eTOP-IPC1670P Tech-Note

IPC1670P 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. 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. IPC1670P is ideal for use in oil and gas rig, wind farms, chemical factories, pharmaceutical factories, and hazardous working area.

- 16:9 WXGA, 1366 x 768 fanless panel computer
- Powerful 4th generation Intel® Core™ i processor
- Optional two expansion slots for add-on PCI or/and PCIe cards
- Optional 3.5G/Wi-Fi module/2.5" HDD
- 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

Specifications

Panel
LCD size: 15.6", 16:9
Resolution: WXGA, 1366 x 768
Luminance: 300cd/m²
Contrast ratio: 500
LCD color: 16.7M
Viewing angle: 80(U), 80(D), 85(L), 85(R)
Backlight: LED

Touch
Ten points P-Cap (projected capacitive touch)
Light transmission: 87%
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 frequency3.3GHz 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) (for DC
model only)
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

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 MIic-in
USB: 4 x USB3.0
3-pin remote power on/off switch connector
Reset button
COM#1: RS232/422/485 w/ 5V or 12V selection (for T/P-DC only)
ATX power switch (for T/P-DC only)

Top I/O
COM#2 RS232/422/485 w/ 5V or 12V selection (for T/P-DC only)

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: IPPC 1670P
- 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: -10°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
(for IPPC 1670P series, limits to be at 90% RH at max 50°C)
Dimension
417.4 x 312.4 x 105.95mm
Weight: (barebone): 9.18kg

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
Windows 10 32-bit and 64-bit