



ITPC-BXXX-CP2 (ARM)

Fanless Industrial Touch Panel PC

Technical Support Documentation

Document Version:	1.0
Date:	February 2026
Product:	ITPC-BXXX-CP2 (ARM)
Platform:	Rockchip RK3566: Quad-core Cortex-A55 @1.8GHz, Mali-G52 2EE GPU, 1 TOPS NPU
Classification:	Touch Panel PC

IWILL Technology | WhatsApp: +852 914 61951

United Kingdom
www.iwilltech.co.uk
support@iwilltech.co.uk

Poland
www.iwill.pl
wsparcie@iwill.pl

MENA Region
www.iwillmena.com
support@iwillmena.com

Denmark
www.iwill.dk
stotte@iwill.dk

Portugal & Spain
www.iwill.pt
apoyo@iwill.pt

Bulgaria
www.iwill.bg
support@iwill.bg

All product specifications are subject to change without notice.

Table of Contents

- 1. Product Overview**
- 2. Hardware Specifications**
- 3. I/O Interfaces & Connectivity**
- 4. Mechanical Dimensions**
- 5. Bootloader & Firmware Configuration**
- 6. Operating System Installation**
- 7. Touchscreen Configuration**
- 8. Expansion Module Installation**
- 9. Mounting Guide**
- 10. Maintenance & Troubleshooting**
- 11. Warranty & Support**
 - Appendix A — Order Information & Accessories

1. Product Overview

The ITPC-BXXX-CP2 (ARM) is a fanless industrial touch panel PC designed for demanding environments requiring reliable, maintenance-free operation. Built with an aluminum alloy chassis and IP65-rated front panel, it combines computing performance with industrial-grade durability.

1.1 Key Features

- Support Rockchip RK3566 / RK3568 / RK3588 CPU
- LCD Screen with Multi-point Capacitive Touch (Full Bonding Process)
- Built-in Mini PCIe Slot (Dual LAN version)
- 2 x COM, 4 x TTL/RS232 COM Optional, 1 x RS485
- Support Embedded, Desktop, Wall Mounted, VESA Standard
- Full Flat Front Panel, Front Panel IP65 Protection
- Support Android 11/12, Ubuntu, OpenHarmony

1.2 Target Applications

The ITPC-BXXX-CP2 (ARM) is suitable for Industrial Automation, MES, Logistics, Warehousing, E-Education.

1.3 Package Contents

Verify the following items are included in the package:

Item	Qty	Description
Power Supply	1	12V 3.3A / 12V 5A (optional)
Power Cable	1	CN, US, UK, EU etc.
WiFi Antenna	1	2.4G/5G
Embedded Mounting Clips	4	Installation clips and screws
Desktop/Wall Mount	1	Optional

NOTE: If any item is missing or damaged, contact IWILL Technology support immediately at support@iwilltech.co.uk.

2. Hardware Specifications

Complete technical specifications for the ITPC-BXXX-CP2 (ARM).

SYSTEM	
Model	ITPC-BXXX-CP2 (ARM)
Processor	Rockchip RK3566: Quad-core Cortex-A55 @1.8GHz, Mali-G52 2EE GPU, 1 TOPS NPU
Memory	Onboard 2GB / 4GB / 8GB
Storage	Onboard 16GB / 32GB / 64GB / 128GB
Expansion	1 x TF Card (Max 256GB), 1 x Mini PCIe (Dual LAN version)
Ethernet	1 x or 2 x 1000M Gigabit LAN (model dependent)
OS Support	Android 11/12, Ubuntu 18.04/20.04, OpenHarmony V3.2/V4.0
I/O PORTS	
Ports	Ports 1 x Power Button, 1 x DC-IN, 1 x HDMI USB 1 x USB 3.0, 1 x USB/OTG
POWER & OTHER	
Power Input	DC 9-15V Input
DISPLAY & TOUCH	
Brightness	500 cd/m ² 300 cd/m ² 350 cd/m ² 250 cd/m ² 300 cd/m ² 350 cd/m ² 250 cd/m ²
Resolution	1024x768 1920x1080 1024x768 1920x1080 1280x1024 1920x1080 1920x1080
Panel Specs Raw	Model B121-CP2 B133-CP2 B150-CP2 B156-CP2 B170-CP2 B185-CP2 B215-CP2 Size 12.1" 13.3" 15" 15.6" 17" 18.5" 21.5" Ratio 4:3 16:9 4:3 16:9 5:4 16:9 16:9 Resolution 1024x768 1920x1080 1024x768 1920x1080 1280x1024 1920x1080 1920x1080 Brightness 500 cd/m ² 300 cd/m ² 350 cd/m ² 250 cd/m ² 300 cd/m ² 350 cd/m ² 250 cd/m ² Touch Capacitive Capacitive Capacitive Capacitive Capacitive Capacitive Capacitive
ENVIRONMENT	
Operating Temp.	-10°C ~ +60°C (Surface airflow)
Humidity	5% ~ 95% (non-condensing)
Certifications	CE, CCC, FCC Class A, RoHS
MECHANICAL	
Weight	2.2 kg

3. I/O Interfaces & Connectivity

3.1 I/O

Connector	Description
Ports 1 x Power Butt	Ports 1 x Power Button, 1 x DC-IN, 1 x HDMI
USB 1 x USB 3.0, 1 x	USB 1 x USB 3.0, 1 x USB/OTG

Ethernet / LAN

- 1 x or 2 x 1000M Gigabit LAN (model dependent)

WARNING: Always power off the unit and disconnect all power sources before connecting or disconnecting any internal components.

