



Ver. 3.1

BOARDCON
Embedded Design



Boardcon Embedded Design

Single Board
Computer, System-
on-Module,
Development
Kit and more



Open Source, Tech
Support questions,
Documentation,
Warranty



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



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



Boardcon Catalog 2024

▶ System-on-Module

Rockchip

CM3576	(1)	CM3288	(11)
CM3588	(2)	MINI3288	(12)
CM3588S	(3)		
CM3568	(4)		
CM3566	(5)		
CM1126	(6)		
CM3326S	(7)		
MINI3399	(8)		
CM3399	(9)		
PICO3399	(10)		

Allwinner

CMT527	(13)
MINI507	(14)
CMA40i	(15)

NXP

CM6ULL	(16)
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Ingenic

CMT41Z	(17)
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▶ Single Board Computer

Rockchip

EM3576	(18)	EM3399	(28)
Idea3588	(19)	Idea3288	(29)
SBC3588	(20)	EM3288	(30)
Idea3588S	(21)		
EM3568	(22)		
EM3566	(23)		
Idea1126	(24)		
EM3326S	(25)		
SBC3399	(26)		
Idea3399	(27)		

Allwinner

IdeaT527	(31)
EMT507	(32)
EMA40i	(33)

NXP

EM6ULL	(34)
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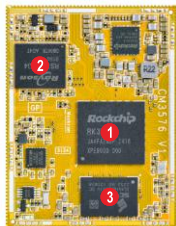
Ingenic

IdeaT41	(35)
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▶ Card Size Board

Rockchip

Compact3566	(36)
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Perfect balance between high performance and low power consumption



Application Field

- Industrial HMI
- Multi-Camera Monitoring
- DMS&OMS
- Automatic Vehicle Identification
- Home Security and Surveillance

Specifications

CPU core

CPU	Rockchip RK3576, 4x Cortex-A72 @ 2.2GHz + 4x Cortex-A53 @ 1.8GHz(1)
GPU	ARM Mali G52 MC3
VPU	8Kp30 or 4Kp120 decode, 4Kp60 encode
NPU	6 TOPS

Memory & Storage

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

Network

Ethernet	1x GbE PHY
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Video & Audio

Display	MIPI DSI, HDMI2.1, DP1.4, RGB/EBC
Audio	2x SAI, SPDIF
Camera/Video input	3x 4-lane MIPI CSI

Pin out

UART, USB3.2/DP, RGB/EBC, HDMI, MIPI DSI, MIPI CSI, Ethernet, PCIe, SDMMC, SAI, SPDIF_RX, I2C, PWM, SARADC_IN, GPIO, SPI

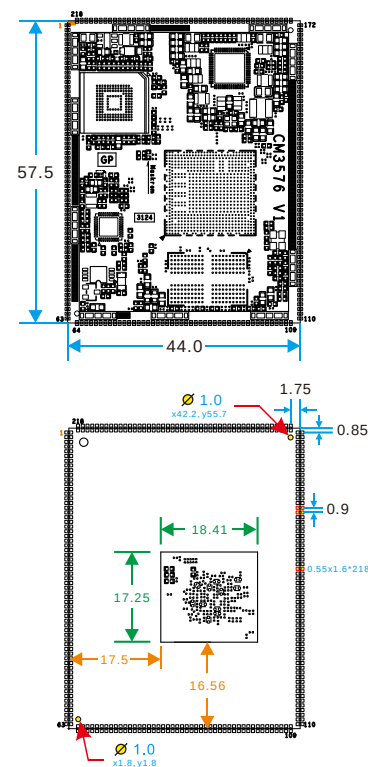
Electrical & Specifications

Supply Voltage	3.4V to 5.5V
Digital I/O Voltage	3.3V/1.8V

Environmental & Mechanical

Temperature	Commercial: 0° to 70° C
Humidity	10% to 90%
Dimensions	57.5 x 44.0mm
Weight	11.7 gram
Package	218-pin, 0.9mm pitch

PCB Dimension





Advanced processing power and high-end multimedia



Application Field

- 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

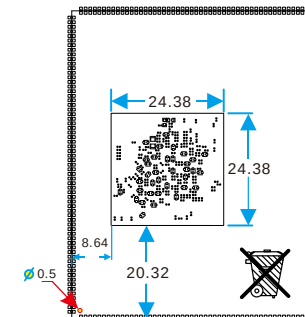
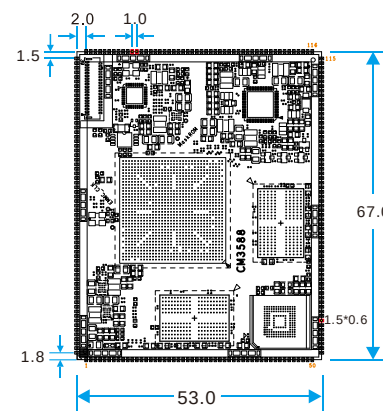
Electrical & Specifications

