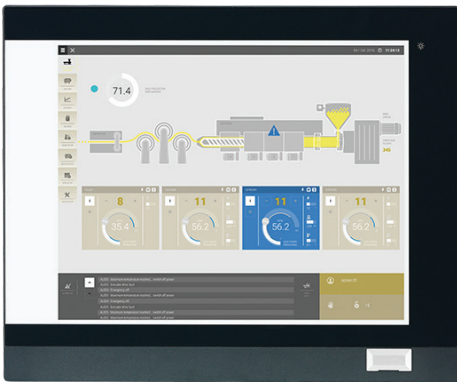


# eTOP-IPC1970T Tech-Note

IPC1970 series is a heavy industrial panel PC to support powerful 4th generation Intel® Core™ i processor, TFT LCD panel with LED backlight and userfriendly touch screen. The IP66 rated heavy-duty aluminum front bezel and the vibration-resistant rugged chassis are specifically designed for outdoor and harsh industrial environments. IPC1970 series is ideal for use in oil and gas rig, wind farms, chemical factories, pharmaceutical factories, and hazardous working area.



- Industrial Panel PC & Monitor
- 19" TFT SXGA 4:3 Heavy Industrial Panel PC
- 4th Generation Intel® Core™ i Processor
- 4:3 19" SXGA fanless panel computer
- Powerful 4th generation Intel® Core™ i processor
- Optional two expansion slots for add-on PCI or/and PCIe card
- 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 Windows
- Wide range 12~30VDC power input

## Specifications

### Panel

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

### 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 (optional)

- 1 x PCI and 1 x PCIe x4 slots

- 2 x PCIe x4 slots

- 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
- 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

- Two FBI Windows

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

Storage temperature: -20°C to 75°C

Operating humidity: 10%~90% relative humidity, non-condensing (for IPC1970T series, limits to be at 90% RH at max 50°C)

Dimension: 470 x 400 x 104.9 mm

Weight: 10.25kg (barebone)

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

