

# Panel PCs 12, 15, 17 e 19"

Panel PC LED Industrial Intel™ Atom® D2550

O Panel PC industrial é de fácil operação, instalação e o touchscreen é ideal para uso em Terminais e Interfaces Homem-Máquina. Com monitores LED de 12 a 19" no formato 4:3, equipados com o processador Intel® Atom™ D2550 1,86GHz, estes produtos são homologados para rodar os principais softwares de gerenciamento de processo (SCADA). Com frontal NEMA 4/12 podem ser instalados em painéis diretamente no ambiente do chão-de-fábrica.

## Especificações:

- Frontal IP65, NEMA 4/12;
- Monitor LED formato 4:3;
- Frontal em alumínio;
- Plataforma Intel™ Atom® D2550 1.86GHz;
- Memória RAM DDR3 SO-DIMM até 4GB;
- Saída VGA para 2º display;
- Touchscreen resistivo;
- Montagem em painel;
- 4x Digital Input (Source type), versão OPP-X31TNX;
- 4x Digital Output (Sink type) versão OPP-X31TNX;
- Audio interface: Line out/ Line in/ MIC-in Audio Jack;
- Alimentação 12 a 30VDC;
- Certificações: CE approval, FCC Class A.



Código	Tela
OPP-1230TNX	12"
OPP-1231TNX	12"
OPP-1530TNX	15"
OPP-1531TNX	15"
OPP-1730TNX	17"
OPP-1731TNX	17"
OPP-1930TNX	19"
OPP-1931TNX	19"

(\* ) As versões com final 31TNX dispõem adicionalmente de 4 Input e 4 Outputs isoladas, 2 Inputs e 2 Outputs (GPIO), 2 seriais RS 232 (totalizando 4 seriais)

# Panel PCs 12, 15, 17 e 19"

Panel PC LED Industrial Intel™ Atom® D2550

## Panel

- LED Size: 12.1", 4:3
- Resolution: SVGA 800x600
- Luminance: 450cd/m<sup>2</sup>
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing Angle: 65(U), 75(D), 80(L), 80(R)
- Backlight: LED

## Touch Screen

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

## System

- CPU: On-board Intel® Atom™ Dual Core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2x 204-pin DDR3 SO-DIMM socket, 1G DDR3 (Default), Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered
- Storage Device:

For APCC1231T only DIO w/ 2.5kv isolated:

### 4x Digital Input (Source type)

- Input Voltage (Dry Contact): Logic 0: Close to GND
- Logic 1: Open
- Input Voltage: Logic 0: 3V max
- Logic 1: +5V ~ +30V

### 4x Digital Output (Sink type)

- Output Voltage: 3.6V ~ 5V
- Sink current: 200 mA max. per channel

- GPIO: 2x digital in / 2x digital out
- COM #1: RS232/422/485 w/ 2.5kv isolated
- COM #2: RS232/422/485 w/ 2.5kv isolated
- COM #3: RS232 w/ RI or 5V selection
- COM #4: RS232 w/ RI or 12V selection

## Audio

- AC97 codec: Realtek ALC886-GR
- Audio interface: Line out/Line in/MIC-in Audio Jack

## Ethernet

- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

## Especificações Técnicas

### Panel PC 12"

### OPP-1230TNX

### OPP-1231TNX

- 1x external locked CFast socket
- 1x hard drive bay: optional 1x 2.5" SATA HDD or 1x SATA DOM
- 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: 2x Mini-PCIe sockets (support optional Wi-Fi or 3.5G module)
- Panel backlight control button: Increase brightness / decrease brightness / Backlight On/Off (For APCC1231T only)

## Rear I/O

- Ethernet: 2x RJ45
- 2nd display VGA port: 1x DB15
- Audio port: 1x Line out; 1x Line in; 1x MIC-in
- USB: 4x USB 2.0
- PS2 keyboard/ mouse
- Power switch / Reset button
- COM #1: RS232/422/485 w/RI or 5V selection
- COM #2: RS232/422/485 w/RI or 12V selection

## Mechanical & Environment

- Color: pantone black\RAL 15 00 front bezel w/ Pantone 400C\RAL 090 80 10 metal style membrane
- IP protection: IP65 front
- Mounting: panel/ wall/ stand/ VESA 100mm x 100mm
- Power input: 12V~ 30VDC
- Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- 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: -5°C to 60°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing  
Limits to be at 90% RH at max 50°C
- Dimension: 317 x 243 x 65.89mm
- Weight: 3.9 Kg