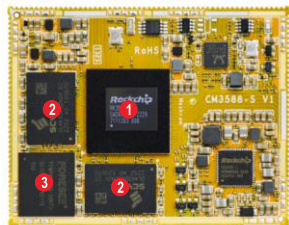
Supply Voltage	3.3V to 4.5V
Digital I/O Voltage	3.3V/1.8V

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



Application Field

- 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

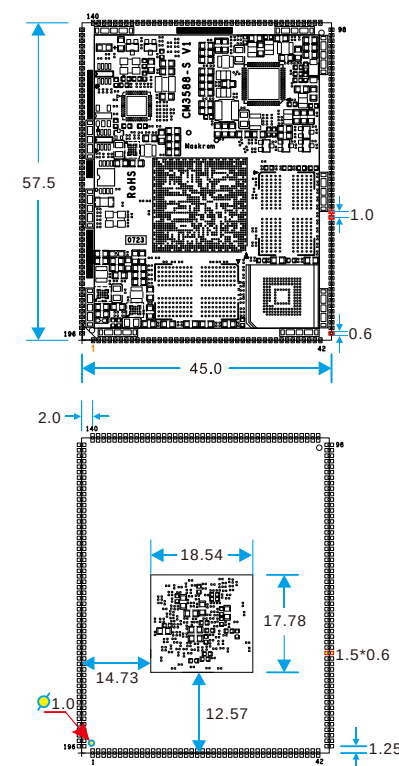
Electrical & Specifications

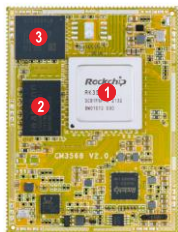
Supply Voltage	3.3V to 4.2V
Digital I/O Voltage	3.3V/1.8V

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



Application Field

- 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

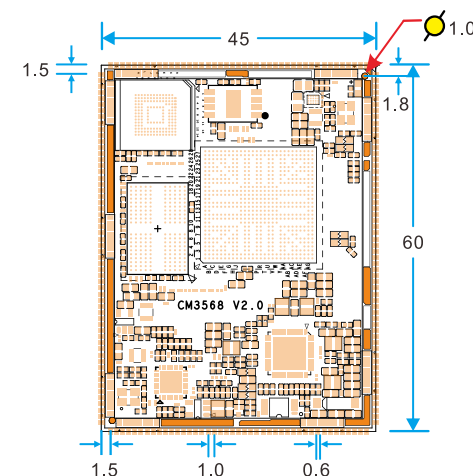
Electrical & Specifications

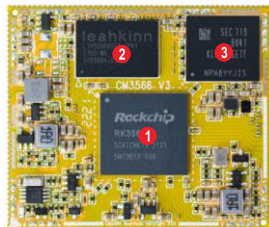
Supply Voltage	3.3V to 5V
Digital I/O Voltage	3.3V/1.8V

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



Application Field

- 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

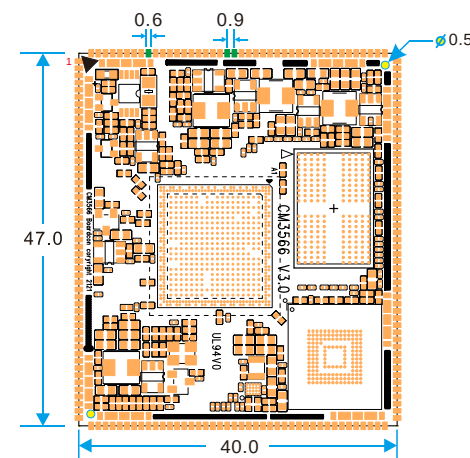
Electrical & Specifications

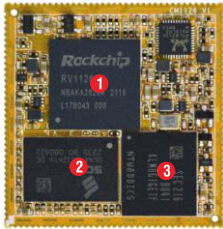
Supply Voltage	3.3V
Digital I/O Voltage	3.3V/1.8V

