



BOARDCON
Embedded Design

V.3-202403



Boardcon Embedded Design

ARM Development Kit, Single board computer, Computer-on-Module and more



Products

Open Source, Tech Support questions, Documentation, Warranty



Support

WinCE, Linux Android, uC/OS Embedded OS, and More



Software

Reduce your project's risk, decrease your time to market, lower cost



Custom Design

Boardcon Catalog 2024

▶ Computer-on-Module

Rockchip

- CM3588 (1)
- CM3588S (2)
- CM3568 (3)
- CM3566 (4)
- CM1126 (5)
- CM3326S (6)
- MINI3399 (7)
- CM3399 (8)
- PICO3399 (9)
- CM3288 (10)
- MINI3288 (11)

Allwinner

- MINI507 (12)
- CM-A40i (13)

NXP

- CM6ULL (14)

▶ Single Board Computer

Rockchip

- Idea3588 (15)
- SBC3588 (16)
- Idea3588S (17)
- EM3568 (18)
- EM3566 (19)
- Idea1126 (20)
- EM3326S (21)
- SBC3399 (22)
- Idea3399 (23)
- EM3399 (24)
- Idea3288 (25)
- EM3288 (26)

Allwinner

- EMT507 (27)
- EMA40i (28)

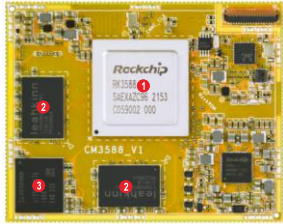
NXP

- EM6ULL (29)

▶ Card Size Board

Rockchip

- Compact3566 (30)



Advanced processing power and high-end multimedia



Target use cases

- Edge computing server
- Cloud terminal
- High-end tablets
- Livestreaming machine
- SoC-Clusters
- Multi-camera

Specifications

CPU core

CPU	Rockchip RK3588, 4x Cortex-A76 @ 2.4GHz + 4x Cortex-A55 @ 1.8GHz(1)
GPU	ARM Mali G610 Mp4
VPU	8Kp60 decode, 8Kp30 encode
NPU	6 TOPs

Memory & Storage

RAM	8GB/16GB(2)
Storage	32GB/64GB/128GB(3)

Network

Ethernet	1x GbE PHY + 1x RGMII/RMII
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Video & Audio

Display	MIPI DSI, 2x HDMI2.1(or 1x HDMI, 1x eDP), DP1.4
Audio	3x I2S, 2x SPDIF
Camera/Video input	3x 4-lane MIPI CSI, 1x HDMI in

Pin out

UART, USB3.0, USB2.0 Host, Type-C, HDMI I/O, DP, MIPI DSI, MIPI CSI, SATA3.0, PCIe3.0, PCIe2.1, SDMMC, SDIO, Ethernet, PWM, CAN, GPIO, I2C, I2S, SPDIF, ADC, PDM

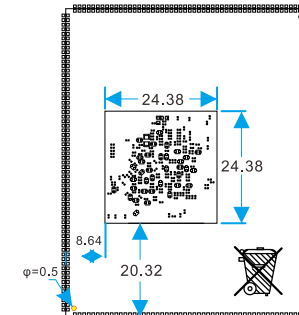
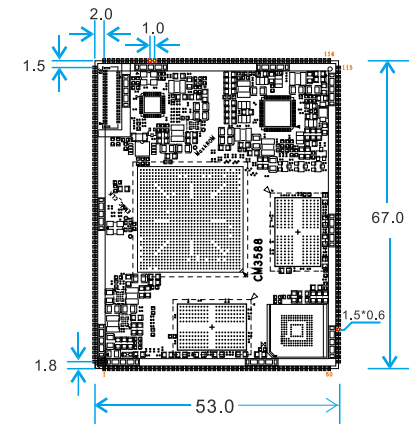
Electrical & Specifications

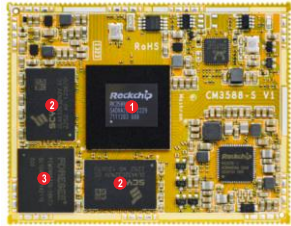
Supply Voltage	3.3V to 4.5V
Digital I/O Voltage	3.3V/1.8V

Environmental & Mechanical

Temperature	Commercial: 0° to 70° C, Industrial: -40° to 85° C
Humidity	10% to 90%
Dimensions	67 x 53mm
Weight	16.9 gram
Package&Connector	230-pin, 1.0mm pitch, plus 39-pin FPC connector

PCB Dimension





Cost-effective SoM with high performance CPU and reduced power consumption



Target use cases

- Tablet
- TV BOX
- smart locks
- Game console
- Commercial tablet

Specifications

CPU core

CPU	Rockchip RK3588S, 4x Cortex-A76 @ 2.4GHz + 4x Cortex-A55 @ 1.8GHz(1)
GPU	ARM Mali G610 Mp4
VPU	8Kp60 decode, 8Kp30 encode
NPU	6 TOPs

Memory & Storage

RAM	8GB/16GB(2)
Storage	32GB/64GB/128GB(3)

Network

Ethernet	1x GbE PHY
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Video & Audio

Display	MIPI DS/eDP1.3, HDMI2.1, DP1.4
Audio	3x I2S, 2x SPDIF
Camera	2x 4-lane MIPI CSI

Pin out

USB3.0 Host, USB2.0 Host, USB Type-C, PCIe2.1, SATA3.0, MIPI CSI, MIPI DSI, HDMI, SDMMC, UART, CAN, Ethernet, PWM, ADC, GPIO, PDM, I2C, I2S, SPI

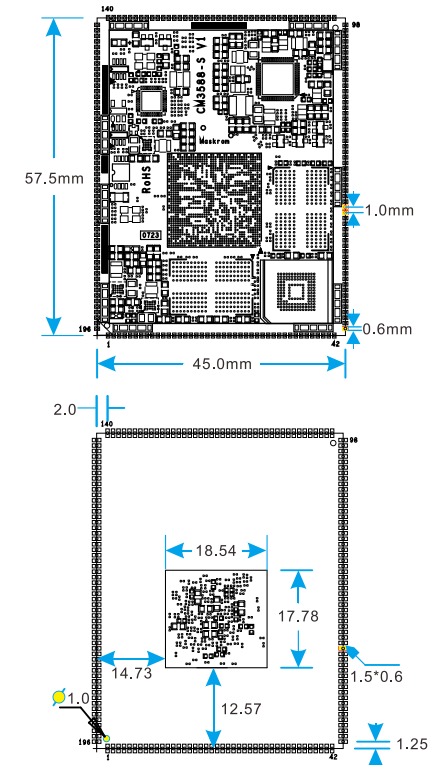
Electrical & Specifications

Supply Voltage	3.3V to 4.2V
Digital I/O Voltage	3.3V/1.8V

Environmental & Mechanical

Temperature	Commercial: 0° to 70° C
Humidity	10% to 90%
Dimensions	57.5 x 45mm
Weight	12.8 gram
Package	196-pin, 1.0mm pitch

PCB Dimension





Industrial/Consumer SOM for Embedded Development



Target use cases

- NVRs
- Cloud terminals
- IoT gateways
- Car infotainment systems
- Karaoke machines

Specifications

CPU core

CPU	Rockchip RK3568, Quad-core Cortex-A55 @ 2.0GHz(1)
GPU	ARM Mali-G52
VPU	4Kp60 decode, 1080p60 encode
NPU	1 TOPs

Memory & Storage

RAM	1GB/2GB/4GB/8GB(2)
Storage	8GB/16GB/32GB/64GB/128GB(3)

Network

Ethernet	1x GbE PHY + 1x RGMII/RMII
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Video & Audio

Display	HDMI2.0, eDP, RGB, 2x MIPI DSI (or 1x MIPI DSI, 1x LVDS)
Audio	3x I2S, 1x SPDIF
Camera	1x 4-lane or 2x 2-lane MIPI CSI

Pin out

UART, USB3.0 Host, USB2.0 Host, USB3.0 OTG/SATA3.0, PCIe2.1, HDMI2.0, eDP, MIPI DSI, LVDS, MIPI CSI, SDMMC, Ethernet, Audio I/O, CAN, PDM, ADC, I2C, I2S, GPIO, PWM, SPI

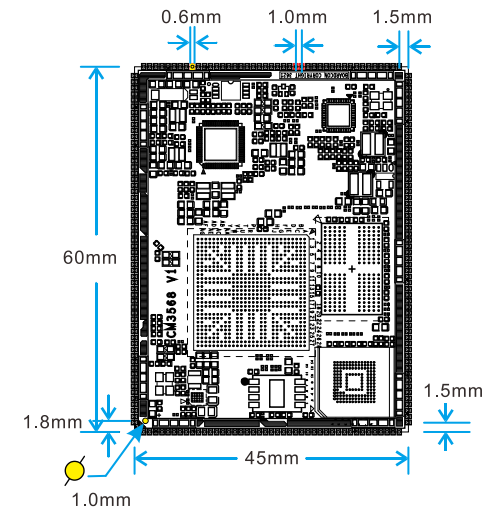
Electrical & Specifications

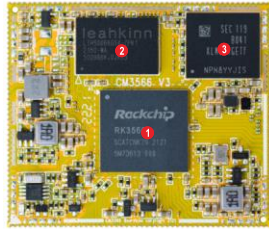
Supply Voltage	3.3V to 5V
Digital I/O Voltage	3.3V/1.8V

Environmental & Mechanical

Temperature	Commercial: 0° to 70° C, Industrial: -40° to 85° C
Humidity	10% to 90%
Dimensions	60 x 45mm
Weight	11.1 gram
Package	202-pin, 1.0mm pitch

PCB Dimension





Low-power and cost-optimized solution with ultimate scalability



Target use cases

- E-Reader
- Sports equipment
- Makeup mirror
- Smart medical care POCT
- Electronic organ
- DJ equipment

Specifications

CPU core

CPU	Rockchip RK3566, Quad-core Cortex-A55 @ 1.8GHz(1)
GPU	ARM Mali-G52
VPU	4Kp60 decode, 1080p60 encode
NPU	1 TOPs