# Panel PCs 12, 15, 17 e 19"

Panel PC LED Industrial Intel™ Atom® D2550

## Panel

- LED Size: 15", 4:3
- Resolution: XGA 1024x768
- Luminance: 400cd/m<sup>2</sup>
- Contrast ratio: 700
- LCD color: 16.2M
- Viewing Angle: 60 (U), 80(D), 80(L), 80(R)
- Backlight: LED

## Touch Screen

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

## System

- CPU: On-board Intel® Atom™ Dual Core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2x 204-pin DDR3 SO-DIMM socket, 1G DDR3 (Default), Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered

For APPC 1531T only

- DIO w/ 2.5kv isolated:
  - 4x Digital Input (Source type)
    - Input Voltage (Dry Contact): Logic 0: Close to GND
    - Logic 1: Open
    - Input Voltage: Logic 0: 3V max
    - Logic 1: +5V ~ +30V
  - 4x Digital Output (Sink type)
    - Output Voltage: 3.6V ~ 5V
    - Sink current: 200 mA max. per channel
- GPIO: 2x digital in/ 2x digital out
- COM #1: RS232/422/485 w/ 2.5kv isolated
- COM #2: RS232/422/485 w/ 2.5kv isolated
- COM #3: RS232 w/ RI or 5V selection
- COM #4: RS232 w/ RI or 12V selection

## Audio

- AC97 codec: Realtek ALC886-GR
- Audio interface: Line out/ Line in/ MIC-in Audio Jack

## Ethernet

- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

## Especificações Técnicas

### Panel PC 15"

OPP-1530TNX

OPP-1531TNX

## Storage Device:

- 1x external locked CFast socket
- 1x hard drive bay: optional 1x 2.5" SATA HDD or 1x SATA DOM
- 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)
- HW status monitor: Monitoring system temperature, and voltage
- Expansion: 2x Mini-PCIe sockets (support optional Wi-Fi or 3.5G module)
- Panel backlight control button: Increase brightness / decrease brightness / Backlight On/Off (For APPC1531T only)

## Rear I/O

- Ethernet: 2x RJ45
- 2nd display VGA port: 1x DB15
- Audio port: 1x Line out; 1x Line in; 1x MIC-in
- USB: 4x USB 2.0
- PS2 keyboard/ mouse
- Power switch
- Reset button
- COM #1: RS232/422/485 w/RI or 5V selection
- COM #2: RS232/422/485 w/RI or 12V selection

## Mechanical & Environment

- Color: pantone black\RAL 15 00 front bezel w/ Pantone 400C\RAL 090 80 10 metal style membrane
- IP protection: IP65 front
- Mounting: panel/ wall/ stand/ VESA 100mm x 100mm
- Power input: 12V~30VDC
- Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- 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: -5°C to 60°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing  
Limits to be at 90% RH at max 50°C
- Dimension: 384.37 x 309.95 x 63.2 mm
- Weight: 5 Kg

# Panel PCs 12, 15, 17 e 19"

Panel PC LED Industrial Intel™ Atom® D2550

## Panel

- LED Size: 17", 4:3
- Resolution: SXGA 1280x1024
- Luminance: 380cd/m<sup>2</sup>
- Contrast ratio: 1000
- LCD color: 16.7M
- Viewing Angle: 80(U), 80(D), 85(L), 85(R)
- Backlight: CCFL

## Touch Screen

- 5-wire resistive (flush panel type)
- Light transmission: 81%
- Interface: USB

## System

- CPU: On-board Intel® Atom™ Dual Core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2x 204-pin DDR3 SO-DIMM socket, 1G DDR3 (Default),
- Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered

## Especificações Técnicas

### Panel PC 17"

### OPP-1730TNX

### OPP-1731TNX

- Storage Device:
  - 1x external locked CFast socket
  - 1x hard drive bay: optional 1x 2.5" SATA HDD or 1x SATA DOM
- 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: 2x Mini-PCIe sockets (support optional Wi-Fi or 3.5G module)
- Panel backlight control button: Increase brightness / decrease brightness / Backlight On/Off (For APPC1731T only)

## Rear I/O

- Ethernet: 2x RJ45
- 2nd display VGA port: 1x DB15
- Audio port: 1 x Line out; 1x Line in; 1 x MIC-in
- USB: 4x USB 2.0
- PS2 keyboard/ mouse
- Power switch
- Reset button
- COM #1: RS232/422/485 w/RI or 5V selection
- COM #2: RS232/422/485 w/RI or 12V selection