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



Application Field

- 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

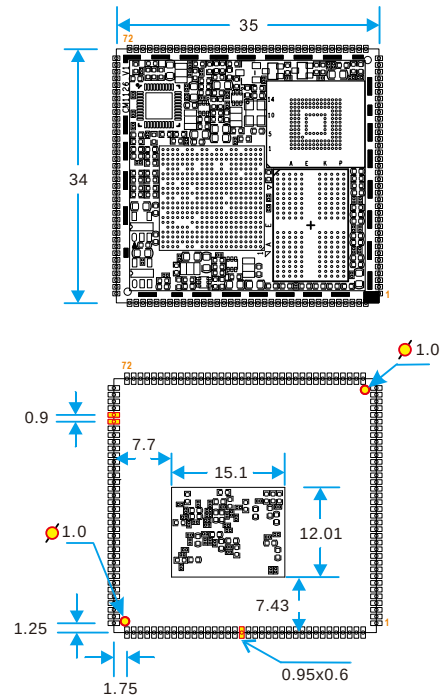
Electrical & Specifications

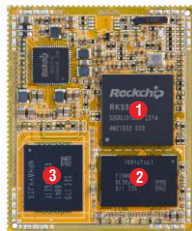
Supply Voltage	3.3V
Digital I/O Voltage	3.3V/1.8V

Environmental & Mechanical

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

PCB Dimension





Low-power and cost-optimized solution with ultimate scalability



Application Field

- 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

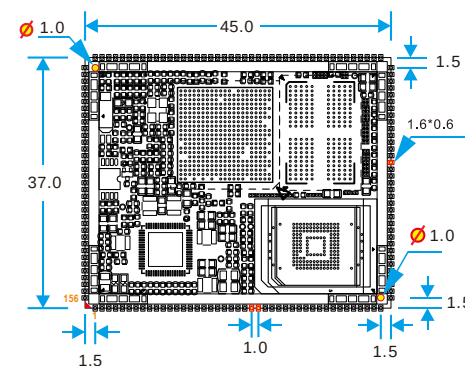
Electrical & Specifications

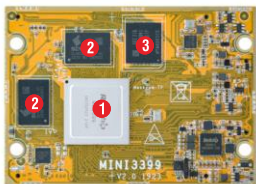
Supply Voltage	5V
Digital I/O Voltage	3.3V/1.8V

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



Application Field

- 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

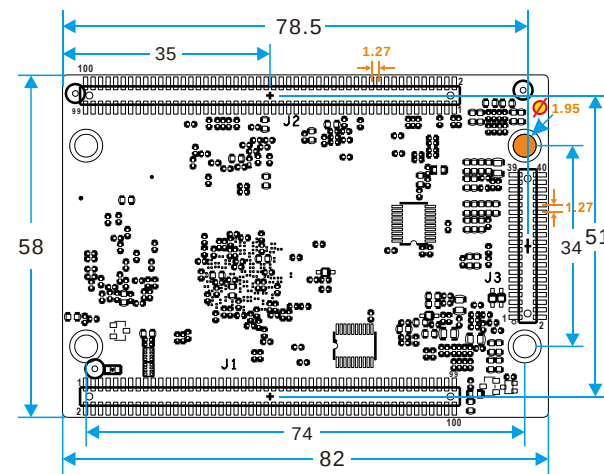
Electrical & Specifications

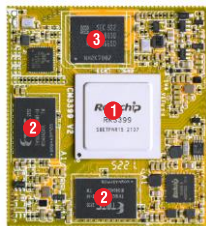
Supply Voltage 3.4V to 5V
 Digital I/O Voltage 3.3V/1.8V

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



Application Field

- 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

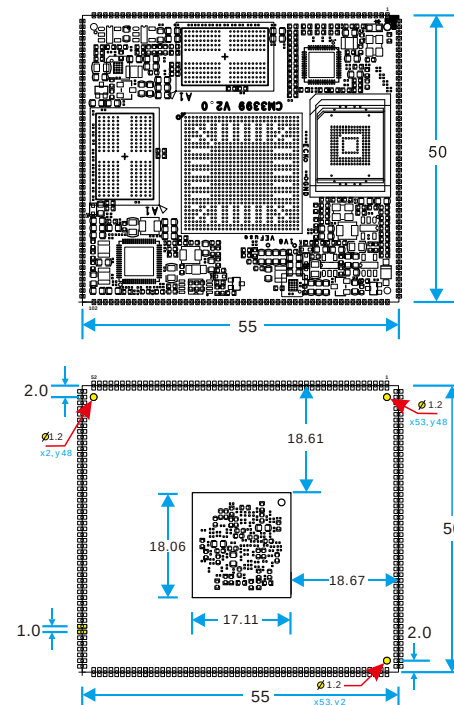
Electrical & Specifications

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



Application Field

- 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
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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