Memory & Storage

RAM	1GB/2GB/4GB/8GB(2)
Storage	8GB/16GB/32GB/64GB/128GB(3)

Network

Ethernet	1x RGMII/RMII
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Video & Audio

Display	LVDS/MIPI DSI, eDP1.3, HDMI2.0
Audio	3x I2S, 1x SPDIF
Camera	1x DVP, 1x 4-lane MIPI CSI

Pin out

LVDS/MIPI DSI, eDP, HDMI, MIPI CSI, CIF, Ethernet, USB2.0 Host, USB3.0 Host, PCIe2.1, USB2.0 OTG, SDMMC, I2C, SPI, UART, PWM, ADC, I2S, GPIO, SPDIF, VOP_BT656

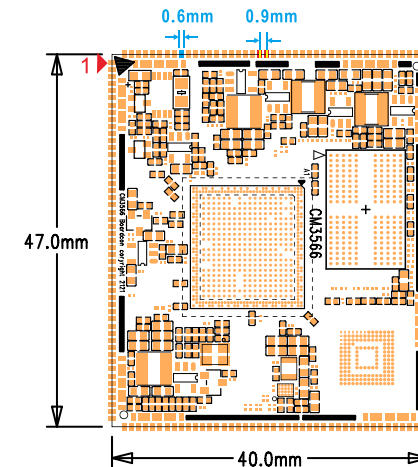
Electrical & Specifications

Supply Voltage	3.3V
Digital I/O Voltage	3.3V/1.8V

Environmental & Mechanical

Temperature	Commercial: 0° to 70° C
Humidity	10% to 90%
Dimensions	47 x 40mm
Weight	8.6 gram
Package	186-pin, 0.9mm pitch

PCB Dimension





Ideal for space constrained and portable systems



Target use cases

- IP Camera
- Video-doorbell
- In-vehicle
- Robots
- Access control

Specifications

CPU core

CPU	Rockchip RV1126, Quad-core Cortex-A7 @ 1.5GHz + RISC-V MCU @ 400MHz(1)
GPU	2D graphics engine
VPU	4Kp30 decode, 4Kp30 encode
NPU	2 TOPs

Memory & Storage

RAM	2GB/4GB(2)
Storage	8GB/16GB/32GB/64GB/128GB(3)

Network

Ethernet	1x GbE PHY
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Video & Audio

Display	MIPI DSI, RGB
Audio	4x I2S
Camera	1x DVP, 2x MIPI CSI

Pin out

UART, USB2.0 HOST, USB2.0 OTG, Ethernet, CAN, RGB, MIPI CSI, MIPI DSI, SDMMC, SDIO, SPI, ADC, I2S, PDM, I2C, GPIO, PWM

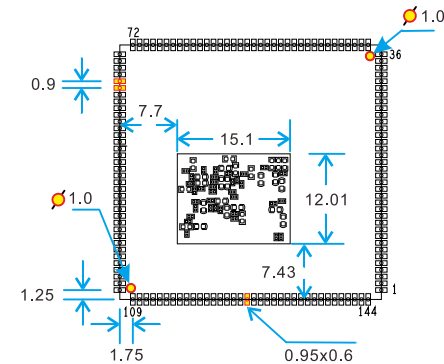
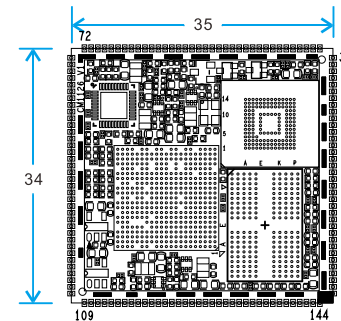
Electrical & Specifications

Supply Voltage	3.3V
Digital I/O Voltage	3.3V/1.8V

Environmental & Mechanical

Temperature	Commercial: 0° to 70° C
Humidity	10% to 90%
Dimensions	35 x 34mm
Weight	5.2 gram
Package	144pins, 0.9mm pitch

PCB Dimension





Low-power and cost-optimized solution with ultimate scalability



Target use cases

- Smart Language Translator
- Wireless Smart Sound Speaker
- Smart Audio Monitor

Specifications

CPU core

CPU	Rockchip RK3326-S, Quad-core Cortex-A35 @ 1.5GHz(1)
GPU	ARM G31-2EE
VPU	1080p60 decode, 1080p30 encode

Memory & Storage

RAM	1GB/2GB/4GB(2)
Storage	8GB/16GB/32GB/64GB/128GB(3)

Video & Audio

Display	LVDS/MIPI DSI/RGB
Audio	2x I2S
Camera	1x DVP, 1x 4-lane MIPI CSI

Pin out

UART, USB OTG, Audio Out, MIC, Speaker, LVDS/MIPI_DSI/RGB, MIPI CSI, I2C, CIF, SDMMC, SDIO, I2S, ADC, SPI, PWM, GPIO

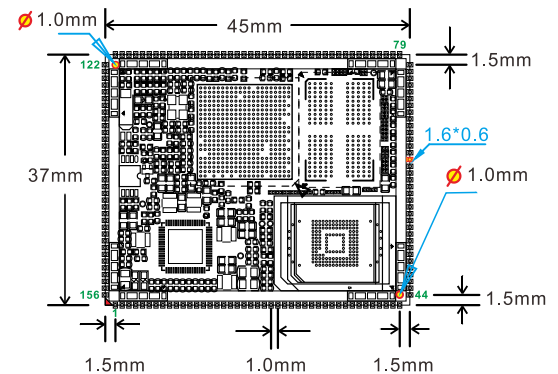
Electrical & Specifications

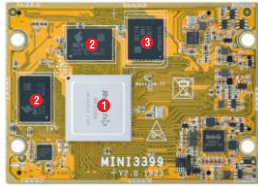
Supply Voltage	5V
Digital I/O Voltage	3.3V/1.8V

Environmental & Mechanical

Temperature	Commercial: 0° to 70° C
Humidity	10% to 90%
Dimensions	45 x 37mm
Weight	6.8 gram
Package	156-pin, 1.0mm pitch

PCB Dimension





Optimized for industrial embedded applications



Target use cases

- Table
- Thin Client
- OTT BOX
- Business Display
- Industrial Control Equipment

Specifications

CPU core	
CPU	Rockchip RK3399, 2x Cortex-A72 @ 1.8GHz + 4x Cortex-A53 @ 1.4GHz(1)
GPU	ARM Mali-T860 Mp4
VPU	4Kp60 decode, 1080p30 encode
Memory & Storage	
RAM	2GB/4GB(2)
Storage	8GB/16GB/32GB/64GB/128GB(3)
Network	
Ethernet	1x GbE PHY + 1x RGMII/RMII
Video & Audio	
Display	LVDS or MIPI DSI, eDP, HDMI2.0
Audio	2x I2S, 1x SPDIF
Camera	1x DVP, 2x 4-Lane MIPI CSI
Pin out	
	HDMI, LVDS/MIPI TX, eDP, MIPI TX/RX, MIPI RX, CIF, UART, SPDIF, SDMMC, SDIO, USB2.0 Host, USB Type-C, PCIe, Ethernet, PWM, GPIO, ADC, I2S, SPI

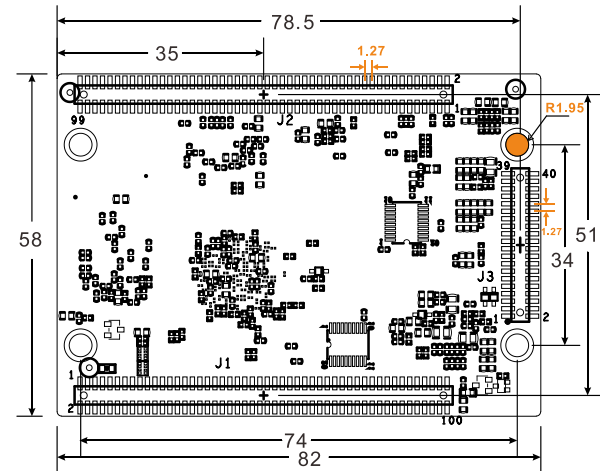
Electrical & Specifications

Supply Voltage	3.4V to 5V
Digital I/O Voltage	3.3V/1.8V

Environmental & Mechanical

Temperature	Commercial: 0° to 70° C, Industrial: -40° to 85° C
Humidity	10% to 90%
Dimensions	82 x 58mm
Weight	28.8 gram
Connector	(2x 100pin + 1x 40pin) Receptacle, 1.27mm pitch

PCB Dimension





Highly customizable and cost-effective SOM for industrial control and monitoring



Target use cases

- IoT devices
- Intelligent interactive devices
- Personal computers
- Robots

Specifications

CPU core

CPU	Rockchip RK3399, 2x Cortex-A72 @ 1.8GHz + 4x Cortex-A53 @ 1.4GHz(1)
GPU	ARM Mali-T860 Mp4
VPU	4Kp60 decode, 1080p30 encode

Memory & Storage

RAM	2GB/4GB(2)
Storage	8GB/16GB/32GB/64GB/128GB(3)

Network

Ethernet	1x GbE PHY
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Video & Audio

Display	eDP, MIPI DSI, HDMI
Audio	2x I2S
Camera	2x 4-Lane MIPI CSI

Pin out

USB2.0 Host, Type-C, UART, MIPI TX, MIPI RX, MIPI TX/RX, HDMI, eDP, Ethernet, PCIe, SDIO, SDMMC, I2C, I2S, PWM, SPI, ADC, GPIO

