POLYHEX
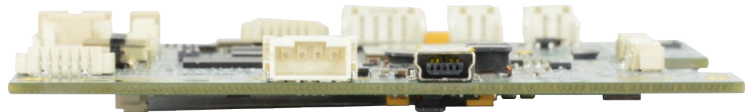
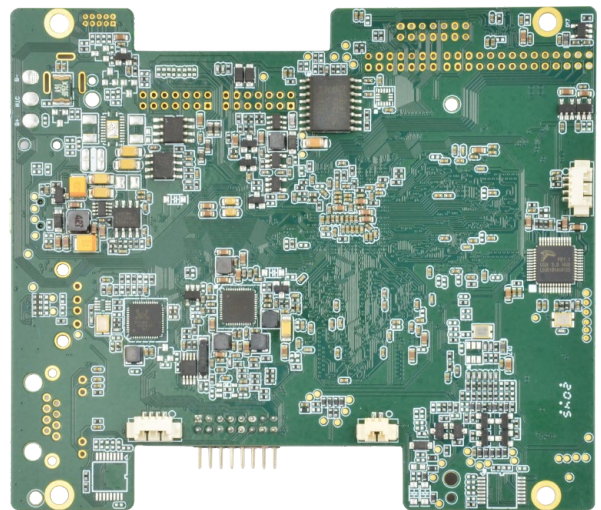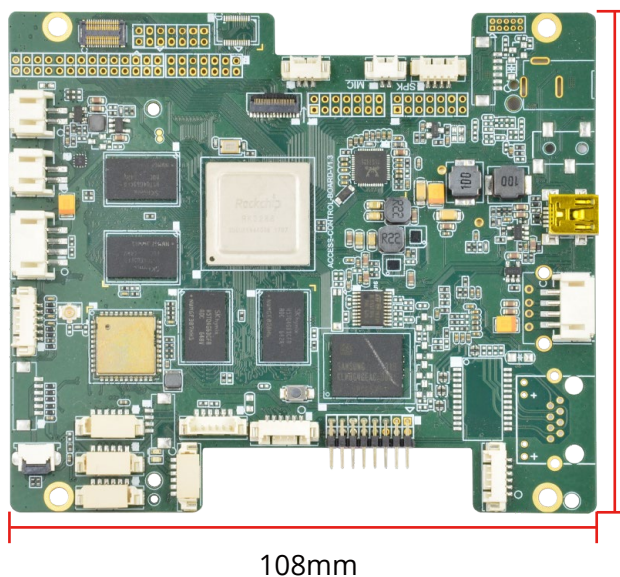# Small Size Embedded Motherboard based on RK3288 Quad Core CPU

Features:

- Onboard with Rockchip RK3288 Cortex-A17 Quad Core CPU
- Onboard 2GB DDR3 (up to 4GB)
- Onboard 32GB eMMC (default, 8GB, 16GB optional)
- Video out: 1 x MIPI DSI, support 1 x HDMI, 1 x eDP, 1 x Dual 8bit LVDS
- Video in: 1 x MIPI CSI, support 1 x 8bit Parallel CIF camera IN
- 1 x USB OTG, 2 x USB 2.0, 1 x POE, support 1 x LAN
- 4 x GPIO, 2 x RS232
- TP: 1x IIC Interface Touch Panel
- Support Android 5.1, Android 7.1 (optional) and Debian 9 (optional)

Board Description:

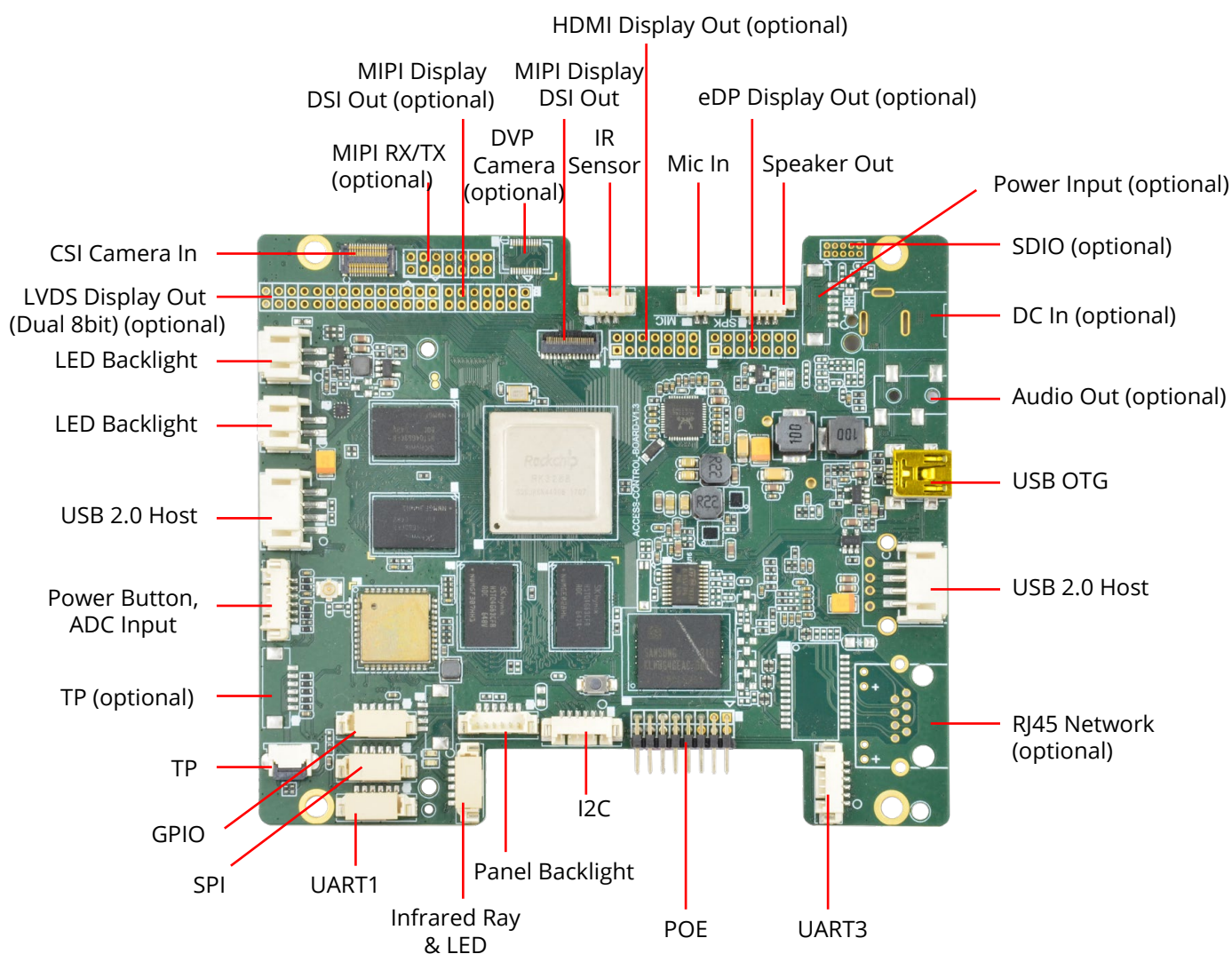 EMB-RK3288-03 is a customized motherboard for a smart face recognition access controlling system. It is onboard with RK3288 Cortex-A17 Quad Core CPU, 2GB DDR3 RAM and 32GB eMMC. The board is connected with a touch panel by MIPI port, a doorbell and door lock by GPIO port, and a camera for collecting face information. It is thin and small in size and with ultra-low power consumption.

93mm

108mm

RK3288
Rockchip
Mali-T764
Cortex-A17

Specification :

System	
CPU	Rockchip RK3288 ARM Cortex-A17 Quad Core CPU, Mali-T764 GPU core
Memory	2GB DDR3 (Default, 1GB/4GB optional)
Flash	32GB (Default)/8GB/16GB optional
OS	Android 5.1, Android 7.1 (optional) and Debian 9 (optional)
Communication	
LAN	Support 1 x Gigabit Ethernet
POE	1 x POE
GPS	support GPS
Video & Audio	
Video Out	Support 1 x Dual 8bit LVDS(up to 2K supported)
	1 x MIPI DSI
	Support 1 x HDMI OUT
	Support 1 x eDP
Video In	1 x MIPI CSI
	Support 1 x 8bit Parallel CIF Camera in
Audio	1 x Mic in
	1 x Speaker Lout , 1 x Speaker Rout
	Support 1 x Headphone L&R Out
Other Interfaces	
SDIO	Support 1 x SDIO
OTG	1 x USB OTG
USB 2.0	2 x USB 2.0 Host
TP	1 x IIC Interface Touch Panel
LED Flash	2 x LED Flash
SPI	1 x SPI
GPIO	4 x GPIO
RS 232	2 x RS232
IR	1 x IR
IIC	2 x IIC
Power	
DC	1 x 12V DC In
Mechanical	
Size	108 x 93 x 1.2mm

Interface Diagram:

Interface labels (clockwise/around board):

- HDMI Display Out (optional)
- MIPI Display DSI Out (optional)
- MIPI Display DSI Out
- eDP Display Out (optional)
- MIPI RX/TX (optional)
- DVP Camera (optional)
- IR Sensor
- Mic In
- Speaker Out
- Power Input (optional)
- CSI Camera In
- SDIO (optional)
- LVDS Display Out (Dual 8bit) (optional)
- DC In (optional)
- LED Backlight
- LED Backlight
- Audio Out (optional)
- USB 2.0 Host
- USB OTG
- Power Button, ADC Input
- USB 2.0 Host
- TP (optional)
- RJ45 Network (optional)
- TP
- GPIO
- SPI
- UART1
- Infrared Ray & LED
- Panel Backlight
- I2C
- POE
- UART3

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