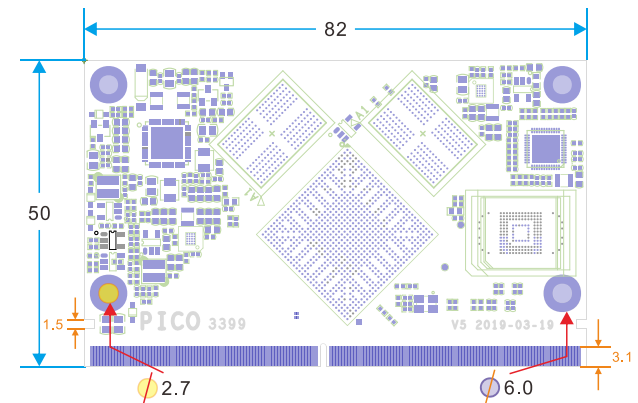
Electrical & Specifications

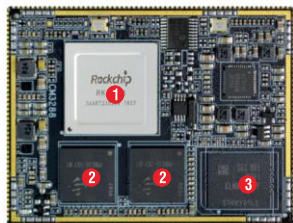
Supply Voltage	3.3V to 5V
Digital I/O Voltage	3.3V/1.8V

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



Application Field

- 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
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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

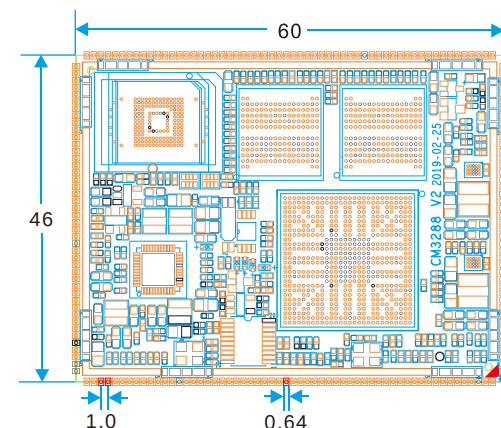
Electrical & Specifications

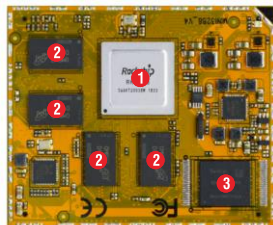
Supply Voltage	3.6V to 5V
Digital I/O Voltage	3.3V/1.8V

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



Application Field

- 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
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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

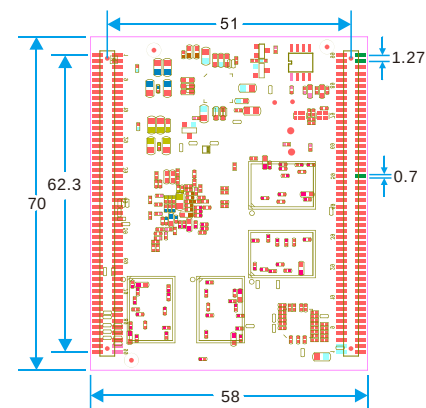
Electrical & Specifications

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





Powerful multi-core heterogeneous processing capabilities



Application Field

- Smart Commercial Display
- Industrial HMI
- Automotive dashboard

Specifications

CPU core

CPU	Allwinner T527, Octa-core Cortex-A55 @ 1.8GHz + RISC-V core @ 200MHz (1)
GPU	ARM Mali-G57 MC1
VPU	4Kp60 decode, 4Kp25 encode
NPU (optional)	2 TOPS

Memory & Storage

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

Network

Ethernet	1x GbE PHY
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Video & Audio

Display	RGB or 2x Dual-LVDS, HDMI2.0
Audio	I2S
Camera/Video input	2x 4-lane MIPI CSI

Pin out

UART, USB2.0, USB 3.1 (multiplexed with PCIe 2.1), dual-LVDS or RGB, HDMI, MIPI CSI, Ethernet, SDIO3.0, CAN, MIC, Audio out, ADC, TWI, PWM, I2S