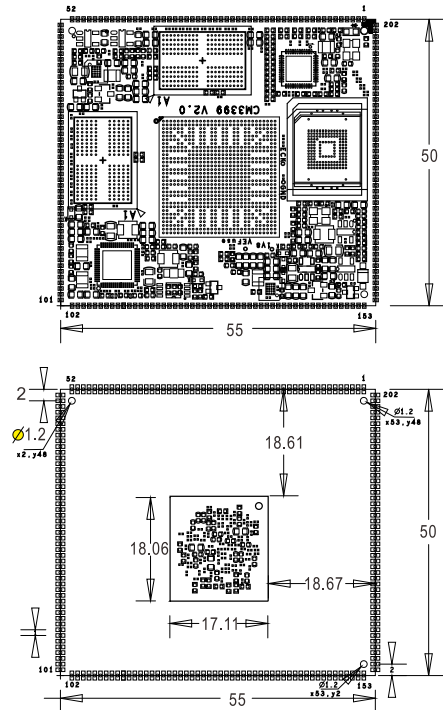
Electrical & Specifications

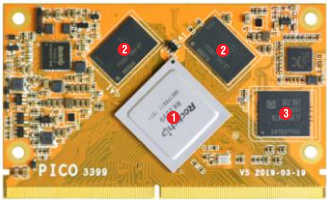
Supply Voltage	3.3V to 5V
Digital I/O Voltage	3V/1.8V

Environmental & Mechanical

Temperature	Commercial: 0° to 70° C, Industrial: -40° to 85° C
Humidity	10% to 90%
Dimensions	55 x 50 mm
Weight	13.5 gram
Package	202-pin, 1.0mm pitch

PCB Dimension





Wide range of high-speed interfaces provides extensive connectivity



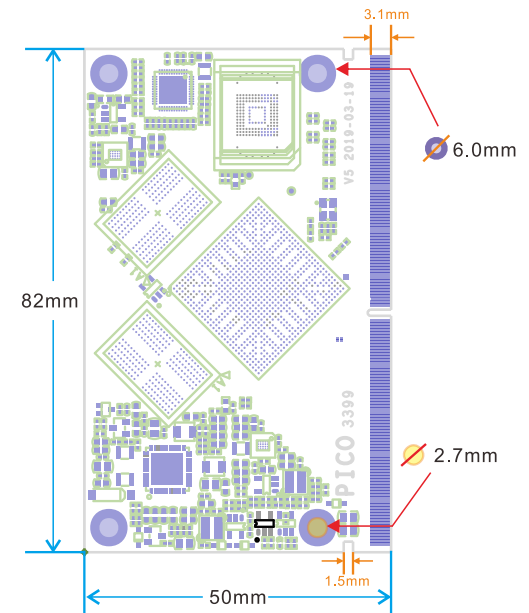
Target use cases

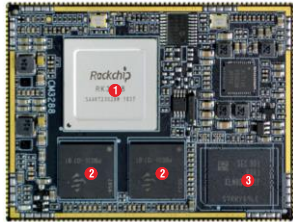
- Tablet
- Thin Client
- OTT BOX
- Business Display
- POS

Specifications

CPU core	
CPU	Rockchip RK3399, 2x Cortex-A72 @ 1.8GHz + 4x Cortex-A53 @ 1.4GHz(1)
GPU	ARM Mali-T860 Mp4
VPU	4Kp60 decode, 1080p30 encode
Memory & Storage	
RAM	2GB/4GB(2)
Storage	8GB/16GB/32GB/64GB/128GB(3)
Network	
Ethernet	1x GbE PHY
Video & Audio	
Display	eDP, MIPI DSI, HDMI
Audio	2x I2S
Camera	1x DVP, 2x 4-Lane MIPI CSI
Pin out	
	USB2.0 Host, Type-C, UART, eDP, MIPI TX, MIPI RX, MIPI TX/RX, Ethernet, HDMI, CIF, PCIe, SDIO, SDMMC, OTP, I2C, I2S, SPI, ADC, SPDIF, GPIO
Electrical & Specifications	
Supply Voltage	3.3V to 5V
Digital I/O Voltage	3.3V/1.8V
Environmental & Mechanical	
Temperature	Commercial: 0° to 70° C
Humidity	10% to 90%
Dimensions	82 x 50mm
Weight	19.3 gram
Connector	314-pin card edge connector

PCB Dimension





Optimized for industrial embedded applications



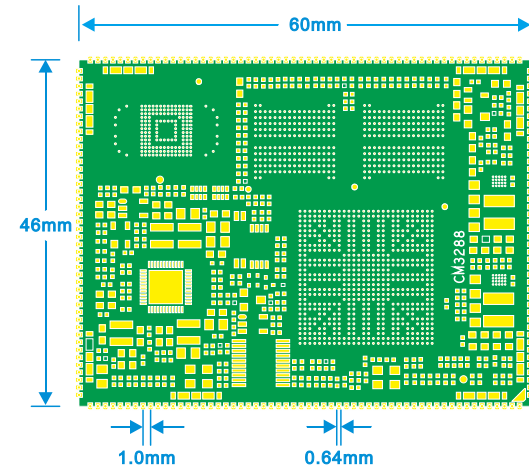
Target use cases

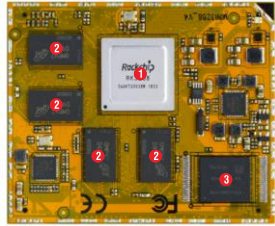
- Tablet
- Thin Client
- OTT BOX
- Business Display
- POS
- Facial Recognition Gatekeeper

Specifications

CPU core	
CPU	Rockchip RK3288, Quad core Cortex-A17 @ 1.8 GHz(1)
GPU	ARM Mali-T764
VPU	4Kp60 decode, 1080p30 encode
Memory & Storage	
RAM	1GB/2GB(2)
Storage	4GB/8GB/16GB/32GB(3)
Network	
Ethernet	1x RGMII
Video & Audio	
Display	LVDS, MIPI DSI, HDMI, eDP
Audio	I2S, SPDIF
Camera	1x DVP, 2x 4-Lane MIPI CSI
Pin out	
	USB2.0 Host, USB2.0 OTG, UART, MIPI RX, MIPI TX, MIPI TX/RX, eDP, LVDS, CIF, Ethernet, SPI, HDMI, I2C, I2S, GPIO, SDIO, SDMMC, PWM, ADC, SPDIF
Electrical & Specifications	
Supply Voltage	3.6V to 5V
Digital I/O Voltage	3.3V/1.8V
Environmental & Mechanical	
Temperature	Commercial: 0° to 70° C, Industrial: -40° to 85° C
Humidity	10% to 90%
Dimensions	60 x 46mm
Package	204-pin, 1.0mm pitch

PCB Dimension





Highly customizable and
cost-effective
Modular and easy to service



Target use cases

- Tablet
- Thin Client
- OTT BOX
- Business Display
- POS
- Industrial Control Equipment

Specifications

CPU core

CPU Rockchip RK3288, Quad core Cortex-A17 @ 1.8 GHz(1)
 GPU ARM Mali-T764
 VPU 4Kp60 decode, 1080p30 encode

Memory & Storage

RAM 512MB/1GB/2GB(2)
 Storage 4GB/8GB/16GB/32GB(3)

Network

Ethernet 1x GbE PHY

Video & Audio

Display LVDS/RGB, HDMI
 Audio I2S, SPDIF
 Camera 1x DVP, 1x MIPI CSI

Pin out

USB2.0 Host, USB2.0 OTG, UART, LVDS/LCDC, MIPI TX/RX, CIF, Ethernet, HDMI, SDIO, SDMMC, SPI, I2C, I2S, ADC, SPDIF, PWM, PS2, GPIO

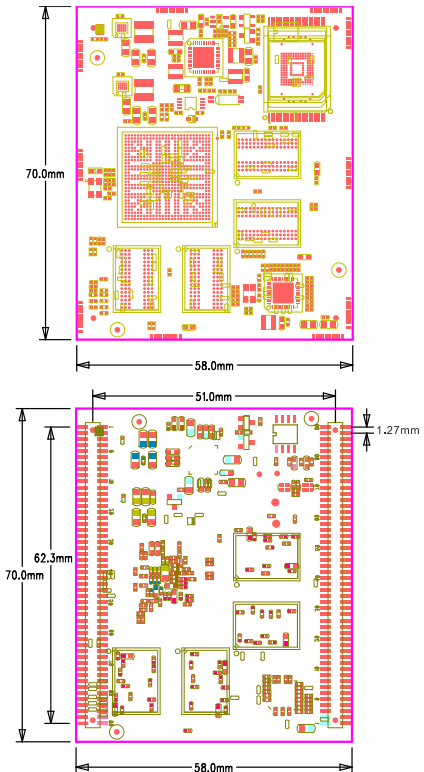
Electrical & Specifications

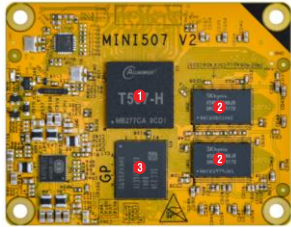
Supply Voltage 3.6V to 5V
 Digital I/O Voltage 3.3V/1.8V

Environmental & Mechanical

Temperature Commercial: 0° to 70° C, Industrial: -40° to 85° C
 Humidity 10% to 90%
 Dimensions 70 x 58mm
 Weight 23.6 gram
 Connector 2x 100-pin Receptacle, 1.27mm pitch

PCB Dimension





Optimized for industrial embedded applications



Target use cases

- IVI
- Digital cluster
- HD AVM
- HUD and other intelligent cockpit

Specifications

CPU core

CPU	Allwinner T507-H, Quad-core Cortex-A53 @ 1.5GHz(1)
GPU	ARM Mali-G31 Mp2
VPU	4Kp60 decode, 4Kp25 encode

Memory & Storage

RAM	2GB/4GB(2)
Storage	8GB/16GB/32GB/64GB(3)

Network

Ethernet	1x RGMII, 1x 100M PHY
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Video & Audio

Display	Dual-LVDS/RGB, HDMI, CVBS out
Audio	I2S, SPDIF
Camera	1x DVP, 1x MIPI CSI

Pin out

USB2.0 Host, USB2.0 OTG, UART, Ethernet, MIPI CSI, parallel CSI, dual-LVDS/LCD, HDMI, SDMMC, SPDIF, ADC, I2S, SPI, PWM, GPIO, Line out, TV OUT, IR TX

