USER MANUAL

Thinvent® 15" Industrial Panel PC

PPC15-N5-4-m512-12_5-X-11O-KM



Edition November 2026

Serial number: _____

Thinvent Technologies Private Limited · www.thinvent.in

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1. BEFORE YOU START

The Thinvent 15 inch Industrial Panel PC is a computer and a 15 inch screen in one aluminium housing. It has no fan, it is cooled passively, and it is rated IP65. The screen is 1024 × 768 pixels, 350 nits, with a viewing angle of 178° horizontally and vertically. It suits the shop floor, control rooms and kiosks.

- Keep the vents clear, and keep the computer away from water and direct sunlight.
- Use only the power adapter that came with the panel PC.
- Save your work before you shut down. Unsaved work is lost.

Drivers, other files for this computer and the latest edition of this manual are on the Thinvent Support Downloads page: www.thinvent.in/support/downloads. Enter the serial number or the order number of your computer.

2. WHAT IS IN THE BOX

- Thinvent 15" Industrial Panel PC
- 12 V power adapter with a 2 metre cable

3. SPECIFICATIONS

Processing	
Generation	11th
Series	Celeron
Processor Brand	Intel
Processor Model	N5095A
Cores	4
Max Frequency	2.9 GHz
Cache	4 MB
Main Memory	4 GB
SSD Storage	512 GB
Display	
Screen Size	15 inch
Resolution	1024 × 768
Brightness	350 nits
Viewing Angle	Horizontal 178°, Vertical 178°
HDMI	1
VGA	1
Audio	
Speaker Out	1
Mic In	1
Connectivity	
USB 3.0	4
Networking	
Ethernet	1000 Mbps
Power	
DC Voltage	12 Volts
DC Current	5 Amps
Power Input	100~240 Volts AC, 50~60 Hz, 1.5 Amps maximum
Cable Length	2 Metre
Environmental	
Ingress Protection	IP65

Physical

Form Factor	Panel PC
Thermal Design	Fanless Passive Cooling
Dimensions	370mm × 290mm × 55mm
Housing Material	Aluminium
Net and Gross Weight	5.03kg, 5.61kg

Accessories

Keyboard and Mouse	1

Operating System

Operating System	Microsoft Windows 11 Professional

4. PORTS AND CONTROLS

Rear

From left to right, seen from the back:

#	Port	Description
1	DC-IN	DC power jack
2	HDMI	HDMI port with HDCP and multi-channel digital audio
3	VGA/COM	VGA port. It can also connect an RS-232 serial device.
4	USB 3.0 × 2	Two stacked USB 3.0 ports, compatible with USB 2.0 and 1.1
5	LAN	RJ45 Gigabit Ethernet port, 100 and 1000 Mbps
6	USB 3.0 × 2	Two stacked USB 3.0 ports, compatible with USB 2.0 and 1.1
7	MIC	Microphone jack (pink)
8	LINE-OUT	Audio output jack (light green) for headphones or a second audio channel

5. SETTING UP

Connect and switch on

1. Place the panel PC where you will use it.
2. Connect the cable of the power adapter to the DC power socket.
3. Plug the power adapter into a power outlet.
4. Connect the keyboard and mouse to the USB ports, and the network cable to the Ethernet port if you use a wired network.
5. Press the power button to switch on the panel PC.

6. USING THE COMPUTER

Shut down

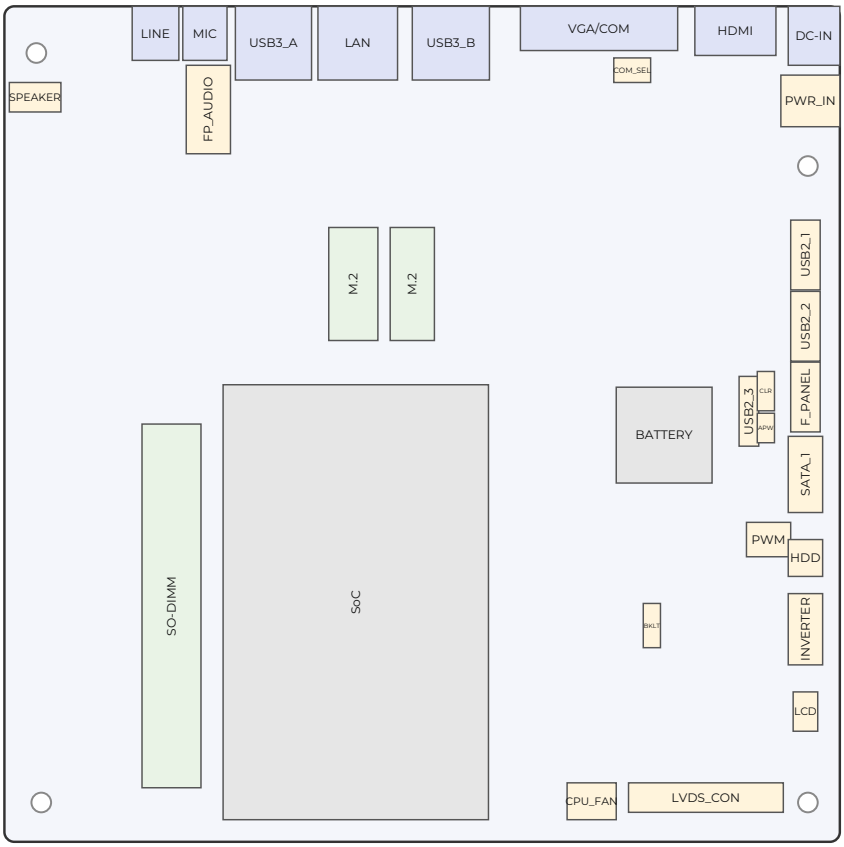
1. Save your work and close your programs.
2. Select Start, select the Power icon, then select Shut down.
3. If the panel PC does not respond, hold the power button until it switches off.