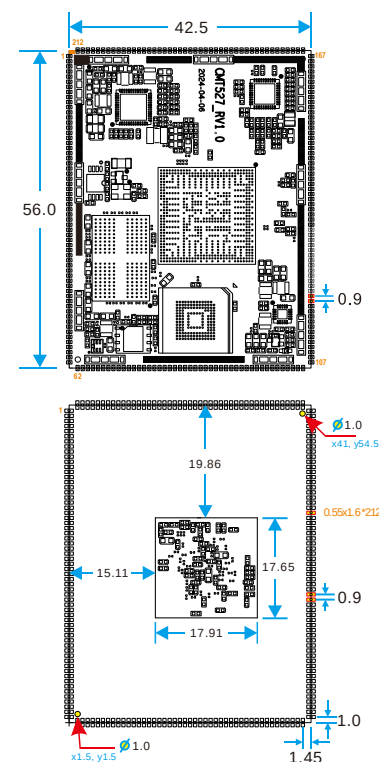
Electrical & Specifications

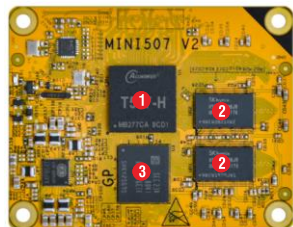
Supply Voltage	5V
Digital I/O Voltage	3.3V/1.8V

Environmental & Mechanical

Temperature	Industrial: -40° to 85° C
Humidity	10% to 90%
Dimensions	56.0 x 42.5mm
Weight	10.5 gram
Package	212-pin, 0.9mm pitch

PCB Dimension





Optimized for industrial embedded applications



Application Field

- 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
----------	-----------------------

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

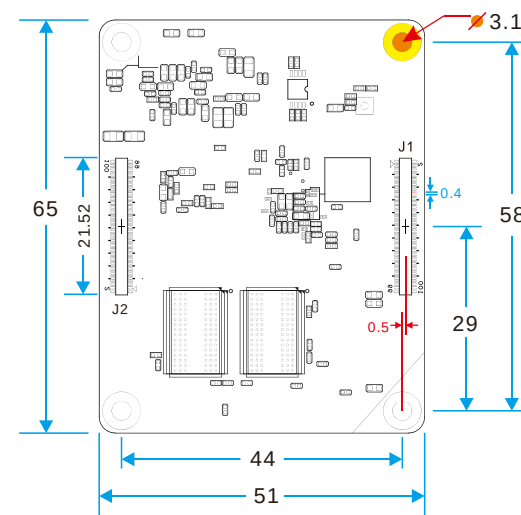
Electrical & Specifications

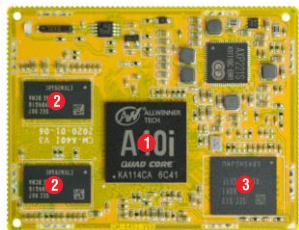
Supply Voltage	5V
Digital I/O Voltage	3.3V/1.8V

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



Application Field

- 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
----------	----------

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

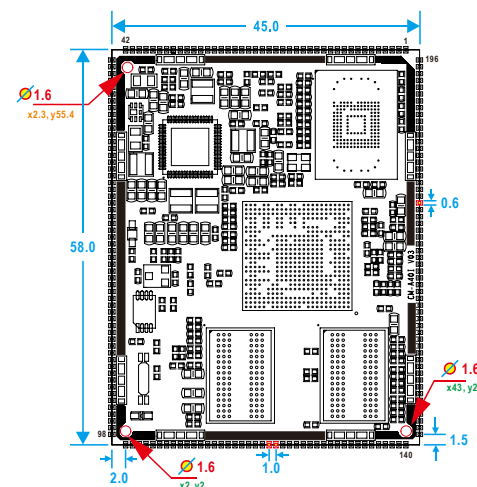
Electrical & Specifications

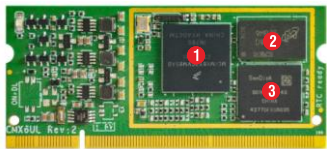
Supply Voltage	DC 5V or 3.7V Battery
Digital I/O Voltage	3.3V

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



Application Field

- 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

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

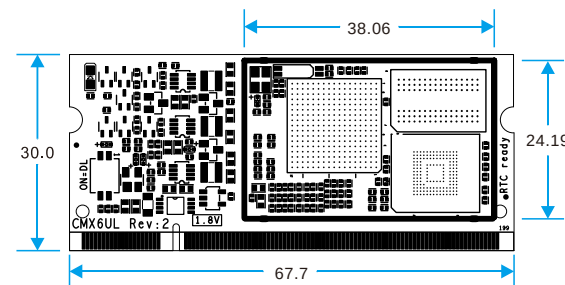
Electrical & Specifications

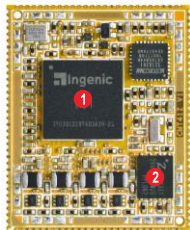
Supply Voltage 5V
Digital I/O Voltage 3.3V