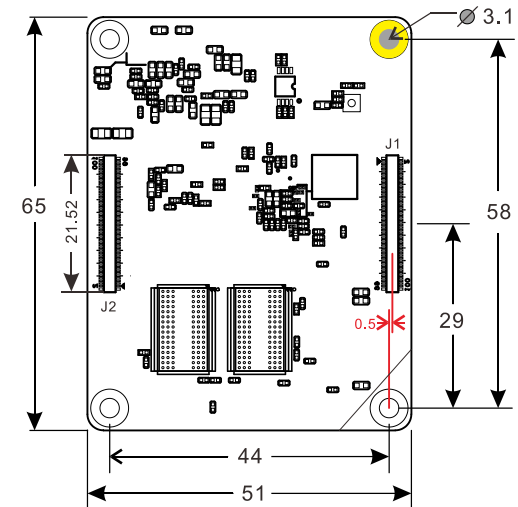
Electrical & Specifications

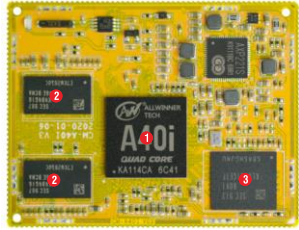
Supply Voltage	5V
Digital I/O Voltage	3.3V/1.8V

Environmental & Mechanical

Temperature	Industrial: -40° to 85° C
Humidity	10% to 90%
Dimensions	65 x 51mm
Weight	15.5 gram
Connector	2x 100-pin Plug, 0.4mm pitch

PCB Dimension





Ideal solution for cost-sensitive systems



Target use cases

- Industrial HMI
- Industrial control gateway
- Industrial IoT
- Smart terminals

Specifications

CPU core

CPU	Allwinner A40i, Quad-core Cortex-A7 @ 1.2GHz(1)
GPU	ARM Mali400 Mp2
VPU	1080p45 decode, 1080p45 encode

Memory & Storage

RAM	512MB/1GB/2GB(2)
Storage	8GB/16GB/32GB(3)

Network

Ethernet	1x RGMII
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Video & Audio

Display	Dual-LVDS/RGB, MIPI DSI, HDMI
Audio	I2S, SPDIF
Camera/Video in	1x DVP, 4x CVBS in

Pin out

UART, USB2.0 Host, USB2.0 OTG, dual-LVDS/LCD, I2S, MIPI DSI, SATA, HDMI, Ethernet, Parallel CSI, TV in, Audio out, MIC, SDMMC, SDIO, SPDIF, SPI, PWM, ADC, GPIO, IR RX

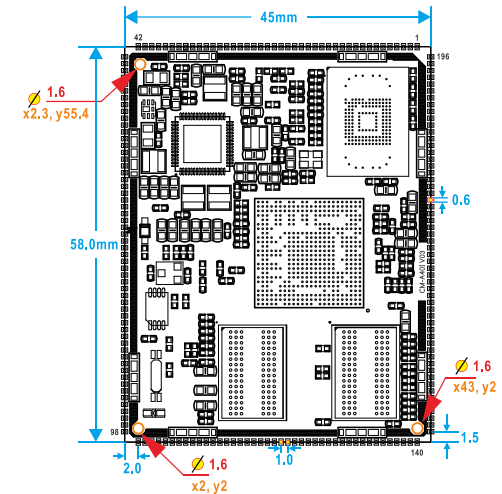
Electrical & Specifications

Supply Voltage	DC 5V or 3.7V Battery
Digital I/O Voltage	3.3V

Environmental & Mechanical

Temperature	Industrial: -20° to 70° C
Humidity	10% to 90%
Dimensions	58 x 45mm
Weight	10.5 gram
Package	196-pin, 1.0mm pitch

PCB Dimension





Miniature size and power efficiency,
ideal for space constrained and
portable systems



Target use cases

- Electronics Point-of-Sale device
- Telematics
- IoT Gateway
- Access control panels
- Human Machine Interfaces (HMI)

Specifications

CPU core

CPU	NXP i.MX 6ULL, ARM Cortex-A7 @ 528MHz(1)
GPU	2D pixel acceleration engine

Memory & Storage

RAM	256MB/512MB(2)
Storage	4GB/8GB/16GB/32GB(3)

Network

Ethernet	2x 10/100 Mbps
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Video & Audio

Display	RGB
Audio	SAI, SPDIF
Camera	Parallel CSI

Pin out

USB OTG, UART, LCD, SAI, SPDIF, Ethernet (10/100T), SD, Parallel CSI, I2C, PWM, GPIO

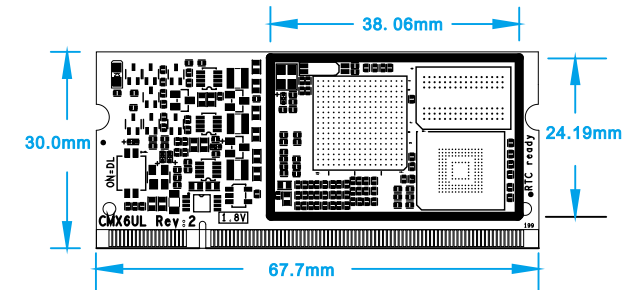
Electrical & Specifications

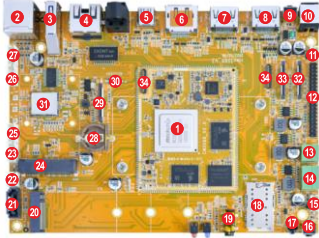
Supply Voltage	5V
Digital I/O Voltage	3.3V

Environmental & Mechanical

Temperature	Industrial: -20° to 70° C
Humidity	10% to 90%
Dimensions	67.7 x 30.0mm
Connector	200-pin SO-DIMM edge connector

PCB Dimension





High performance graphics and image processing
Wide range of high-speed interfaces



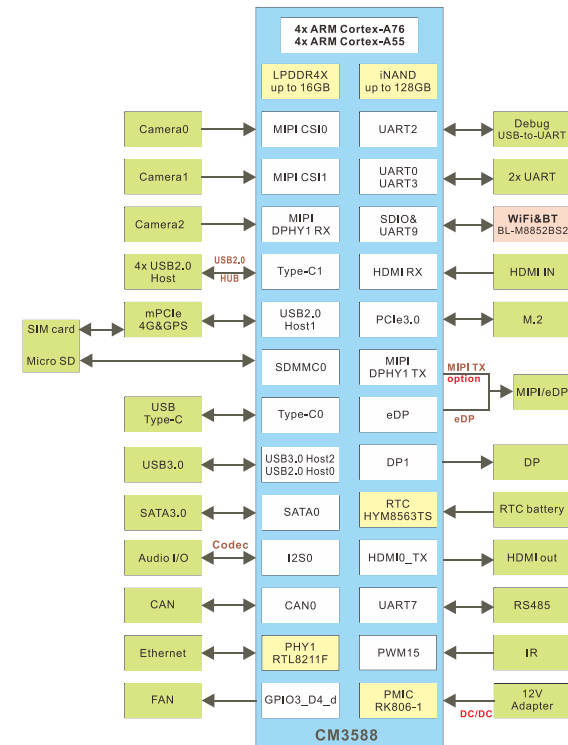
Target use cases

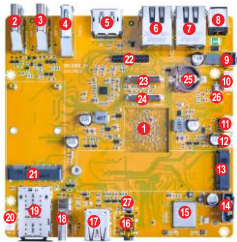
- TIPC
- High-end tablet
- 8K TV
- AR/VR

Specifications

System	
CPU module	CM3588(1)
Network	
Ethernet	1000Mbps, RJ45(4)
WiFi&BT	2.4G/5G 2T2R WiFi (802.11a/b/g/n/ac/ax) with Bluetooth5.2(31)
Cellular	Mini PCIe socket(24) with Nano SIM card port(18) to support 4G LTE
Video & Audio	
Display	DP1.4(6), HDMI2.1(7), MIPI DSI/eDP1.3(12)
Audio	3.5mm audio I/O jack(19), 8-channel audio via HDMI
Camera/Video in	2x MIPI CSI(29, 33), 1x DPHY(32), 1x HDMI2.0 in(8)
I/O & Other Features	
USB3.0 Host(3), USB Type-C(5), 4x USB2.0 Host(2,26,27), Reset(9), Fan(11), CAN(13), RS485(14), Debug(15), Power(16), IR(17), Micro SD(18), M.2(20), SATA3.0(21), SATA Power(22), 2x UART(23, 25), RTC(28), Recovery(30), CSI Bridge(34)	
Electrical & Specifications	
Supply Voltage	12V/3A(10)
Optional Modules	
4G model, Camera, 10.1" LCD	
Environmental & Mechanical	
Temperature	Commercial: 0° to 70 °C
Humidity	10% to 90%
Dimensions	165 x 120mm

Block Diagram





Low-power and cost-optimized solution with ultimate scalability



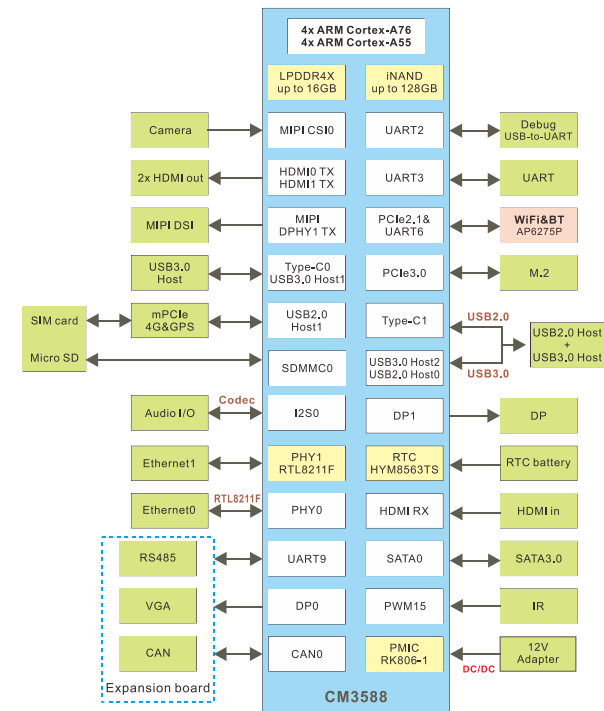
Target use cases

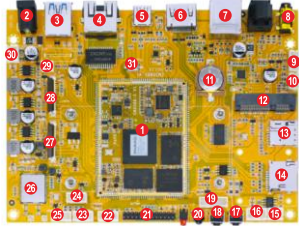
- TV box
- AIoT gateway
- Industrial PC
- Video analytics server
- Digital signage

