core™ i5-4590T, Quad Core, 3.0GHz, 6M Cache
  - Core™ i3-4350T, Dual Core, 3.1GHz, 4M Cache
  - Pentium® G3320TE, Dual Core, 2.3GHz, 3M Cache
  - Celeron® G1820TE, Dual Core, 2.2GHz, 2M Cache
- ♦ BIOS: AMI BIOS

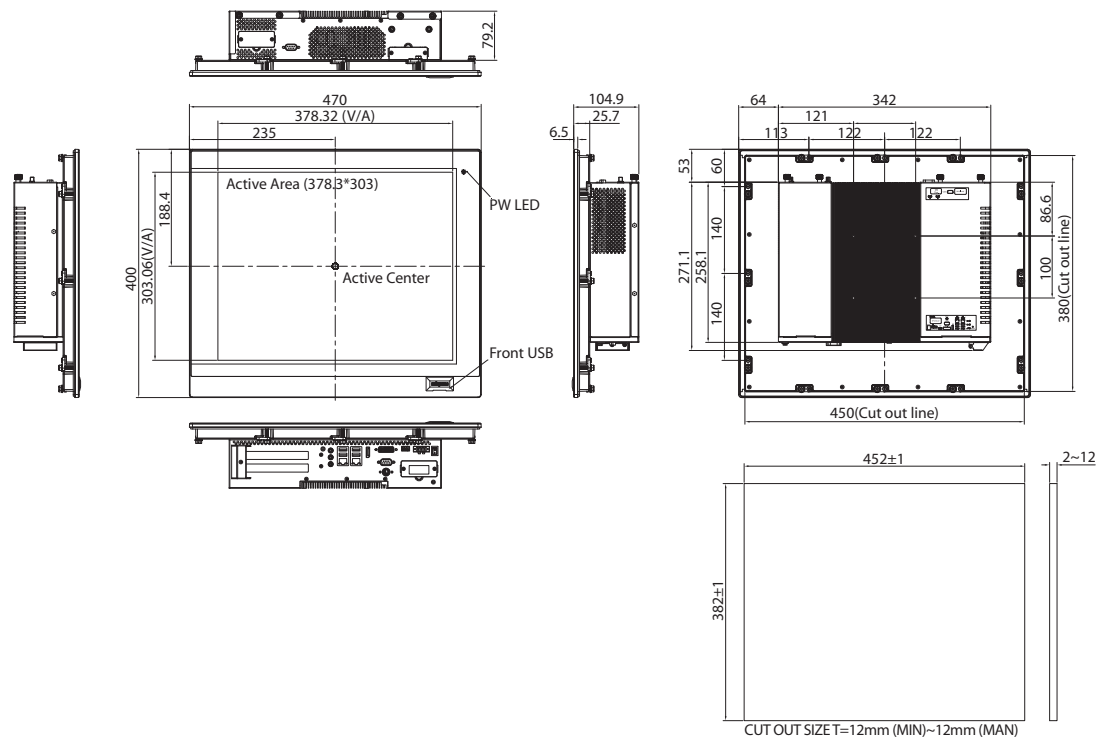
- ♦ System chipset: Intel® Q87 PCH
- ♦ System memory (optional): 2 x 204-pin DDR3/DDR3L SO-DIMM socket, support up to 16GB DDR3/DDR3L 1333/1600, non-ECC and unbuffered
- ♦ Storage device:
  - 1 x external locked CFast socket
  - 1 x mini-PCIe w/o SIM card holder slot to support mSATA storage
  - 1 x hard drive bay: support 1 x 2.5" SATA HDD/SSD (optional)
- ♦ Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (tolerance 15% under room temperature 25°C)
- ♦ H/W status monitor: monitoring system temperature and voltage
- ♦ Expansion:
  - 2 x mini-PCIe sockets (support optional Wi-Fi or 3.5G module/NVRAM/mSATA storage)
  - 2 x expansion slots for add-on PCI or/and PCIe cards
  - 1 x PCI and 1 x PCIe x4 slots
  - 2 x PCIe x4 slots (default)
  - 2 x PCI slots
  - 1 x PCIe x16 slot

### Rear I/O

#### For All

- ♦ 1 x PS2 for keyboard/mouse
- ♦ Ethernet: 2 x RJ45
- ♦ 2nd/3rd display: additional independent DisplayPort: 1 x DVI-I and 1 x DisplayPort
- ♦ Audio port: 1 x Line-out; 1 x Line-in; 1 x MIC-in
- ♦ USB: 4 x USB 3.0

## Dimension Drawing



- 3-pin remote power on/off switch connector
- Reset button
- COM#1: RS232/422/485 w/ 5V or 12V selection
- ATX power switch

### Top I/O

- COM#2 RS232/422/485 w/ 5V or 12V selection

### Audio

- HD codec: Realtek ALC886-GR
- Audio interface: Line-out/Line-in/MIC-in audio jack

### Ethernet

- LAN chip: dual Intel® I210IT gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

### Fieldbus

- Support up to two Fieldbus module

### Mechanical & Environment

- Color: pantone 432C\RAL 70 24 front bezel
- Enclosure: aluminum front bezel with SPPC nickel plated housing
- IP protection: IP66 front
- Mounting: panel/wall/stand/VESA 100mm x 100mm
- Power
  - Power input: 12~30 VDC
  - Power connector: 3-pin phoenix connector
- Vibration:
  - IEC 68 2-64 (w/ HDD)
  - 1Grms @ sine, 5~500Hz, 1hr/axis (HDD operating)
  - 2Grms @ sine, 5~500Hz, 1hr/axis (CFast operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (non-operating)
- Shock:
  - IEC 68 2-27
  - HDD: 20G @ wall mount, half sine, 11ms

- Operating temperature:
  - Resistive: -10°C to 50°C
  - P-Cap: -20°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
- Dimension: 470 x 400 x 104.9 mm
- Weight: (barebone)
  - IPPC A1970TE2-DC: 10.25kg
  - IPPC A1970PE2-DC: 10.34kg

### Certifications

- CE (including EN61000-6-2/EN61000-6-4)
- FCC Class A

### OS Support Lists

- Windows 7 32 bits and 64 bits
- Windows 8.1 32 bits and 64 bits

## Ordering Information

### System

- **IPPCA 1970TE2-DC (P/N: 10II0197001X0)**  
19" SXGA LED backlight fanless RTP touch panel PC, 4GB DDR3L, 2 x COM, DC power input, and optional fieldbus module
- **IPPCA 1970PE2-DC (P/N: 10II0197000X0)**  
19" SXGA LED backlight fanless P-CAP touch panel PC, 4GB DDR3L, 2 x COM, DC power input, and optional fieldbus module