For APPC1731T only

- DIO w/ 2.5kv isolated:
  - 4x Digital Input (Source type)
    - Input Voltage (Dry Contact): Logic 0: Close to GND
    - Logic 1: Open
    - Input Voltage: Logic 0: 3V max
    - Logic 1: +5V ~ +30V
  - 4x Digital Output (Sink type)
    - Output Voltage: 3.6V ~ 5V
    - Sink current: 200 mA max. per channel
- GPIO: 2x digital in / 2x digital out
- COM #1: RS232/422/485 w/ 2.5kv isolated
- COM #2: RS232/422/485 w/ 2.5kv isolated
- COM #3: RS232 w/ RI or 5V selection
- COM #4: RS232 w/ RI or 12V selection

## Audio

- AC97 codec: Realtek ALC886-GR
- Audio interface: Line out/ Line in/ MIC-in Audio Jack

## Ethernet

- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

## Mechanical & Environment

- Color: pantone black\RAL 15 00 front bezel w/ Pantone 400\RAL 090 80 10 metal style membrane
- IP protection: IP65 front
- Mounting: panel/ wall/ stand/VESA 100mm x 100mm
- Power input: 12V~30VDC
- Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- 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: -5°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing  
Limits to be at 90% RH at max 50°C
- Dimension: 410.4 x 340.4 x 75.79 mm
- Weight: 6.6 Kg

# Panel PCs 12, 15, 17 e 19"

Panel PC LED Industrial Intel™ Atom® D2550

## Panel

- LED Size: 19", 4:3
- Resolution: SXGA 1280x1024
- 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 Screen

- 5-wire resistive (flush panel type)
- Light transmission: 81%
- Interface: USB

## System

- CPU: On-board Intel® Atom™ Dual Core processor D2550, 1.86GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System chipset: Intel® NM10 Express chipset
- System memory: 2x 204-pin DDR3 SO-DIMM socket, 1G DDR3 (Default), Support up to 4GB DDR3-800/1066, Non-ECC and Un-buffered
- COM #2: RS232/422/485 w/RI or 12V selection

For APPC1931T only

- DIO w/ 2.5kv isolated:
  - 4x Digital Input (Source type)
    - Input Voltage (Dry Contact): Logic 0: Close to GND
    - Logic 1: Open
    - Input Voltage: Logic 0: 3V max
    - Logic 1: +5V ~ +30V
  - 4x Digital Output (Sink type)
    - Output Voltage: 3.6V~5V
    - Sink current: 200 mA max. per channel
- GPIO: 2x digital in/ 2x digital out
- COM #1: RS232/422/485 w/ 2.5kv isolated
- COM #2: RS232/422/485 w/ 2.5kv isolated
- COM #3: RS232 w/ RI or 5V selection
- COM #4: RS232 w/ RI or 12V selection

## Audio

- AC97 codec: Realtek ALC886-GR
- Audio interface: Line out/ Line in/ MIC-in Audio Jack

## Ethernet

- LAN chip: dual Intel® 82574L Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

## Especificações Técnicas

### Panel PC 19"

OPP-1930TNX

OPP-1931TNX

## Storage Device:

- 1x external locked CFast socket
- 1x hard drive bay: optional 1x 2.5" SATA HDD or 1x SATA DOM
- 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: 2x Mini-PCIe sockets (support optional Wi-Fi or 3.5G module)
- Panel backlight control button: Increase brightness / decrease brightness / Backlight On/Off (For APPC1931T only)

## Rear I/O

- Ethernet: 2x RJ45
- 2nd display VGA port: 1x DB15
- Audio port: 1x Line out; 1x Line in; 1x MIC-in
- USB: 4x USB 2.0
- PS2 keyboard/ mouse
- Power switch
- Reset button
- COM #1: RS232/422/485 w/RI or 5V selection

