POLYHEX

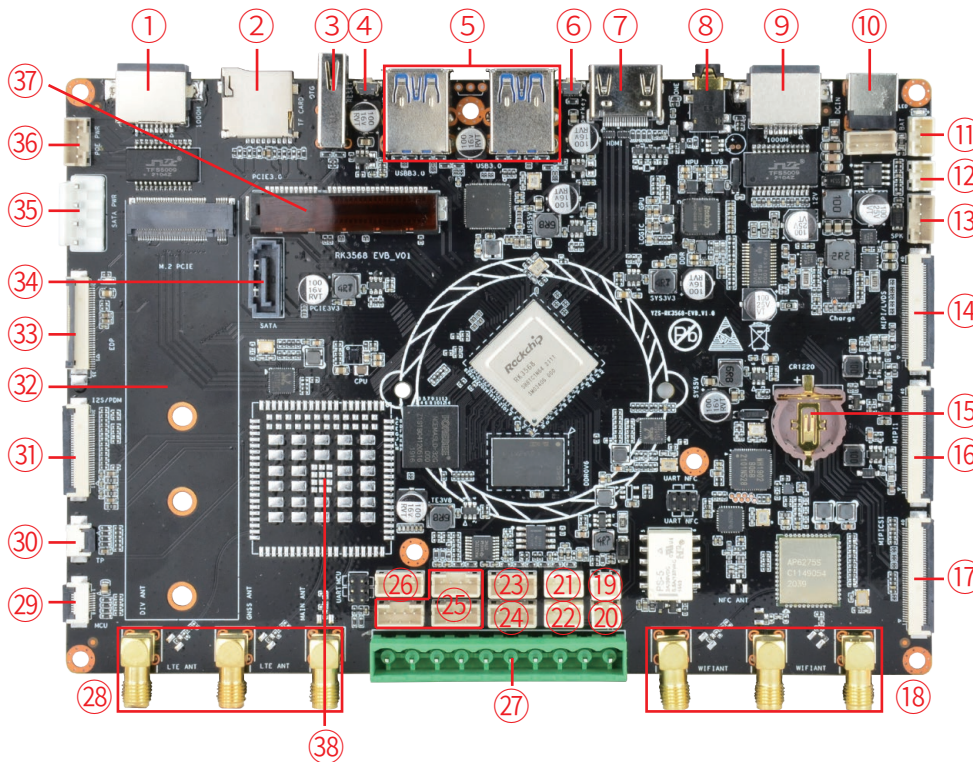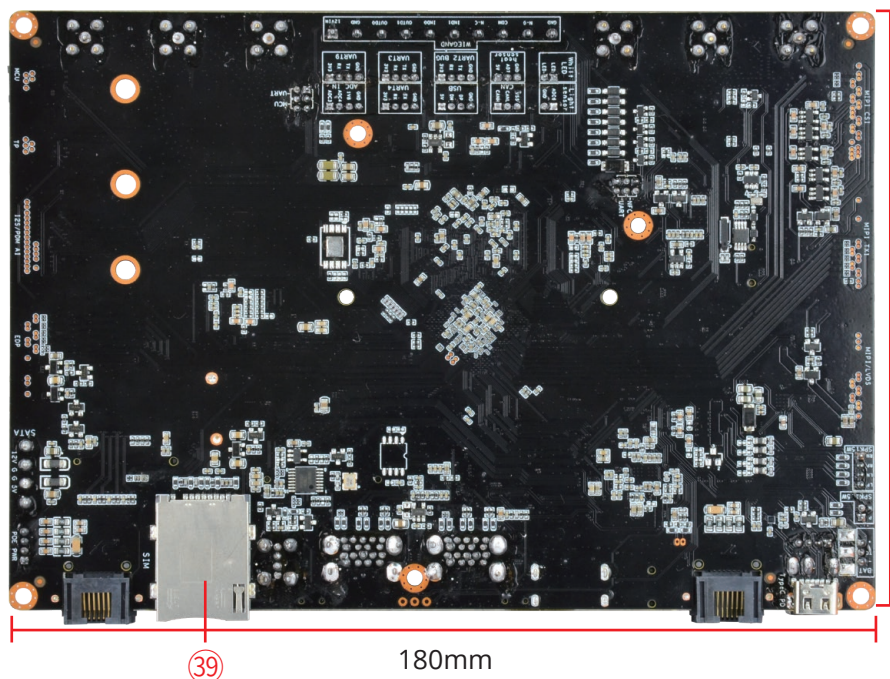# Embedded Motherboard Based on Rockchip RK3568 Cortex-A55 Quad Core CPU