Specifications

System	
CPU module	CM3588(1)
Network	
Ethernet	2x 1000Mbps, RJ45(6,7)
WiFi&BT	2.4G/5G 2T2R WiFi (802.11 a/b/g/n/ac/ax) with Bluetooth5.1(15)
Cellular	Mini PCIe socket(21) with Nano SIM card port(19) to support 4G LTE
Video & Audio	
Display	2x HDMI(2,3), DP 1.4(5), MIPI DSI(23), VGA(22)
Audio	3.5mm audio I/O jack(16), 8-channel audio via HDMI
Video in/Camera	MIPI CSI(24), HDMI in(18)
I/O & Other Features	
	2x USB3.0(4,17), Reset(9), UART(10), Debug(11), SATA Power(12), M.2(13), SATA3.0(14), USB2.0 Host(17), Micro SD(19), Power connector(20), RS485(22), CAN(22), RTC(25), Recovery(26), IR(27)
Electrical & Specifications	
Supply Voltage	12V/3A(8)
Optional Modules	
	4G model, Camera, VGA
Environmental & Mechanical	
Temperature	Commercial: 0° to 70° C
Humidity	10% to 90%
Dimensions	125.0 x 121.7mm

Block Diagram





Extensive wireless and wired connectivity
Ideal solution for cost-sensitive systems



Target use cases

- 8K TV box
- VI devices
- Intelligent interactive devices
- Personal computers
- Robots

Specifications

System

CPU module CM3588S(1)

Network

Ethernet 1000Mbps, RJ45(4)

WiFi&BT 2.4G/5G 2T2R WiFi (802.11a/b/g/n/ac/ax) with Bluetooth5.1(26)

Cellular Mini PCIe socket(12) with Nano SIM card port(13) to support 4G LTE

Video & Audio

Display HDMI 2.1(6), MIPI DSI(21)

Audio 3.5mm audio I/O jack(8), 8-channel audio via HDMI

Camera 2x MIP CSI (27,28. Multiplexed with I2C)

I/O & Other Features

USB3.0 Host(3), Type-C(5), 3x USB2.0 Host(7,9), Debug(10), RTC(11), Micro SD(14), CAN(15), RS485(16), Power(17), Reset(18), GPIO(19), IR(20), 3x UART(22,23,25), ADC/GPIO(24), Fan(29), SATA Power(30), Recovery(31)

Electrical & Specifications

Supply Voltage 12V/3A(2)

Optional Modules

4G model, Camera, 10.1" LCD

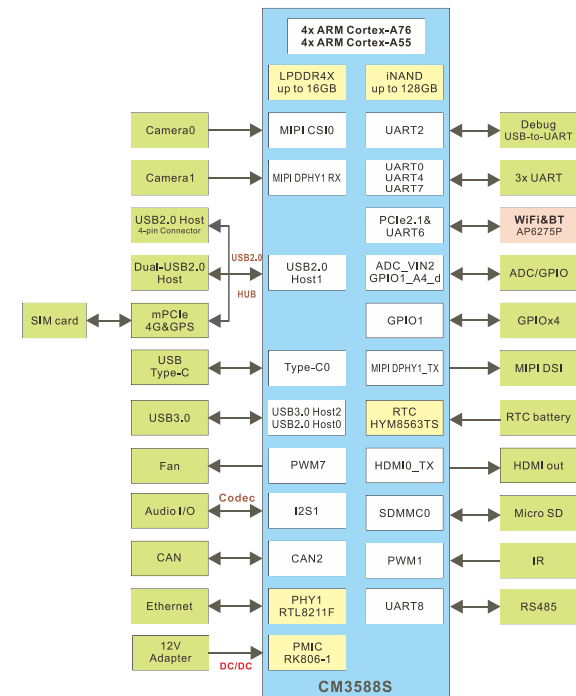
Environmental & Mechanical

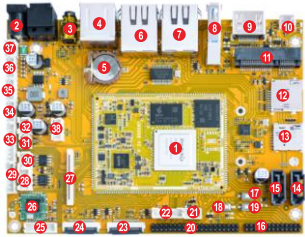
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 145 x 105mm

Block Diagram





Highly customizable and cost-effective SBC for IoT connectivity and remote control and monitoring applications



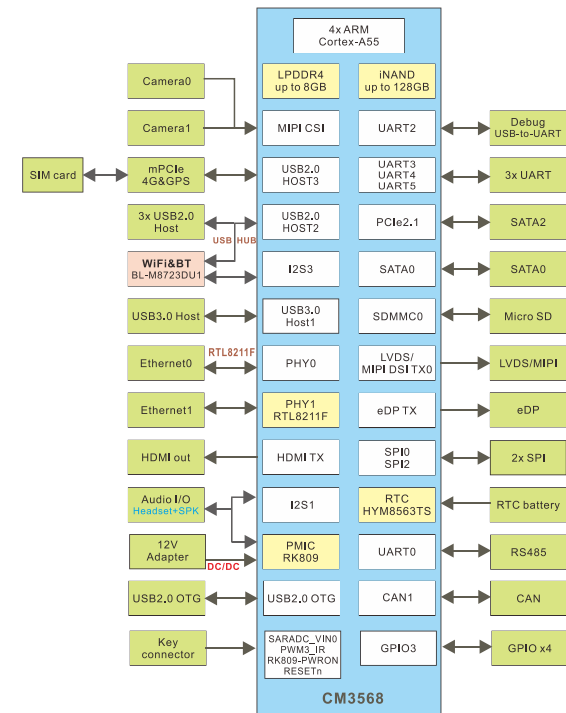
Target use cases

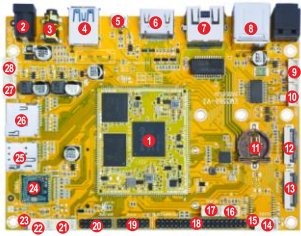
- NVRs
- Cloud terminals
- IoT gateways
- Industrial control

Specifications

System	
CPU module	CM3568(1)
Network	
Ethernet	2x 1000Mbps, RJ45(6,7)
WiFi&BT	2.4G WiFi (802.11b/g/n) with Bluetooth 4.2(26)
Cellular	Mini PCIe socket(11) with Nano SIM card port(13) to support 4G LTE
Video & Audio	
Display	HDMI 2.0(9), eDP 1.3(16), MIPI DSI/LVDS(20), RGB(27)
Audio	3.5mm audio I/O jack(3), 8-channel audio via HDMI, Speaker(31)
Camera	2x MIPI CSI(23, 24)
I/O & Other Features	
3x USB2.0 Host(4,38), RTC(5), USB3.0 Host(8), USB2.0 OTG(10), Micro SD(12), SATA3.0(14,15), Recovery(17), Power(18), Reset(19), Debug(21), Key connector(22), 2x SPI(25,29), RS485(28), CAN(30), SATA power(32), GPIO(33), 3x UART(34,35,36)	
Electrical & Specifications	
Supply Voltage	12V/3A(2,37)
Optional Modules	
4G model, Camera, 7" LCD, 10.1" LCD	
Environmental & Mechanical	
Temperature	Commercial: 0° to 70° C
Humidity	10% to 90%
Dimensions	135 x 100mm

Block Diagram





Low-power and cost-optimized solution with ultimate scalability



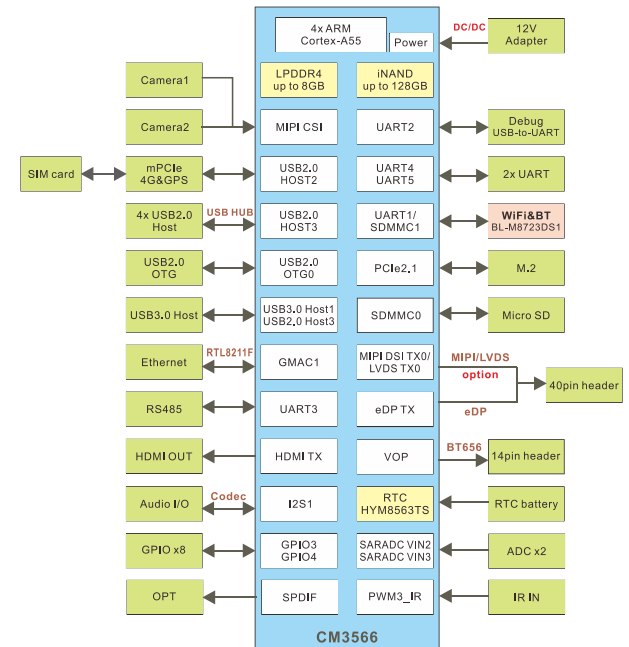
Target use cases

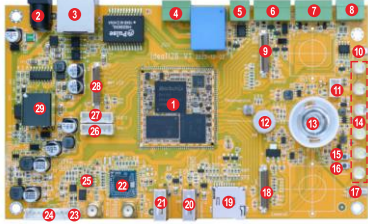
- Business Display
- POS
- E-Reader
- Treadmill
- Smart picture frame

Specifications

System	
CPU module	CM3566(1)
Network	
Ethernet	1000Mbps, RJ45(7)
WiFi&BT	2.4G WiFi (802.11b/g/n) with Bluetooth 4.2(24)
Cellular	Mini PCIe socket(rear side) with Nano SIM card port(25) to support 4G LTE
Video & Audio	
Display	HDMI 2.0(6), MIPI DSI/LVDS/eDP 1.3(18)
Audio	3.5mm audio I/O jack(3), 8-channel audio via HDMI
Camera	2x MIPI CSI(12,13)
I/O & Other Features	
USB3.0 Host(4), USB2.0 OTG(5), 4x USB2.0 Host(8,9,10), RTC(11), RS485(14,15), IR(16), Debug(17), MEMS(19), GPIO(20), 2x UART(21,22), Recovery(23), Micro SD(26), ADC(27), SATA Power(28), M.2(rear side)	
Electrical & Specifications	
Supply Voltage	12V/3A(2)
Optional Modules	
4G model, Camera, 7" LCD, 10.1" LCD	
Environmental & Mechanical	
Temperature	Commercial: 0° to 70 °C
Humidity	10% to 90%
Dimensions	135 x 95mm