4. Mechanical Dimensions

All dimensions are in millimeters (mm).

Parameter	Value
Weight	2.2 kg

NOTE: For detailed technical drawings with mounting hole positions, contact IWILL Technology at support@iwilltech.co.uk.

5. Bootloader & Firmware Configuration

The ITPC-BXXX-CP2 (ARM) is based on the Rockchip RK3566: Quad-core Cortex-A55 @1.8GHz, Mali-G52 2EE GPU, 1 TOPS NPU ARM platform and uses a vendor-supplied bootloader (typically U-Boot or Rockchip Miniloader). Unlike x86 systems, ARM platforms do not have a traditional BIOS/UEFI setup screen.

5.1 Boot Process

The ARM bootloader initialises the hardware (DDR memory, storage controllers, display), then hands control to the operating system kernel stored on eMMC or SD/TF card. The boot sequence is:

1. Power on — Rockchip BootROM executes from internal mask ROM.
2. First-stage loader (SPL / Miniloader) initialises DRAM.
3. U-Boot (or proprietary loader) loads the kernel and device tree.
4. Linux / Android kernel boots and mounts the root filesystem.

5.2 Firmware Update

Firmware updates on ARM platforms are performed by flashing a new system image. Common methods include:

- **Rockchip USB Download Mode:** Connect USB-C/OTG to a PC. Hold the RECOVERY button while powering on. Use **RKDevTool** (Windows) or **rkdeveloptool** (Linux) to flash the firmware image to eMMC.
- **SD/TF Card Update:** Write the update image to a TF card using **balenaEtcher** or **dd**. Insert the card and power on — the bootloader will detect and flash the image automatically (if supported by the firmware).
- **OTA Update (Android):** For Android-based deployments, over-the-air updates can be configured through the Android recovery system.

5.3 Serial Console Access

For low-level debugging, connect a USB-to-TTL serial adapter to the debug UART header (if exposed on the board). Default serial settings: **1500000 baud, 8N1** (Rockchip default) or **115200 baud, 8N1**. Use a terminal emulator such as PuTTY, minicom, or screen.

WARNING: Flashing incorrect firmware can brick the device. Always verify the firmware image matches your exact hardware revision before flashing.

NOTE: Contact IWILL Technology support for the latest firmware images and flashing instructions specific to your hardware revision.

6. Operating System Installation

6.1 Supported Operating Systems

OS	Notes
Android 11/12	Pre-installed or flashable via Rockchip tools. Recommended for kiosk and HMI applications.
Ubuntu 18.04	ARM64 (aarch64) build. Server or Desktop edition for Linux-based deployments.
HarmonyOS V3.2	Huawei OpenHarmony for IoT and industrial applications.

6.2 Flashing via Rockchip USB Tool

The ITPC-BXXX-CP2 (ARM) ARM platform stores its OS on internal eMMC storage. To install or replace the operating system:

1. Download the correct firmware image from {BRAND_NAME} for your hardware revision.
2. Install **RKDevTool** (Windows) or **rkdeveloptool** (Linux) on your PC.
3. Connect the device to your PC via the USB OTG port using a USB cable.
4. Enter Rockchip download mode: hold the **RECOVERY** button while powering on, or use the **adb reboot loader** command if Android is running.
5. In RKDevTool, load the firmware image and click **Upgrade** to flash.
6. Wait for the flashing process to complete (typically 2–5 minutes). The device will reboot automatically.

6.3 Installation via SD/TF Card

Some firmware images support SD card booting or SD-to-eMMC flashing:

1. Write the image to a TF/microSD card using **balenaEtcher**, **Win32DiskImager**, or **dd**.
2. Insert the TF card into the device's TF card slot.
3. Power on the device. If the image supports auto-flash, it will copy itself to eMMC and reboot.
4. For live-boot images, the device will boot directly from the TF card.

6.4 NPU & GPU Drivers

The RK3566 includes a **0.8 TOPS NPU** and a **Mali-G52 2EE GPU**. GPU/NPU drivers are included in the vendor-supplied firmware image.

NOTE: ARM firmware images are hardware-specific. Always verify the image matches your exact model and revision. Contact IWILL Technology for the correct firmware.