① 1000M LAN
② TF Slot
③ USB OTG
④ Reset + Update
⑤ 4 x USB 3.0
⑥ Power
⑦ HDMI
⑧ Earphone
⑨ 1000M LAN
⑩ DC IN 12-38V
⑪ Battery Jack
⑫ 1.3W Speaker
⑬ 15W Speaker
⑭ MIPI/LVDS
⑮ Button Cell Slot
⑯ MIPI DSI
⑰ 2 x MIPI CSI
⑱ WIFI/BT Antenna
⑲ Light Sensor
⑳ Fill Light
㉑ CAN
㉒ Thermal Sensor
㉓ USB
㉔ UART Debug
㉕ UART
㉖ ADC
㉗ Access Control Wiegand Relay
㉘ 4G LTE Antenna
㉙ MCU UART
㉚ TP
㉛ I2S/PDM Mic Array
㉜ M.2 PCIe 2.0
㉝ eDP
㉞ SATA
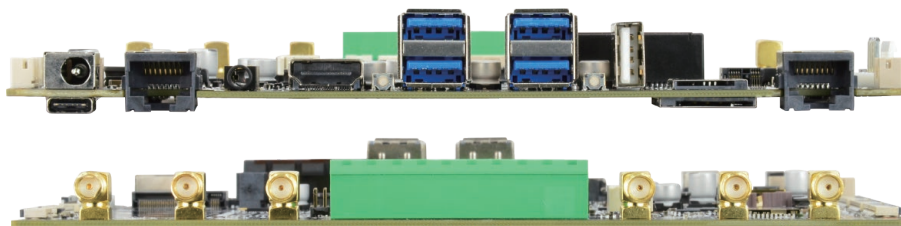㉟ SATA Power
㊱ POE
㊲ PCIe 3.0
㊳ 4G LTE Module
㊴ SIM Slot

125mm

180mm

Specification:

System	
CPU	RK3568 Quad Core 64bit Cortex-A55 up to 2.0GHz
GPU	ARM G52 2EE
Memory	2GB DDR4 (4GB optional)
Flash	16GB eMMC (8GB/32GB/64GB/128GB optional)
OS	Android 11
Communication	
RJ45	2 x 10/100/1000M LAN
WIFI & BT	WIFI6 2.4G & 5G 2T2R, Bluetooth 5.0
I/O Interfaces	
USB 3.0	4 x USB 3.0, 1 x USB OTG (Host for default)
TF Slot	1 x TF Slot
SIM Slot	1 x SIM Slot
PCIe	1 x M.2 PCIe 2.0, 1 x PCIe 3.0
TP	1 x I2C TP
Display	1 x HDMI OUT, 1 x eDP OUT, 1 x MIPI DSI OUT, 1 x MIPI DSI/1 x Single 8bit LVDS OUT
Audio	1 x I2S/PDM (Microphone Array), 1 x 3.5mm Earphone & Mic (support earphone with 3 rings, 1 x 1.3W speaker, 2 x 15W speaker)
Camera	2 x MIPI CSI Camera
Expansion	
SATA	1 x SATA & SATA Power
POE	1 x POE
MCU UART	1 x MCU UART
ADC IN	1 x ADC IN
USB 2.0	1 x USB 2.0, 1 x USB Type-C
UART	3 x UART
UART Debug	1 x UART Debug
CAN	1 x CAN
Fill Light	1 x Fill Light
Sensor	1 x Thermal Sensor, 1 x Light Sensor
Relay	1 x Access Control Wiegand Relay
Cell Slot	1 x Button Cell Slot
Key	2 x Keys (Power & Reset + Update)
Power Supply	
Power Input	DC 12~38V

I/O Interface:

ABOUT POLYHEX

As a board level and system level designer and manufacturer, Polyhex, with 9-year experience, always delivers best-in-class embedded computing solutions based on both ARM and X86 architecture, including hardware customization and software debugging etc. Partnered with silicon vendors like Intel, NXP, ST, Rockchip, Allwinner and so on, we have earned trust from clients worldwide in over 30 countries. Polyhex is also certified with ISO9001 and ISO13485 for the self-owned manufacture facility.

POLYHEX
Beyond the Embedded Deployment