Block Diagram





Ideal solution for the demands of security products and AIoT



Target use cases

- Smart door lock
- Smart IP camera
- Face recognition

Specifications

System

CPU module CM1126(1)

Network

Ethernet 1000Mbps, RJ45(3)

WiFi&BT 2.4G WiFi (802.11b/g/n) with Bluetooth 4.2(22)

RF RF315(25)

Video & Audio

Display MIPI DSI (28)

Audio 2x MIC(10,17), Speaker(23)

Camera 2x MIPI CSI(9,18)

I/O & Other Features

Relay(4), CAN(5), WIEG (6,7), RS485(8), Debug(11), PIR(12), IR LED(13), White LED(14), Recovery(15), Reset(16), Micro SD(19), 2x USB2.0 Host(20,21), GPIO(24), SPI(26), UART(27)

Electrical & Specifications

Supply Voltage 12V/3A(2), POE(29)

Optional Modules

Camera, 10.1" LCD

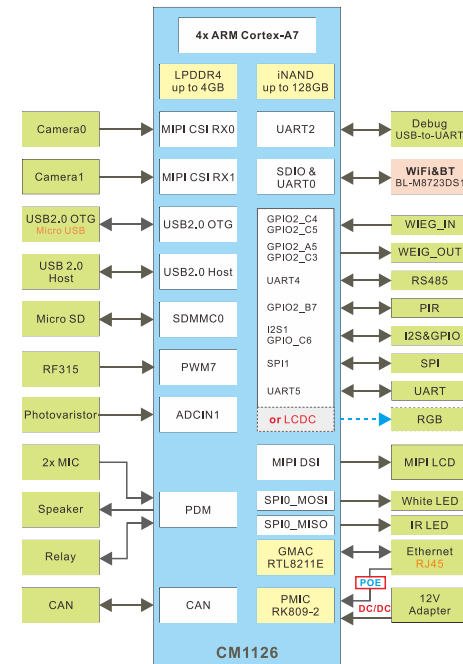
Environmental & Mechanical

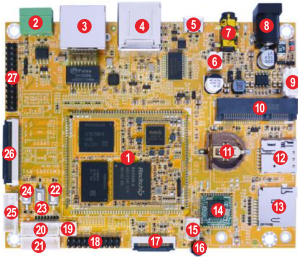
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 162 x 95mm

Block Diagram





Low Power, Scalable Solution for Smart devices



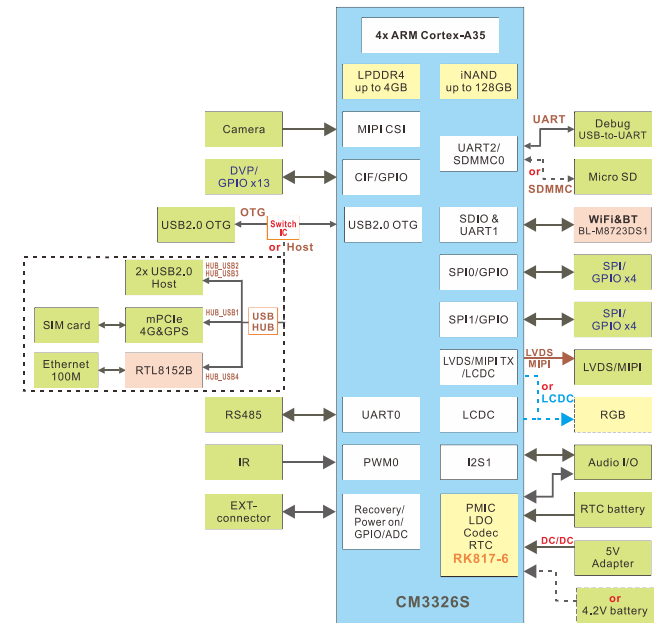
Target use cases

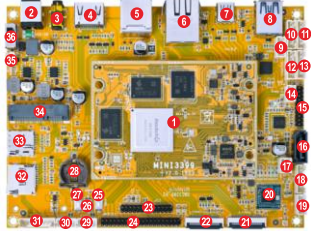
- Smart Language Translator Device
- Wireless Smart Sound Speaker

Specifications

System	
CPU module	CM3326S(1)
Network	
Ethernet	100Mbps, RJ45(3)
WiFi&BT	2.4G WiFi (802.11b/g/n) with Bluetooth 4.2(14)
Cellular	Mini PCIe socket(10) with Nano SIM card port(12) to support 4G LTE
Video & Audio	
Display	MIPI DSI/LVDS (27), or RGB(26)
Audio	3.5mm audio I/O jack(7), Speaker(6)
Camera	MIPI CSI(17), DVP(18)
I/O & Other Features	
	RS485(2), 2x USB2.0 Host(4), USB2.0 OTG(5), RTC(11), Micro SD(13), Debug(15), IR(16), 5V OUT(19), 2x SPI(20,21), Reset(22), Power(23), Recovery(24), Ext-connector(25. Recovery, power, GPIO, ADC)
Electrical & Specifications	
Supply Voltage	5V/3A(8), 4.2V Battery(9)
Optional Modules	
	4G model, Camera, 10.1" LCD
Environmental & Mechanical	
Temperature	Commercial: 0° to 70° C
Humidity	10% to 90%
Dimensions	110 x 85mm

Block Diagram





Ideal for industrial control and monitoring



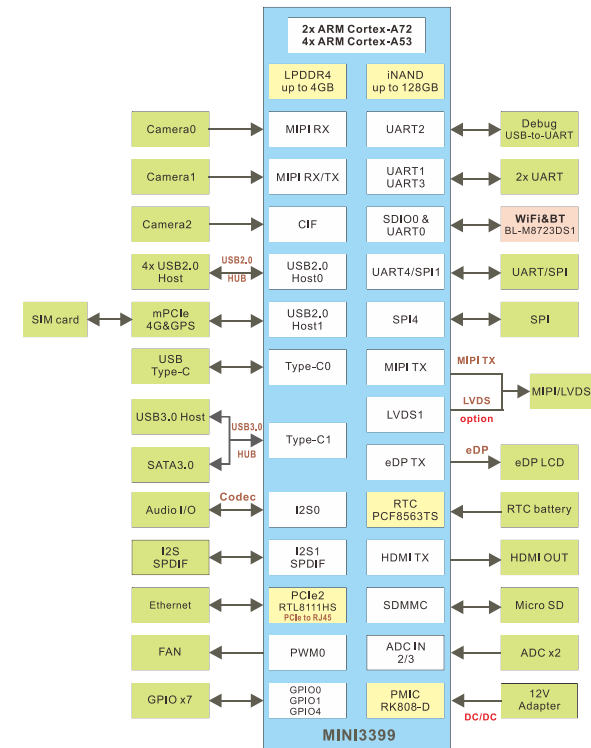
Target use cases

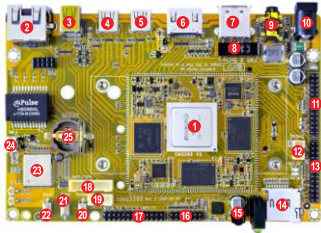
- OTT BOX
- Business Display
- Industrial Control Equipment
- POS machine
- Facial recognition

Specifications

System	
CPU module	MINI3399(1)
Network	
Ethernet	1000Mbps, RJ45(6)
WiFi&BT	2.4G WiFi (802.11b/g/n) with Bluetooth 4.2(20)
Cellular	Mini PCIe socket(34) with Nano SIM card port(33) to support 4G LTE
Video & Audio	
Display	HDMI 2.0(4), eDP 1.3(23), MIPI DSI/LVDS(24)
Audio	3.5mm audio I/O jack(3), 8-channel audio via HDMI
Camera	2x MIPI CSI(21, 22), 1x CIF(15)
I/O & Other Features	
	4x USB2.0 Host(5,29,30), Type-C(7), USB3.0 Host(8), 3x UART(9,10,12), SPI(11), GPIO(13,18), Debug(14), SATA3.0(16), SATA Power(17), ADC(19), Power(25), Recovery(26), Reset(27), RTC(28), I2S/SPDIF(31), Micro SD(32), Fan(35), Power switch(36)
Electrical & Specifications	
Supply Voltage	12V/3A(2)
Optional Modules	
	4G model, Camera, 10.1" LCD
Environmental & Mechanical	
Temperature	Commercial: 0° to 70° C
Humidity	10% to 90%
Dimensions	150 x 110mm

Block Diagram





Highly customizable SBC with ultra-multimedia performance



Target use cases

- OTT BOX
- Business Display
- POS
- Industrial Control Equipment

Specifications

System

CPU module CM3399(1)

Network

Ethernet 1000Mbps, RJ45(2)

WiFi&BT 2.4G/5G WiFi (802.11 a/b/g/n/ac) with Bluetooth 4.1(23)

Cellular Mini PCIe socket(rear side) with Nano SIM card port(rear side) to support 4G LTE

Video & Audio

Display Mini DP(3), HDMI(6), MIPI DSI(17)

Audio 3.5mm audio I/O jack(9), Digital audio via HDMI, MIC Array(16)

Camera 2x MIPI CSI(11,13)

I/O & Other Features

2x Type-C(4,5), USB2.0 Host(7), PWR&Battery(8), Debug(12), Micro SD(14), IR(15), SPI(18), 2x UART(18,19), Recover(20), Power(21), Reset(22), Fan(24), RTC(25), M.2(rear side)

Electrical & Specifications

Supply Voltage 5V/3A(10)