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





Cost-effective SOM with excellent image processing capabilities



Application Field

- Fleet Management
- Building Security
- Home Security and Surveillance
- DMS&OMS

Specifications

CPU core

CPU	Ingenic T41ZL, Dual-core MIPS XBurst2 @ 1.4GHz CPU + RISC-V coprocessor @ 700MHz (1)
VPU	4Kp20 encode
NPU	1.2 TOPS

Memory & Storage

RAM	Built-in 64MB(1)
Storage	32MB/64MB/128MB/256MB Nor Flash(2)

Network

Ethernet	1x 100M PHY
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Video & Audio

Display	RGB, MIPI DSI
Audio	DMIC/I2S
Camera/Video in	1x DVP

Pin out

UART, USB2.0 OTG, RGB, DVP, MIPI RX, Ethernet, SDMMC, MIC, Audio out, I2C, 4x ADC IN, GPIO

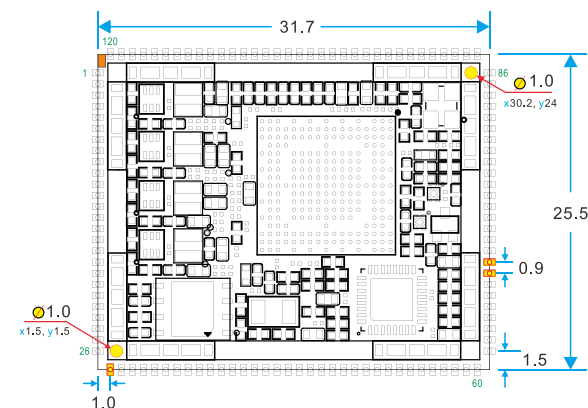
Electrical & Specifications

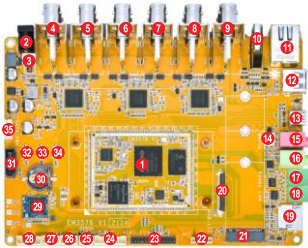
Supply Voltage	3.3V to 5.5V
Digital I/O Voltage	3.3V/1.8V

Environmental & Mechanical

Temperature	Commercial: 0° to 70° C, Industrial: -40° to 85° C
Humidity	10% to 90%
Dimensions	31.7 x 25.5mm
Weight	3.4 gram
Package	120-pin, 0.9mm pitch

PCB Dimension





Cost-effective and energy-efficient Multi-Camera Monitoring solution



Application Field

- Panoramic surveillance camera
- Multi-camera traffic recorder

Specifications

System

CPU module CM3576(1)

Network

Ethernet 1000Mbps, RJ45(11)

WiFi&BT 2.4G/5G 2T2R WiFi (802.11a/b/g/n/ac) with Bluetooth5.0(29)

Cellular NFC connector(22)

Video & Audio

Display HDMI2.1(10), RGB(20), MIPI DSI(23)

Audio Line in(15), Line out(16), 8-channel audio via HDMI

Camera/Video in 12x AHD(4,5,6,7,8,9)

I/O & Other Features

USB2.0 Host(12), USB Type-C(13), MIC(14), RS485(17), CAN(18), Micro SD(19), M.2(21), GPIO(24), Debug(25), 2x UART(26,27), SPI(28), RTC(30), SATA3.0(31), Recovery(32), Reset(33), Power(34), SATA Power(35)

Electrical & Specifications

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

Optional Modules

Camera, 10.1" LCD

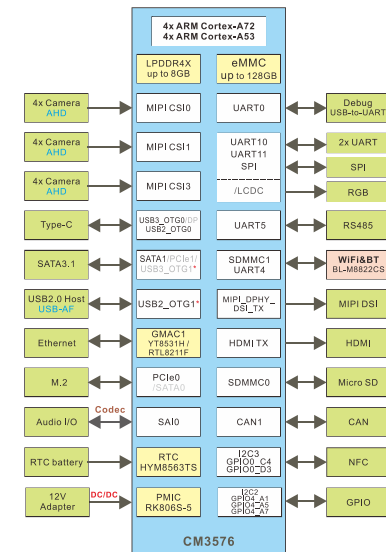
Environmental & Mechanical

Temperature Commercial: 0° to 70° C

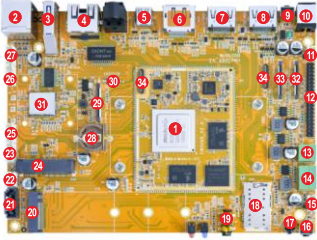
Humidity 10% to 90%

Dimensions 170 x 120mm

Block Diagram



* SATA and USB2.0 Host cannot be used simultaneously.
USB2.0 port is disabled also when USB3 is disabled.