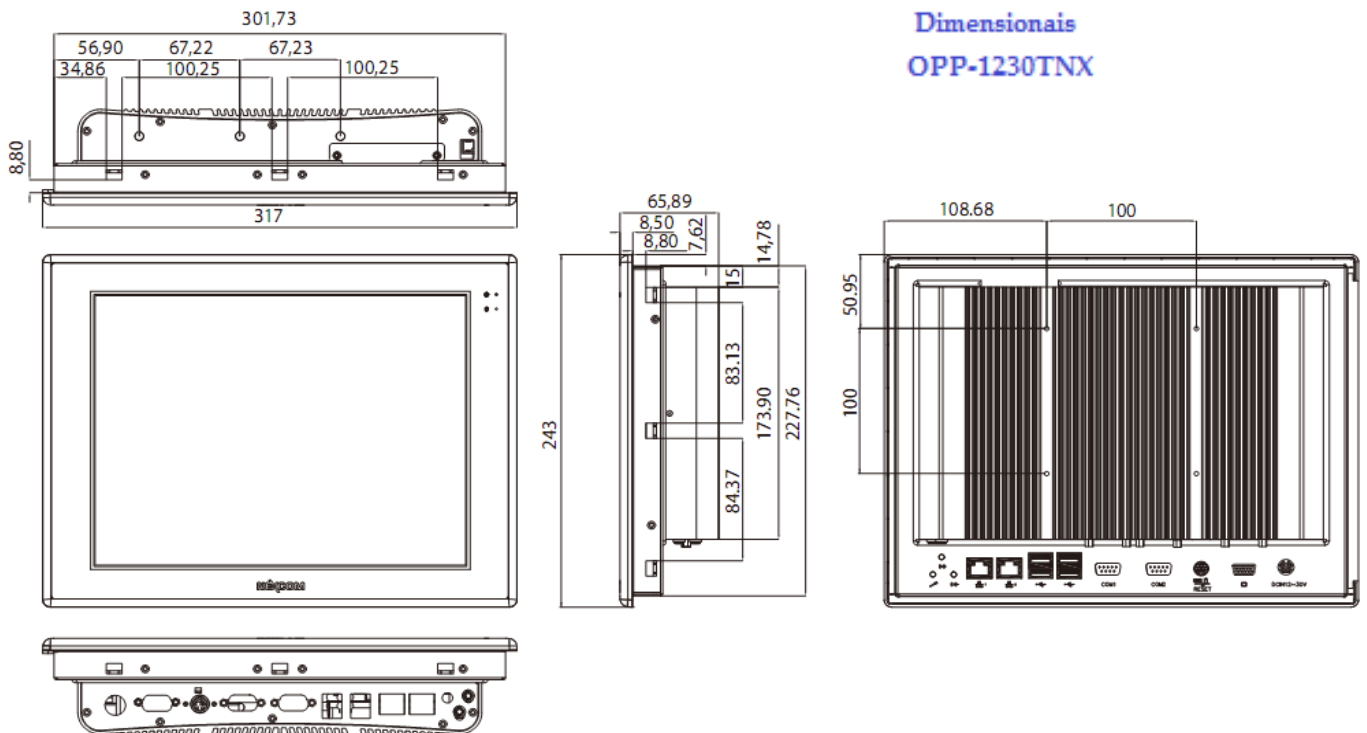
## Mechanical & Environment

- Color: pantone blackRAL 15 00 front bezel w/ Pantone 400RAL 090 80 10 metal style membrane
- IP protection: IP65 front
- Mounting: panel/ wall/ stand/ VESA 100mm x 100mm
- Power input: 12V~30VDC
- Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- 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: -5°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing  
Limits to be at 90% RH at max 50°C
- Dimension: 457.64 x 379.24 x 61.25 mm
- Weight: 6.5 Kg

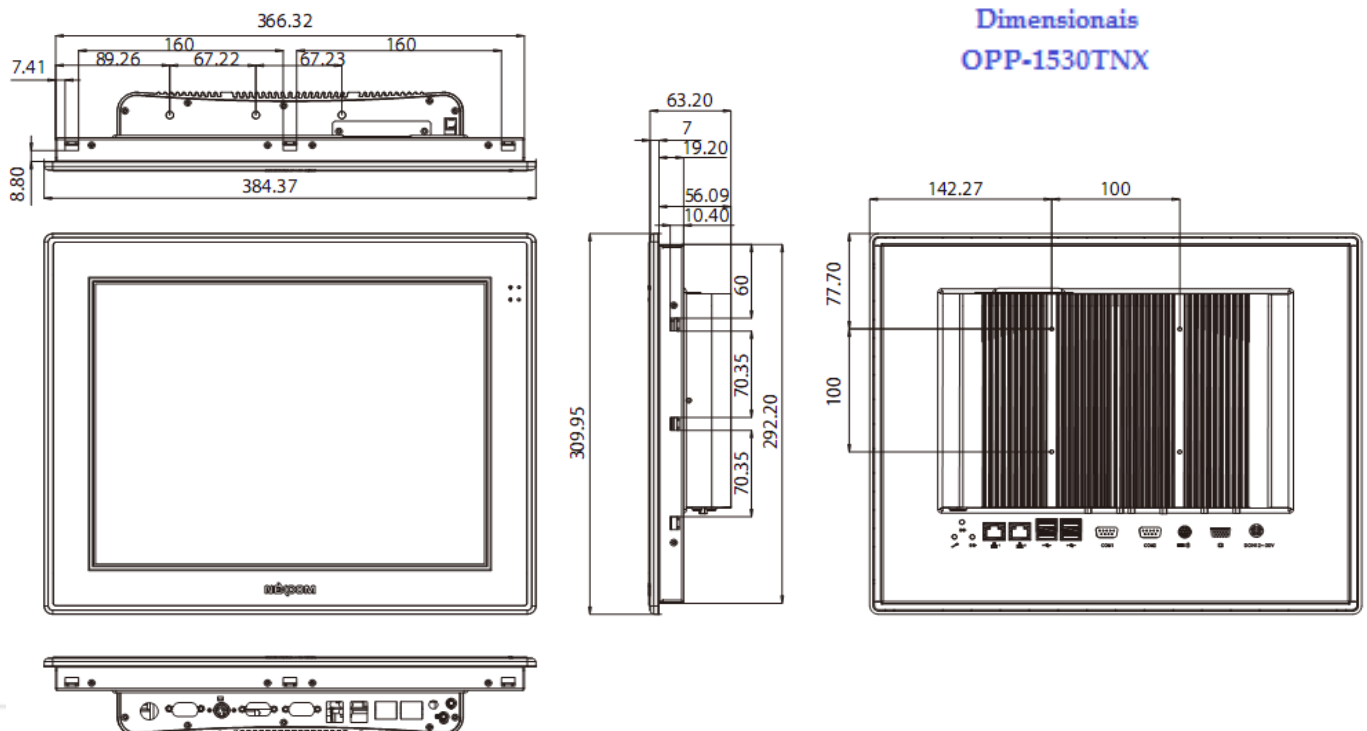
# Panel PCs 12, 15, 17 e 19"

