IPPC A1970T/P

19" TFT SXGA 4:3 Heavy Industrial Panel PC
4th Generation Intel® Core™ i Processor







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
- 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

- LCD size: 19", 4:3
- Resolution: SXGA 1280 x 1024
- Luminance: 350cd/m²
- 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

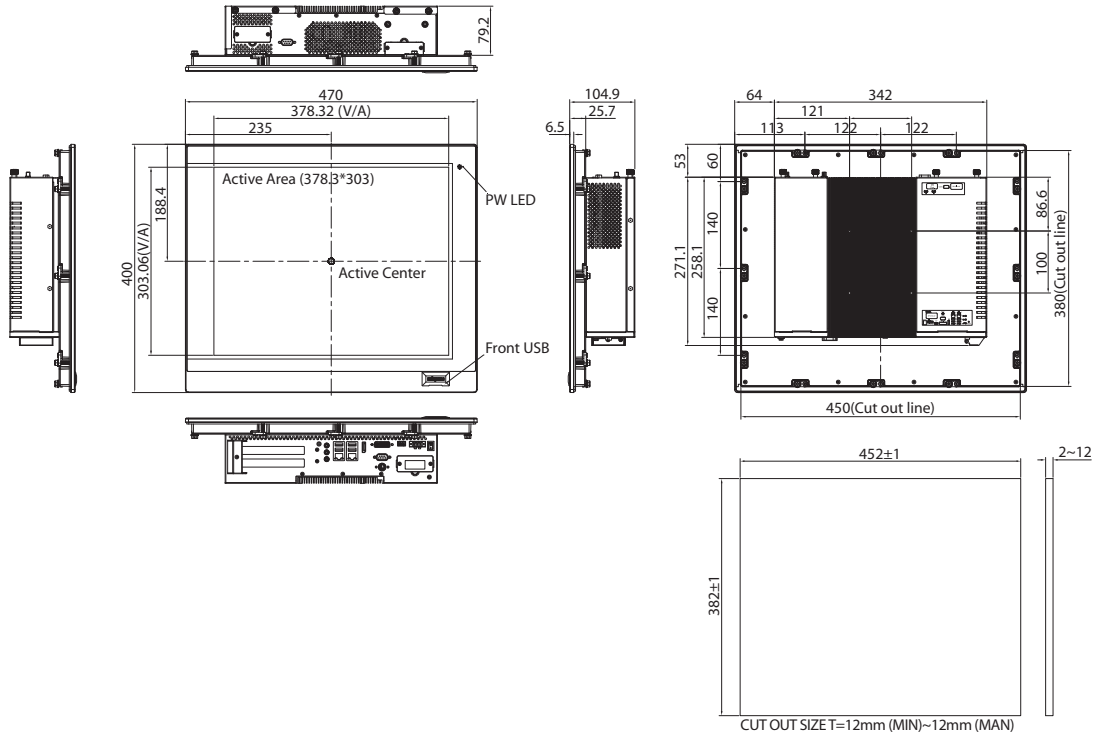
System

- CPU (optional): support 4th gen. Intel® Core™ i processor family, LGA1150 socket type
  - Core™ i5-4590T, Quad Core, 2.0GHz, 6M Cache (maximum frequency 3.0GHz if turbo boost enabled)
  - Core™ i5-4570TE, Dual Core, 2.7GHz, 4M Cache (maximum frequency 3.3GHz if turbo boost enabled)
  - Core™ i3-4350T, Dual Core, 3.1GHz, 4M Cache (no turbo boost)
  - Core™ i3-4340TE, Dual, Core, 2.6GHz, 4M Cache (no turbo boost)
  - Pentium® G3320TE, Dual Core, 2.3GHz, 3M Cache (no turbo boost)
  - Celeron® G1820TE, Dual Core, 2.2GHz, 2M Cache (no turbo boost)
- 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
- 1 x Front accessible USB 2.0

Rear I/O

- 1 x PS2 for keyboard/mouse
- Ethernet: 2 x RJ45
- 2nd/3rd display: additional independent DisplayPort: 1 x DVI-I (DVI-D + DVI-A) 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 Base-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
  (for IPPC A1970T series, limits to be at 90% RH at max 50°C)
- 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-bit and 64-bit
- Windows 8.1 32-bit and 64-bit

Ordering Information

System
- **IPPC A1970TE2-DC (P/N: 10II0197001X0)**
  19" SXGA LED backlight fanless RTP touch panel PC, 2 x COM, DC power input, and optional fieldbus module
- **IPPC A1970PE2-DC (P/N: 10II0197000X0)**
  19" SXGA LED backlight fanless P-CAP touch panel PC, 2 x COM, DC power input, and optional fieldbus modul

Optional
- **12V, 60W AC/DC power adapter w/o power cord (P/N: 7400120023X00)**
- **PROFINET, EtherNet/IP, EtherCAT, SERCOSIII master interface module: FBI90E-REM(P/N:10J50090E08X0)**
- **PROFINET master interface module: FBI90E-PNM (P/N: 10J50090E21X0)**
- **PROFIBUS master interface module: FBI90E-PBM (P/N:10J50090E09X0)**
- **DeviceNet master interface module: FBI90E-DNM (P/N:10J50090E10X0)**
- **EtherCAT master interface module: FBI90E-ECM (P/N:10J50090E19X0)**
- **EtherNet/IP master interface module: FBI90E-EPM (P/N:10J50090E20X0)**

We reserve the right to change specifications and product descriptions at any time without prior notice.