Optional Modules

4G model, Camera, 10.1" LCD

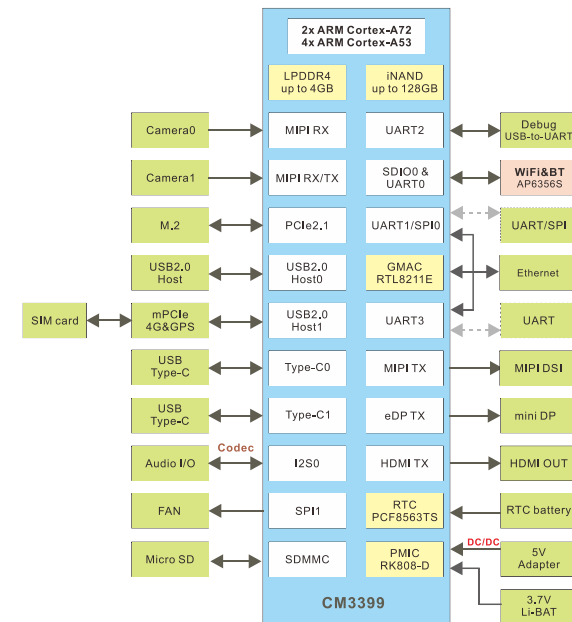
Environmental & Mechanical

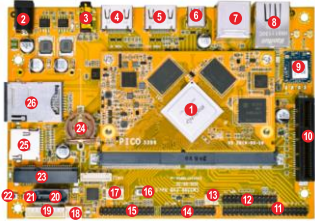
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 135 x 90mm

Block Diagram





Extensive wireless and wired connectivity
Modular and easy to service



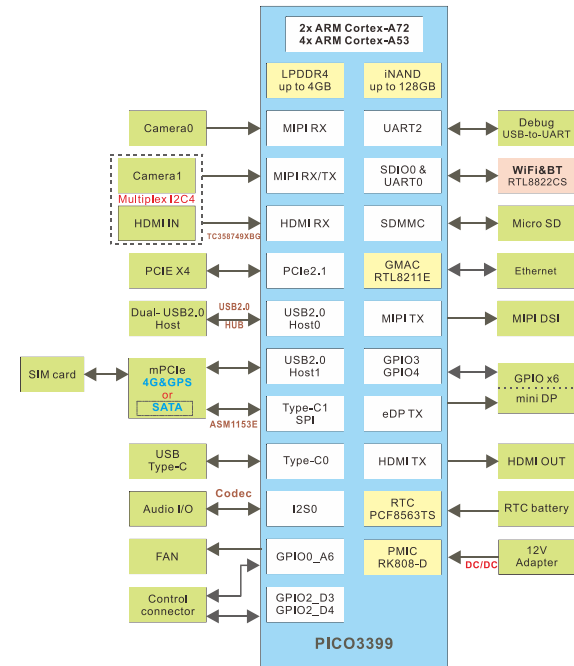
Target use cases

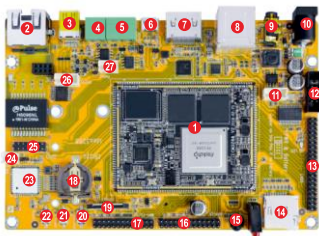
- 2in1 Android tablets
- VR
- TV-BOX
- in-vehicle navigations

Specifications

System	
CPU module	PICO3399(1)
Network	
Ethernet	1000Mbps, RJ45(8)
WiFi&BT	2.4G/5G WiFi (802.11 a/b/g/n/ac) with Bluetooth 4.1(9)
Cellular	Mini PCIe socket(23) with Standard SIM card port(26) to support 4G LTE
Video & Audio	
Display	HDMI(5), eDP(11), MIPI DSI(12)
Audio	3.5mm audio I/O jack(3), 8-channel audio via HDMI
Camera	2x MIPI CSI(14,15), HDMI in(4)
I/O & Other Features	
	USB Type-C(6), 2x USB2.0 Host(7), PCI-E x4(10), Fan(13), Recover(16), Debug(17), SATA Power(18), Control(19), SATA(20), Reset(21), Power(22), RTC(24), Micro SD(25)
Electrical & Specifications	
Supply Voltage	12V/3A(2)
Optional Modules	
	4G model, Camera, 10.1" LCD
Environmental & Mechanical	
Temperature	Commercial: 0° to 70° C
Humidity	10% to 90%
Dimensions	145 x 100mm

Block Diagram





Powerful CPU, robust GPU Performance & functionality



Target use cases

- Intelligent POS
- TV box
- Access control system
- Automotive IoT

Specifications

System

CPU module CM3288(1)

Network

Ethernet 1000Mbps, RJ45(2)

WiFi&BT 2.4GWiFi (802.11 a/b/g/n/ac) with Bluetooth 4.0(23)

Cellular Mini PCIe socket(rear side) with Nano SIM card port(rear side) to support 4G LTE

Video & Audio

Display Mini DP(3), HDMI(7), LVDS(13), MIPI DSI(16)

Audio 3.5mm audio I/O jack(9), Digital audio via HDMI

Camera MIPI CSI(17,19)

I/O & Other Features

CAN(4), RS485(5), USB2.0 OTG(6), 3x USB2.0 Host(8, 11), PWR&Battery(12), Micro SD(14), IR(15), RTC(18), Recover(20), Power(21), Reset(22), Fan(24), GPIO(25), RS232(26), M.2(rear side)

Electrical & Specifications

Supply Voltage 5V/3A(10)

Optional Modules

4G model, Camera, 10.1" LCD

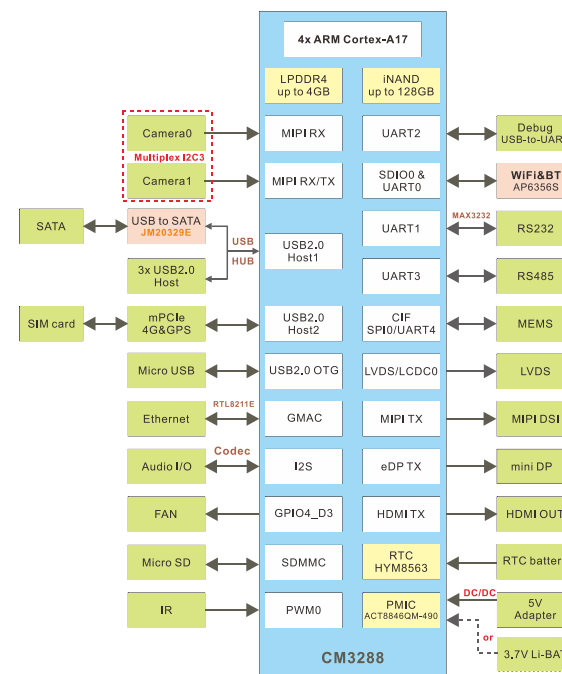
Environmental & Mechanical

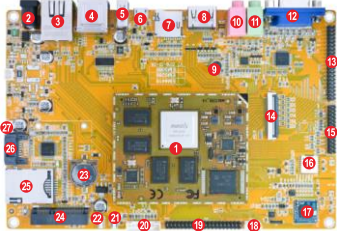
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 135 x 90mm

Block Diagram





Modular design
Suitable for manual assembly and removal



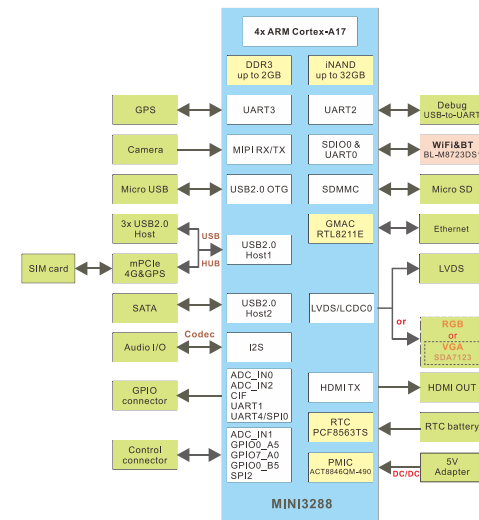
Target use cases

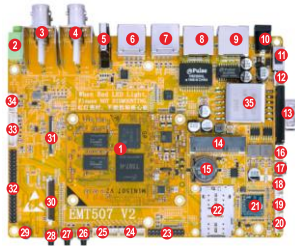
- Business Display
- POS
- Industrial Control Equipment
- All-in-one device
- Smart monitor

Specifications

System	
CPU module	MINI3288(1)
Network	
Ethernet	1000Mbps, RJ45(3)
WiFi&BT	2.4G WiFi (802.11b/g/n) with Bluetooth 4.2(17)
Cellular	Mini PCIe socket(24) with Standard SIM card port(25) to support 4G LTE
Video & Audio	
Display	HDMI(8), VGA(12), LVDS(13), RGB(14)
Audio	Line in(10), Audio out(11), MIC(9), Digital audio via HDMI
Camera	MIPI CSI(15)
I/O & Other Features	
	3x USB Host(4,5), USB OTG(6), Micro SD(7), Debug(18), GPIO(19), Key Connector(20), Recovery(21), Power(22), RTC(23), SATA(26), SATA Power(27)
Electrical & Specifications	
Supply Voltage	5V/3A(2)
Optional Modules	
	4G model, GPS(16), Camera, 10.1" LCD
Environmental & Mechanical	
Temperature	Commercial: 0° to 70° C
Humidity	10% to 90%
Dimensions	175.3 x 117.5mm

Block Diagram





Seamless integration of high-performance and extensive functionality



Target use cases

- IVI
- Digital cluster
- HD AVM
- HUD and other intelligent cockpit

Specifications

System

CPU module MNI507(1)

Network

Ethernet 1x 10/100/1000 Mbps(8), 1x 10/100 Mbps(9), RJ45

WiFi&BT 2.4G WiFi (802.11 b/g/n) with Bluetooth 4.2(21)

Cellular Mini PCIe socket(14) with Nano SIM card port(22) to support 4G LTE

Video & Audio

Display HDMI2.0(5), dual-channel LVDS(32) or RGB(30)

Audio 3.5mm audio out jack(2), Digital audio via HDMI

Camera 1x DVP(23), 4x AHD(3,4) or 1x 4-lane MIPI-CSI(31)