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**Dimensionais**  
**OPP-1230TNX**



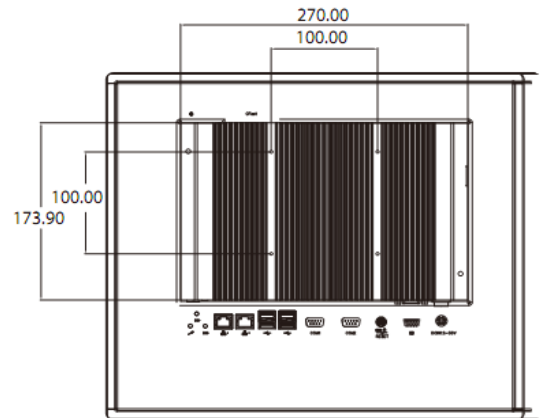
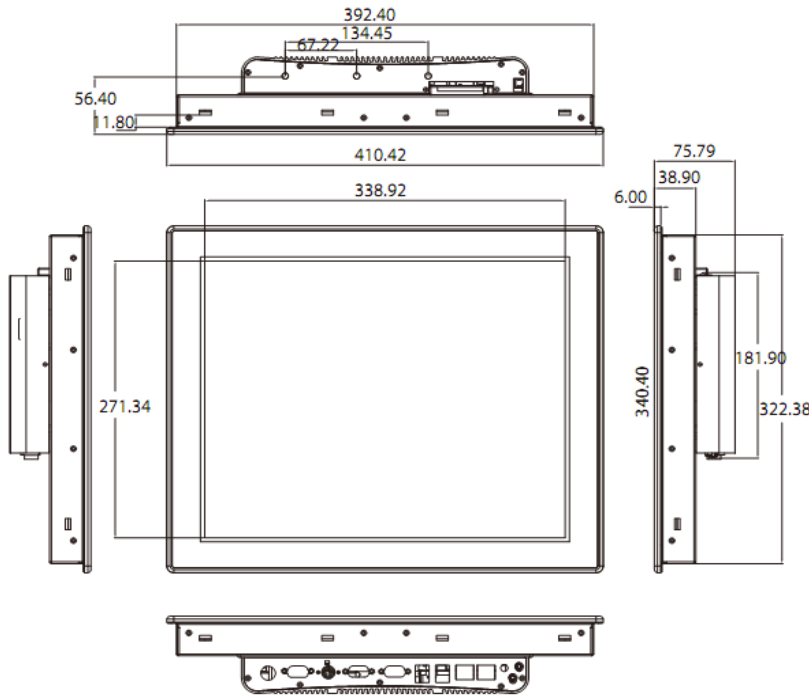
**Dimensionais**  
**OPP-1530TNX**



# Panel PCs 12, 15, 17 e 19"

Panel PC LED Industrial Intel™ Atom® D2550

Dimensionais  
OPP-1730TNX



Dimensionais  
OPP-1930TNX

