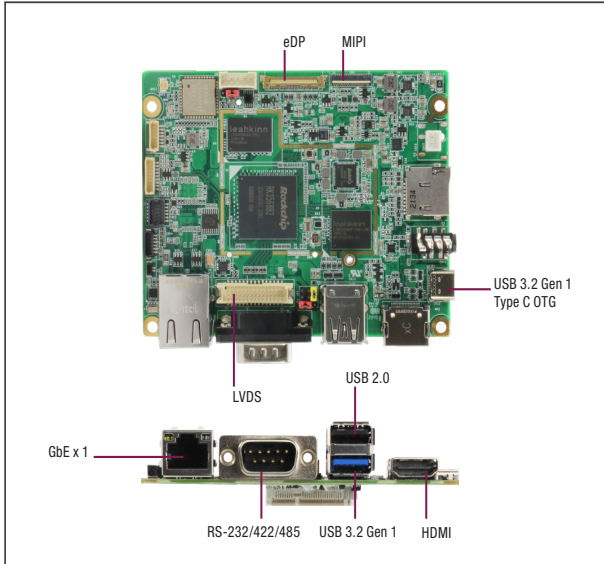


# RICO-3568

Pico-ITX Fanless Board with Rockchip RK3568 Quad-Core Arm® Cortex®-A55 Processor

RISC Boards



## Features

- Rockchip RK3568
- NPU: 0.8 TOPS
- Onboard LPDDR4 2GB/4GB/8GB (Optional)
- Onboard eMMC 16GB and Micro-SD Card Slot
- HDMI 2.0, eDP 1.3, LVDS, MIPI
- Wi-Fi 802.11 a/b/g/n/ac, BT V5.0
- GbE x 2 (One located in Daughter board)
- USB 3.2 Gen 1: Type-C OTG x 1, Type A x 1
- USB 2.0: Type-A x 1, Pin Header x 1
- RS-232/422/485 x 1, RS-232 x 1, Debug Port x 1
- 8-bit GPIO, I2C, mPCIe Slot x 1 (mSATA/USB)
- +12V DC Input
- 12V-24V Input, PoE, CAN Bus x 1, USB 2.0 x 2 via Daughter board, PER-T650
- OS Support: Android™ 12/Debian® 10
- Small Board Size: 100mm x 80mm

## Specifications

System	
Form Factor	Pico-ITX Plus (100mm x 80mm)
CPU	Rockchip RK3568 Quad-Core Arm® Cortex®-A55 Processor NPU: 0.8 TOPS
GPU	Arm® Mali™-G52 GPU
Graphics	Video Encode: 1080P @60fps H.264/H.265 Video Decode: 4K@60fps H.264/H.265/AV1 4KP60 AVS2/VP9 1080P MPEG1/VP8
Memory Capacity	Onboard LPDDR4 2GB/4GB/8GB (Optional)
Storage/SSD	16GB eMMC and Micro-SD card Full-size mini-PCIe slot x 1 (mSATA / USB)
Operating System	Android™ 12 Debian® 10
Kernel	Kernel 4.19.219 (Android 12)
Watchdog Timer	Integrated
Power Requirement	+12V DC input AT: Default, ATX: Optional
Power Consumption (Typical)	0.96A @12V, full load, Quad-core CPU
Dimension	3.94" x 3.15" (100mm x 80mm)
Gross Weight	0.44 lb (0.2 Kg)
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C): Normal -4°F ~ 140°F (-20°C ~ 60°C): Optional
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
MTBF (Hours)	100,000
Certification	CE/FCC
Display	
HDMI	HDMI 2.0, up to 4K x 2K @60Hz
eDP	eDP 1.3, up to 2560 x 1600 @60Hz
LVDS	18/24-bit LVDS, up to 1280 x 800 @60Hz JP2, 3.3V/5V: LVDS Power Selection JP3, 5V/12V: Backlight Power Selection LCD Backlight connector
MIPI	Up to 2048 x 1536 @60Hz for Dual-MIPI Mode
RF Function	
WiFi	Onboard 802.11 a/b/g/n/ac ANT1 for Antenna
BT	Bluetooth V5.0 + EDR



I/O	
Ethernet	GbE x 2 RJ-45 x 2 (Onboard x 1 + T650 Daughter Board RJ-45 Port or T650 Wide-Voltage Board RJ-45 Port)
USB Port	USB 3.2 Gen 1 OTG (Type-C) x 1 USB 3.2 Gen 1 x 1 USB 2.0 x 2 (Type-A x 1, Pin Header with Integrated USB, I2C, 5V x 1)
Serial Port	RS-232/422/485 x 1 JP1, 5V/12V: RS-232/422/485 Voltage Output Selection RS-232 / Debug port 7-pin wafer x 1 CN3: UART (Tx/Rx only), I2C, USB, Others
Audio	Microphone/ Earphone (3.5mm)
GPIO	GPIO x 8, 2x6 Wafer x 1
Expansion Slot	Full-size mini-PCIe slot x 1 (mSATA / USB) Connect to Daughter board: 40-pin FPC connector x 1
SIM Slot	Nano-SIM, Push-Push type with tray
SD Socket	Micro-SD card, Push-Push type
Camera	—

## Packing List

- RICO-3568
- MB Power Cable
- RTC Battery

\*Please note that the RICO-3568 heat sink is not included by default and must be purchased separately.