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



Application Field

- 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

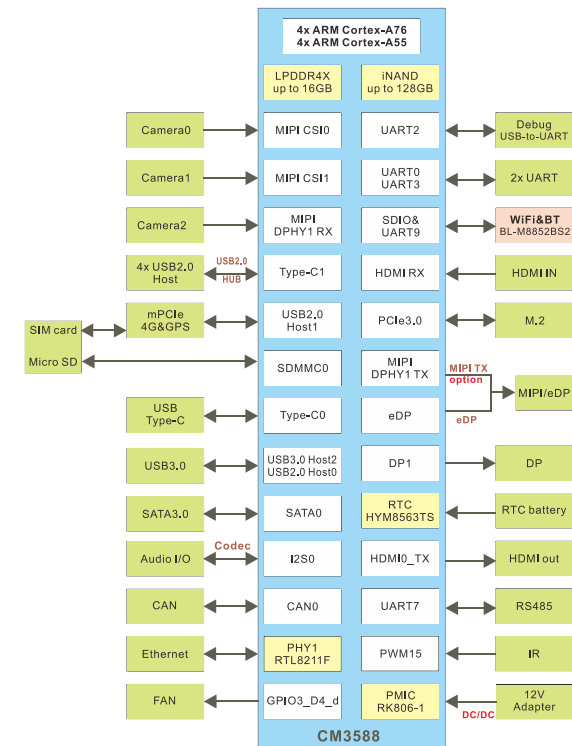
Environmental & Mechanical

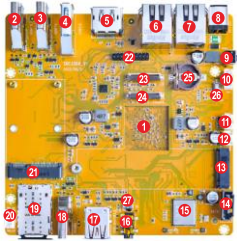
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 165 x 120mm

Block Diagram





Low-power and cost-optimized
solution with ultimate scalability



Application Field

- 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

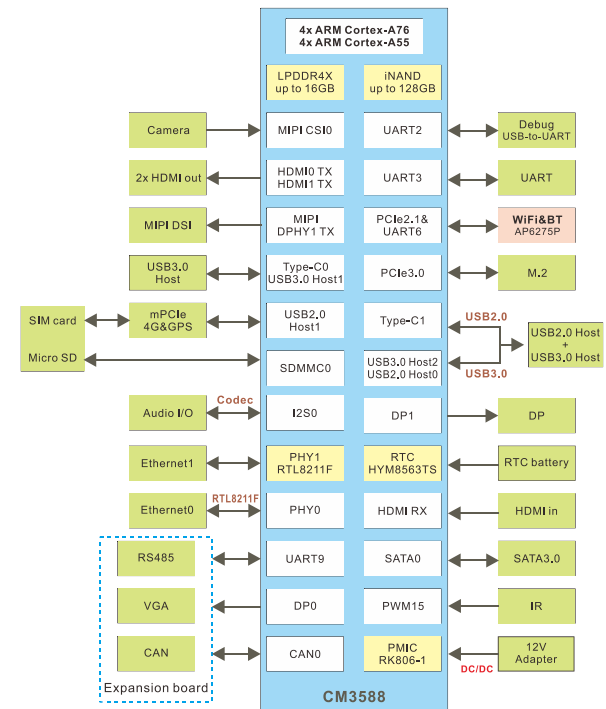
Environmental & Mechanical

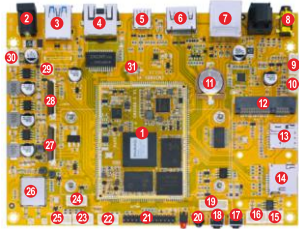
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 125.0 x 121.7mm