7. OPERATING SYSTEM

This computer comes with Microsoft Windows 11 Professional.

1. Switch the computer on. Windows starts its setup on the first start.
2. Pick your country, keyboard layout and network, then sign in or create a local account.
3. Install the drivers in the Drivers chapter of this manual if Device Manager lists a device without a driver.

8. INSIDE THE COMPUTER: THE MOTHERBOARD



170 mm × 170 mm

Component side of the board. Positions are approximate.

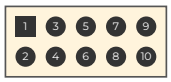
Label	Connector or component
LINE	LINE-OUT audio output jack (light green)
MIC	Microphone jack (pink)
USB3_A	Two stacked USB 3.0 ports
LAN	RJ45 Gigabit Ethernet port
USB3_B	Two stacked USB 3.0 ports
VGA/COM	VGA port that can also connect an RS-232 serial device
HDMI	HDMI port
DC-IN	DC power jack
FP_AUDIO	Front audio header for an HD audio module
SPEAKER	Speaker header, 4 pins
PWR_IN	4-pin power input socket
COM_SEL	COM1_9_SEL jumper beside the VGA/COM port. Contact Thinvent support before you change it.
M.2	M.2 slot. The board has one E key slot for a 2230 Wi-Fi module and one slot for a 2242, 2260 or 2280 SSD.
SoC	Intel Celeron N5095A processor under the heat sink
SO-DIMM	DDR4 SO-DIMM memory slot
BKLT	BKLT_CON backlight connector for an LVDS display
USB2_1	USB 2.0 header, 10 pins, 2 ports
USB2_2	USB 2.0 header, 10 pins, 2 ports
F_PANEL	Front panel header: power switch, reset switch, drive LED and power LED
USB2_3	Third USB 2.0 header, smaller than USB2_1 and USB2_2
CLR	CLR_CMOS jumper that clears the CMOS
APW	AUTO_PW jumper for auto power-on
BATTERY	Coin-cell battery holder
SATA_1	SATA 6 Gb/s data connector
PWM	EDP_PWM_SEL and BKLT_PWM_SEL jumpers. Contact Thinvent support before you change them.
HDD	HDD_PWR 4-pin power socket for a SATA drive

INVERTER	6-pin inverter socket for LVDS backlight power
LCD	LCD_VOL_SEL header, 6 pins, sets the LCD supply voltage
LVDS_CON	30-pin LVDS display connector

9. INTERNAL CONNECTORS AND HEADERS

FP_AUDIO: Front audio header

Connects an HD audio module from the front of the case.



Pin 1 is square.

Pin	Signal	Pin	Signal
1	MIC2_L	2	GND_AUD
3	MIC2_R	4	VCC3P3_S
5	LINE2_R	6	MIC2-JD
7	JACK	8	Key (no pin)
9	LINE2_L	10	LINE2-JD

SPEAKER: Speaker header

Audio output for a low-power speaker, 4 ohm 3 W recommended.



Pin 1 is square.

Pin	Signal	Pin	Signal
1	OUT_R-	2	OUT_R+
3	OUT_L+	4	OUT_L-

HDD_PWR: SATA drive power socket

Powers a SATA drive. The socket is keyed.

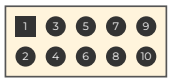


Pin 1 is square.

Pin	Signal	Pin	Signal
1	12VS	2	GND
3	GND	4	+5VS

USB2_1, USB2_2: USB 2.0 headers

Each 10-pin header connects 2 USB 2.0 ports through a USB bracket. Both headers have the same pin layout.

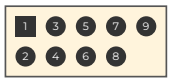


Pin 1 is square.

Pin	Signal	Pin	Signal
1	5V	2	5V
3	D-	4	D-
5	D+	6	D+
7	GND	8	GND
9	Key (no pin)	10	NC

F_PANEL: Front panel header (SYS_PANEL)

Connects the case power switch, reset switch, drive LED and power LED.

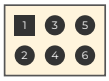


Pin 1 is square.

Pin	Signal	Pin	Signal
1	HDD LED	2	PWR LED
3	HDD LED	4	PWR LED
5	RESET	6	PWR_SW
7	RESET	8	PWR_SW
9	Not used		

LCD_VOL_SEL: LCD supply voltage header

Chooses the supply voltage of the LVDS display. Put a jumper on pins 1-2 for 3.3 V, 3-4 for 5 V or 5-6 for 12 V.