## Optional Accessories

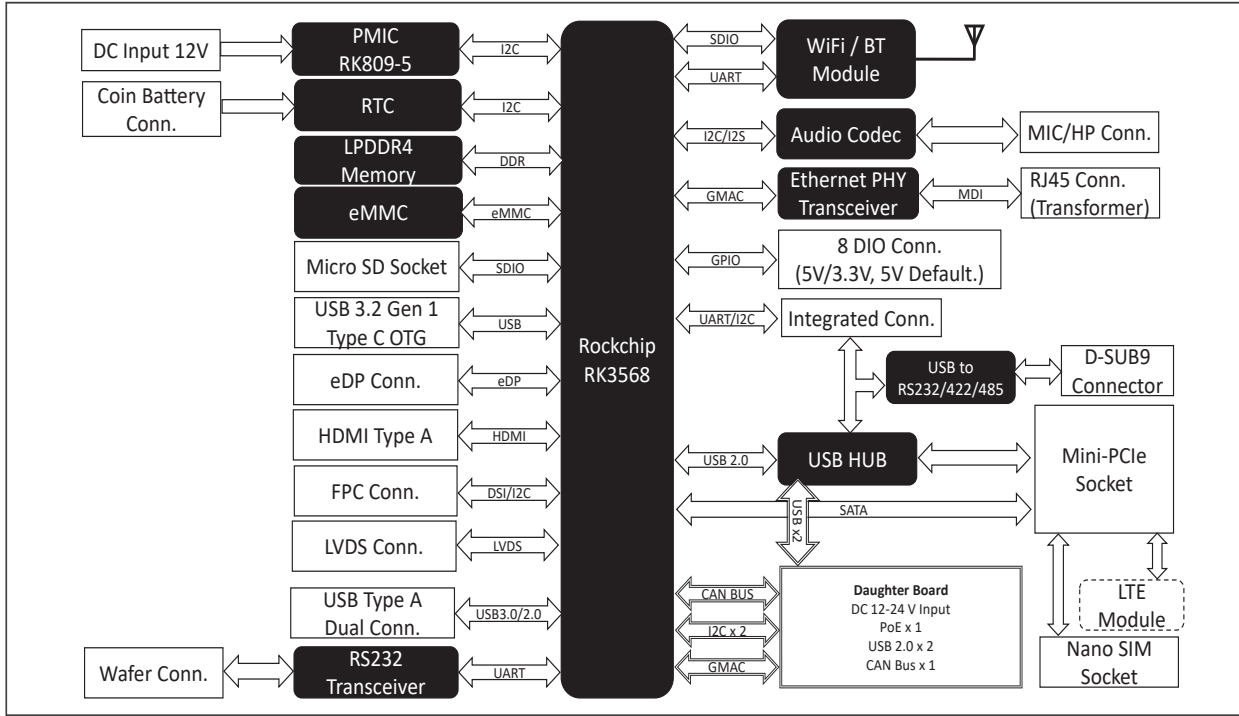
Part Number	Description	Qty.
PER-T650-A10	12-24V Input, PoE x 1, CAN Bus x 1, USB 2.0 x 2	1
125530060Y	12V/60W Power Adaptor	1
RICO-3568-HS-001	Heat-sink for RICO-3568.Low Fins	1
RICO-3568-HS-002	Heat-sink for RICO-3568.High Fins	1
1702031802	Power Cord for US	1
1702031803	Power Cord for EU	1
170203180J	Power Cord for UK	1
170203180E	Power Cord for Japan	1

# RICO-3568

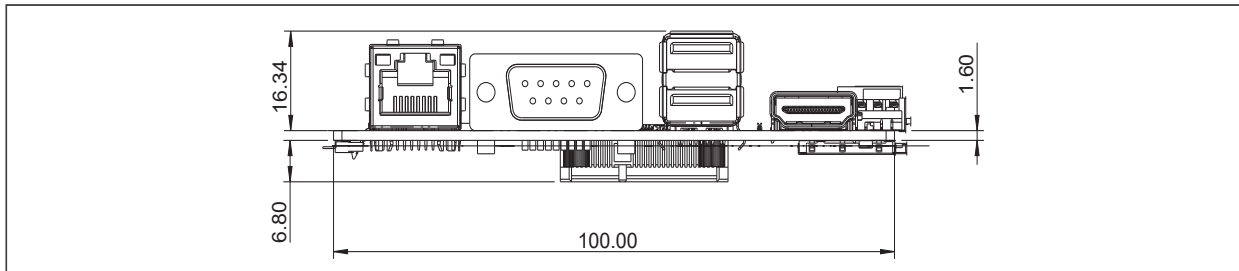
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RISC Boards

## Block Diagram Unit: mm



## Dimension Unit: mm



## Ordering Information

Part Number	CPU	OS	RAM	Storage	LAN	RS-232	USB	Display	WiFi & BT	3G/LTE Slot
RICO-3568-A10-0001	Quad-Core Arm® Cortex®-A55 Processor	Android™ 12	2GB LPDDR4	16GB eMMC	GbE x 1	1 (RS-232) 1 (RS-232/422/485)	4	1 (HDMI) 1 (eDP) 1 (LVDS) 1 (MIPI)	802.11 a/b/g/n/ac BT 5.0 + EDR	1 (mPCIe Slot)
RICO-3568-A10-0002	Quad-Core Arm® Cortex®-A55 Processor	Android™ 12	4GB LPDDR4	16GB eMMC	GbE x 1	1 (RS-232) 1 (RS-232/422/485)	4	1 (HDMI) 1 (eDP) 1 (LVDS) 1 (MIPI)	802.11 a/b/g/n/ac BT 5.0 + EDR	1 (mPCIe Slot)

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