I/O & Other Features

5x USB2.0 Host(6,7,34), Power switch(11), DCIN-12V(12), RS232(13), RTC(15), Debug(16), USB2.0 OTG(17), 3x UART(18,19,20, multiplexed with GbE), ADC(24), SPI(25), FEL(26), Power(27), Reset(28), IR(29), Control(33)

Electrical & Specifications

Supply Voltage 12V/3A(10), POE(35)

Optional Modules

4G model, Camera, 10.1" LCD

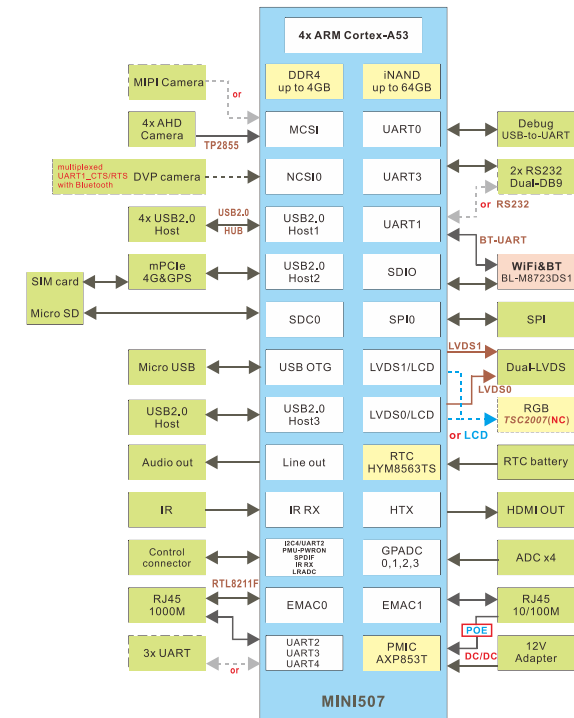
Environmental & Mechanical

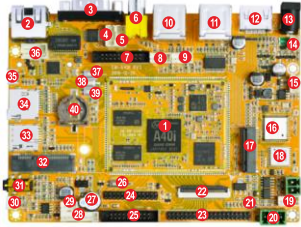
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 150 x 110mm

Block Diagram





Ideal solution for cost-sensitive industrial systems



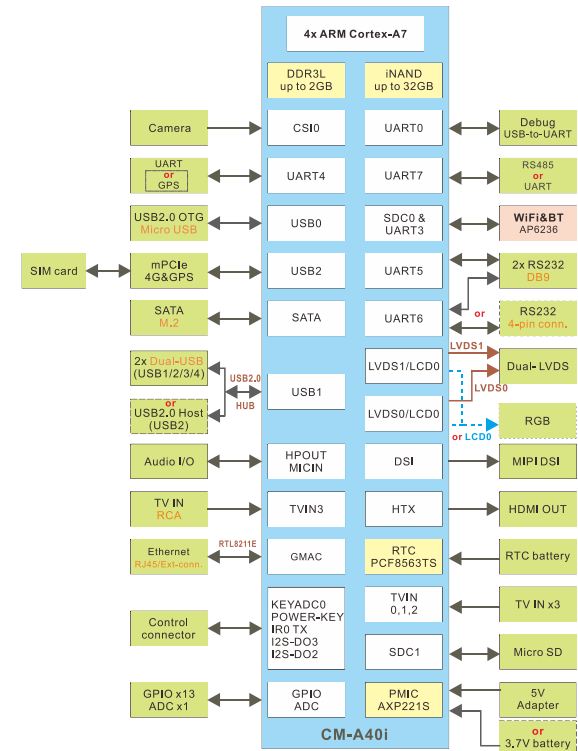
Target use cases

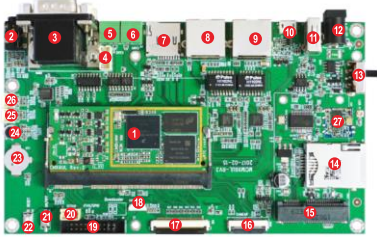
- Industrial control
- Smart terminals
- Data collection
- Industrial IoT

Specifications

System	
CPU module	CM-A40i(1)
Network	
Ethernet	1000Mbps, RJ45(2) or Extension interface(36)
WiFi&BT	2.4G WiFi (802.11b/g/n) with Bluetooth 4.0(16)
Cellular	Mini PCIe socket(32) with Nano SIM card port(33) to support 4G LTE
Video & Audio	
Display	HDMI2.0(5), HDMI 1.4(12), RGB(22), dual-channel LVDS(23), MIPI DSI(24)
Audio	3.5mm audio I/O jack(31), 8-channel audio via HDMI, Speaker(30)
Camera/Video in	1x parallel-CSI(25), 4x TV in(6,9)
I/O & Other Features	
	4x UART(3,4,5,19), GPIO(7), 5x USB2.0 Host(8,10,11), M.2(17), RS485(20,21), FEL(26), Buzzer(27), Control(28), Debug(29), Micro SD(34), USB OTG(35), Reset(37), Power(38), EINT(39), RTC(40)
Electrical & Specifications	
Supply Voltage	5V/3A(13,14), or 3.7V battery(15)
Optional Modules	
	4G model, GPS(18), Camera, 10.1" LCD
Environmental & Mechanical	
Temperature	Commercial: 0° to 70° C
Humidity	10% to 90%
Dimensions	140 x 100mm

Block Diagram





Optimized for industrial embedded applications



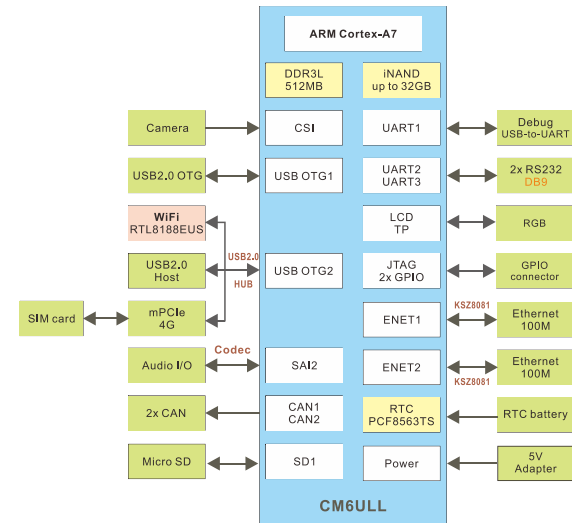
Target use cases

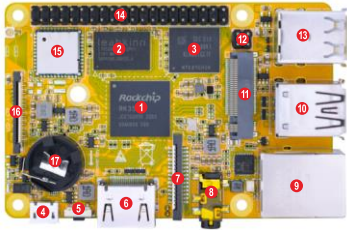
- IoT gateway
- POS
- Industrial Control
- HMI

Specifications

System	
CPU module	CM6ULL(1)
Network	
Ethernet	2x 100Mbps, RJ45(8,9)
WiFi&BT	2.4G WiFi (802.11b/g/n) (27)
Cellular	Mini PCIe socket(15) with Standard SIM card port(14) to support 4G LTE
Video & Audio	
Display	RGB(17)
Audio	3.5mm audio I/O jack(2), MIC(24), 2x Speaker(25,26)
Camera	parallel-CSI(16)
I/O & Other Features	
	2x RS232(3,4), 2x CAN(5,6), Micro SD(7), USB2.0 OTG(10), USB2.0 Host(11), Power switch(13), Cap-TP(18), JTAG&GPIO(19), Debug(20), Power(21), Reset(22), RTC(23)
Electrical & Specifications	
Supply Voltage	5V/2A(12)
Optional Modules	
	4G model, WiFi, Camera, 4.3" LCD, 7" LCD
Environmental & Mechanical	
Temperature	Commercial: 0° to 70° C
Humidity	10% to 90%
Dimensions	155 x 90mm

Block Diagram





Miniature size and power efficiency
Ideal for space constrained and portable systems



Target use cases

- POS
- Home security system
- Face Recognizing Robot
- Drones
- HMI

Specifications

CPU core

CPU	Rockchip RK3566 Quad-core Cortex-A55, 1.8 GHz(1)
GPU	ARM Mali-G52
VPU	4Kp60 decode, 1080p60 encode
NPU	1 TOPs

Memory & Storage

RAM	1GB/2GB/4GB/8GB(2)
Storage	8GB/16GB/32GB/64GB/128GB(3)

Network

Ethernet	1000Mbps, RJ45(9)
WiFi&BT	2.4G WiFi (802.11b/g/n) with Bluetooth 4.2(15)

Video & Audio

Display	MIPI DSI/LVDS(16), HDMI2.0(6)
Audio	3.5mm audio I/O jack(8), MIC(rear side)
Camera	MIPI CSI(7)

I/O & Other Features

Debug(4), Recovery(5), USB3.0(10), USB2.0 OTG(10), M.2(11), 2x USB2.0 Host(13), Expansion (14). 4x UART, I2C, I2S, SPI, PWM, GPIO, RTC(17), Micro SD(rear side)

Electrical & Specifications

Supply Voltage	5V(4), PoE(12). Requires separate PoE HAT
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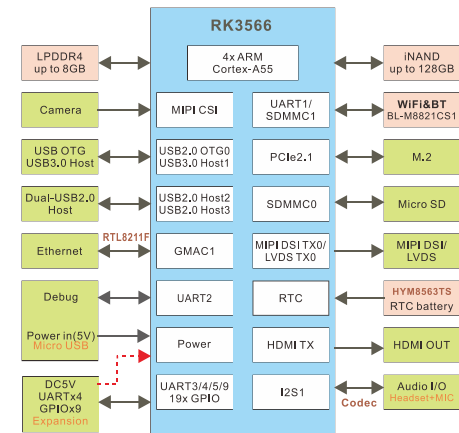
Optional Modules

4G model, Camera, 10.1" LCD

Environmental & Mechanical

Temperature	Commercial: 0° to 70° C
Humidity	10% to 90%
Dimensions	85 x 56 x 19.5mm

Block Diagram





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