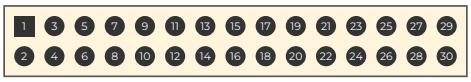


Pin 1 is square.

Pin	Signal	Pin	Signal
1	3.3V	2	LCD_PWR
3	5V	4	LCD_PWR
5	12V	6	LCD_PWR

LVDS_CON: 30-pin LVDS display connector

Connects a display cable through LVDS. Contact Thinvent support for the cable for your display.



Pin 1 is square.

Pin	Signal	Pin	Signal
1	LCD_VDD	2	LCD_VDD
3	LCD_VDD	4	LVDS_CABLE_DETECT#
5	GND	6	Not listed
7	A0N	8	A0P
9	A1N	10	A1P
11	A2N	12	A2P
13	GND	14	GND
15	CLK1N	16	CLK1P
17	A3N	18	A3P
19	A4N	20	A4P
21	A5N	22	A5P
23	A6N	24	A6P
25	GND	26	GND
27	CLK2N	28	CLK2P
29	A7N	30	A7P

INVERTER: Inverter socket

Connects a booster board that powers the backlight of an LVDS display.



Pin 1 is square.

Pin	Signal	Pin	Signal
1	INVER_PWR	2	INVER_PWR
3	BKLT_ON	4	BKLT_PWM
5	GND1	6	GND2

AUTO_PW: Auto power-on jumper

Works together with the BIOS to power the board on when power returns. See section 6.



Pin 1 is square.

Pin	Signal	Pin	Signal
1	GND	2	PWR_SW-
3	NC		

10. JUMPERS AND SWITCHES

AUTO_PW: Auto power-on

Setting	Function
1-2	Auto power-on
2-3	Normal start with the power button (default)

CLR_CMOS: Clear CMOS

Setting	Function
1-2	Normal (default)
2-3	Clear CMOS

LCD_VOL_SEL: LCD supply voltage

Setting	Function
1-2	3.3 V
3-4	5 V
5-6	12 V

11. BIOS SETUP

Press **Del** right after power-on to open BIOS setup. Open the Save & Exit menu to save the settings and restart.

Updating the BIOS

> Keep the power connected during a BIOS update. A power cut during the update leaves the board unable to start.

1. Contact Thinvent support for the BIOS package of this board. The package is a zip file with one BIOS folder.
2. Format a USB stick as FAT32.
3. Unzip the package and copy all of its files and folders to the root of the USB stick. The stick then holds the EFI folder, the file startup.nsh and the BIOS folder.
4. Plug the USB stick into the board and switch the board on. The board starts the UEFI shell from the stick.
5. startup.nsh finds the BIOS folder and runs BIOS.nsh, which writes the BIOS file. The screen shows Updating BIOS and then Update BIOS done. If the update does not start, change to the BIOS folder on the stick and run BIOS.nsh.
6. Do not interrupt the update.
7. When the update has finished, unplug the power adapter and clear the CMOS with the CLR_CMOS jumper (move it to 2-3, then back to 1-2).

8. Plug the power adapter in and switch the board on.
9. Press Del to open BIOS setup, load the optimized defaults, then save and exit.
10. To make the board power on by itself when power returns, use the Autopower BIOS package from Thinvent support. It works the same way. Move the AUTO_PW jumper to 1-2 as well.

12. DRIVERS

Install the drivers in this order. Each one is on the Support Downloads page.

#	Driver	Version
1	Intel Chipset INF Utility for Windows 10 and 11	10.1.20658.8883
2	Intel graphics driver (7th-10th Gen) for Windows 10 and 11	31.0.101.2145
3	Intel Ethernet driver (I219-V) for Windows 10 and 11	31.2.2
4	Intel HID Event Filter driver	604.10146.2708.64268
5	Intel Management Engine software and driver (CSME 15)	2052.15.0.2069

13. CARE

- Switch off the panel PC and unplug the power adapter before you clean it.
- Wipe the screen with a soft, lint-free cloth moistened with an alcohol-free glass cleaner.
- Do not spray liquid on the panel PC and do not use strong solvents.

14. TROUBLESHOOTING

The panel PC does not switch on

1. Check that the power adapter is plugged firmly into the panel PC and into the outlet.
2. Plug a different device into the same outlet to test it.
3. Disconnect every USB device and the network cable.
4. Hold the power button for 15 seconds until the panel PC switches off, then press it once to switch on.
5. If it still does not start, contact Thinvent Support with the serial number.

The screen is blank

1. Press the power button to switch on the panel PC.
2. Touch a key or move the mouse in case the panel PC is asleep.
3. If you use a second screen on the HDMI or VGA port, check that its cable is firmly connected.

The panel PC does not respond

1. Press Ctrl, Alt and Delete together, select Task Manager, select the program that does not respond, then select End task.
2. If that does not help, restart from the Power icon.
3. As a last step, hold the power button until the panel PC switches off, then switch it on again.

15. SUPPORT

Support Downloads	www.thinvent.in/support/downloads
Email	support@thinvent.in
Phone	+91-11-411-71494
WhatsApp	+91 9990344247

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