7. Touchscreen Configuration

7.1 Android Touch Calibration

The industrial touchscreen is pre-calibrated at the factory. On Android, the touch input is managed by the system input framework. If recalibration is needed:

1. Navigate to **Settings > Display > Touch Calibration** (if available).
2. Follow the on-screen crosshair targets to recalibrate.
3. For custom ROMs, use the **idc** (Input Device Configuration) files in **/system/usr/idc/**.
4. Adjust touch parameters such as **touch.deviceType = touchScreen** in the .idc file.

7.2 Linux Touch Configuration

On Ubuntu/Linux, the touchscreen is managed by the **hid-multitouch** kernel module. Use **xinput** to list and configure touch devices. For Wayland-based desktops, use **libinput** for touch configuration.

7.3 Multi-Touch Support

The capacitive touchscreen supports multi-touch gestures (pinch-to-zoom, two-finger scroll) natively in Android and in Linux with libinput.

8. Expansion Module Installation

8.1 Available Expansion Slots

- 1 x TF Card (Max 256GB), 1 x Mini PCIe (Dual LAN version)

8.2 Installation Procedure

1. Power off and disconnect all power sources.
2. Remove the chassis access panel screws.
3. Locate the target expansion slot on the motherboard.
4. Insert the module at a 30° angle and press down until it clicks into the retaining clip.
5. If applicable, connect antenna pigtail cables to the module's U.FL connectors.
6. Replace the access panel and secure with screws.

WARNING: Always use ESD protection (grounding strap) when handling internal expansion modules. Static discharge can permanently damage components.

8.3 Storage Installation

- Onboard 16GB / 32GB / 64GB / 128GB

9. Mounting Guide

9.1 Panel Cutout Preparation

Insert the unit into the panel cutout from the front. From the rear, attach the mounting clamps and tighten evenly to compress the gasket seal against the panel surface.

9.2 VESA / Desktop Mounting

The ITPC-BXXX-CP2 (ARM) supports VESA mounting (check rear panel for mounting hole pattern). Use M3 or M4 screws as appropriate — do not exceed the maximum thread depth.

WARNING: Ensure adequate ventilation around the unit. Do not block the heatsink fins or ventilation openings.

10. Maintenance & Troubleshooting

10.1 Routine Maintenance

- **Screen Cleaning:** Use a soft, lint-free cloth with isopropyl alcohol. Do not use abrasive cleaners.
- **Heatsink Cleaning:** Periodically blow out dust from the heatsink fins using compressed air.
- **Connector Inspection:** Check connectors for damage or corrosion, especially in harsh environments.
- **Firmware Updates:** Check with IWILL Technology for BIOS updates that may improve stability.

10.2 Troubleshooting Guide

Symptom	Possible Cause	Solution
No power / no LED	Power adapter disconnected or faulty	Verify DC input voltage. Try a different adapter.
No display output	Display cable loose or BIOS setting	Reseat display cable. Check BIOS display settings.
Touch not responding	Driver missing or USB disconnected	Install touch driver. Check internal USB connection.
System freezes	Memory or storage issue	Reseat RAM. Test with known-good SSD. Enable watchdog.
Overheating	Blocked heatsink or high ambient temp	Clean heatsink. Ensure adequate airflow.
Boot loop	Corrupted BIOS or OS	Reset BIOS to defaults (F9). Reinstall OS.

11. Warranty & Support

11.1 Warranty Coverage

The ITPC-BXXX-CP2 (ARM) is covered by a standard manufacturer warranty. The warranty covers defects in materials and workmanship under normal use conditions. It does not cover damage from misuse, unauthorized modifications, or exposure beyond rated specifications.

11.2 Technical Support

IWILL Technology provides worldwide technical support through regional offices:

Region	Website	Email
United Kingdom	www.iwilltech.co.uk	support@iwilltech.co.uk
MENA Region	www.iwillmena.com	support@iwillmena.com
Portugal & Spain	www.iwill.pt	apoyo@iwill.pt
Poland	www.iwill.pl	wsparcie@iwill.pl
Denmark	www.iwill.dk	stotte@iwill.dk
Bulgaria	www.iwill.bg	support@iwill.bg

WhatsApp: +852 914 61951

11.3 RMA Process

To initiate a return for repair or replacement, contact IWILL Technology support at the regional office nearest to your location with your product serial number and a description of the issue.

Appendix A — Order Information & Accessories

A.2 Included Accessories

Item	Qty	Specification
Power Supply	1	12V 3.3A / 12V 5A (optional)
Power Cable	1	CN, US, UK, EU etc.
WiFi Antenna	1	2.4G/5G
Embedded Mounting Clips	4	Installation clips and screws
Desktop/Wall Mount	1	Optional

IWILL Technology | WhatsApp: +852 914 61951

United Kingdom
www.iwilltech.co.uk
support@iwilltech.co.uk

Poland
www.iwill.pl
wsparcie@iwill.pl

MENA Region
www.iwillmena.com
support@iwillmena.com

Denmark
www.iwill.dk
stotte@iwill.dk

Portugal & Spain
www.iwill.pt
apoyo@iwill.pt

Bulgaria
www.iwill.bg
support@iwill.bg

All product specifications are subject to change without notice.