Block Diagram





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



Application Field

- 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

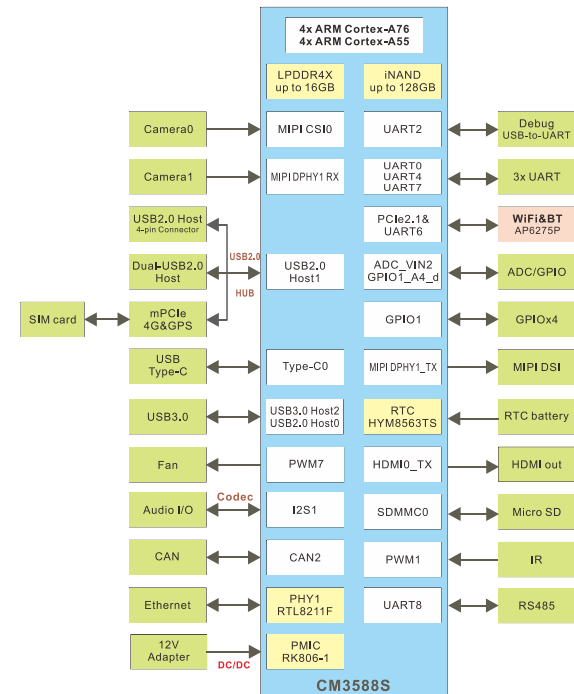
Environmental & Mechanical

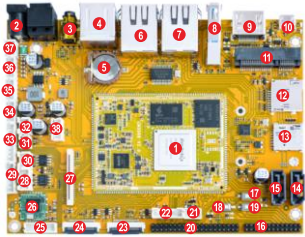
Temperature Commercial: 0° to 70° C

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



Application Field

- 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

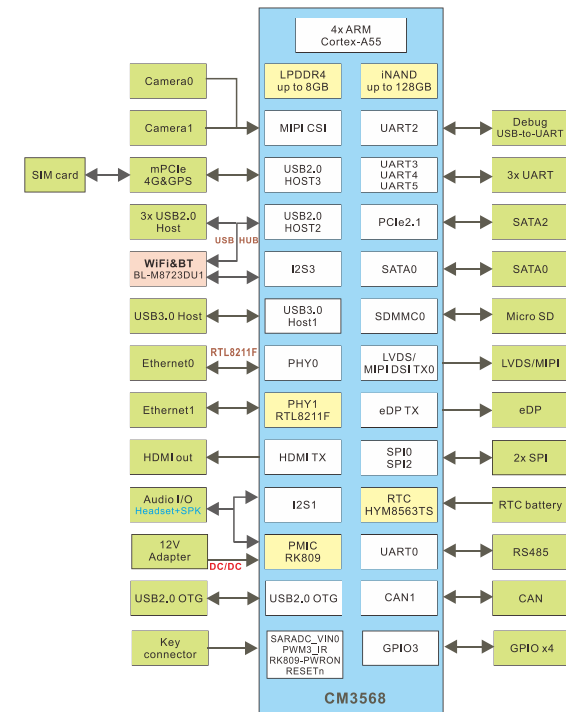
Environmental & Mechanical

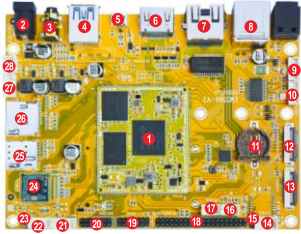
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 135 x 100mm

Block Diagram





Low-power and cost-optimized
solution with ultimate scalability



Application Field

- 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

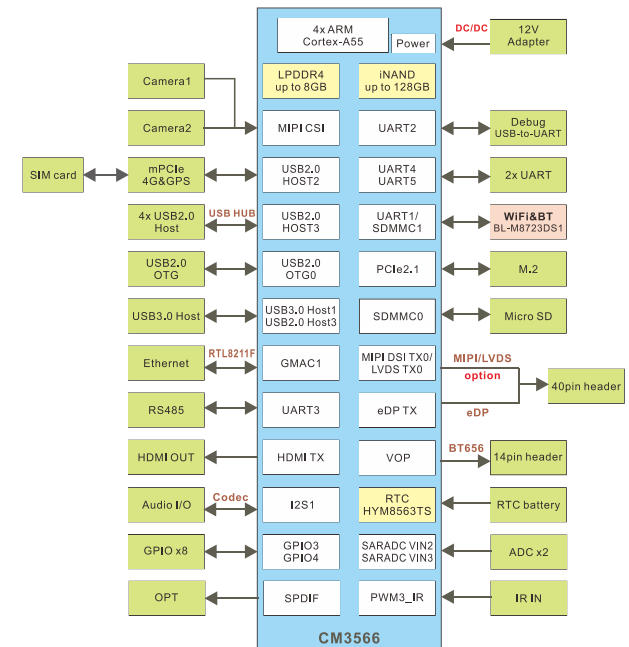
Environmental & Mechanical

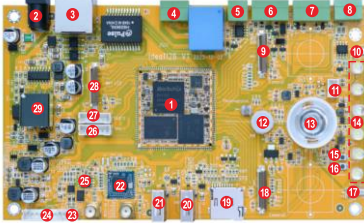
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 135 x 95mm

Block Diagram





Ideal solution for the demands of
security products and AIoT



Application Field

- 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

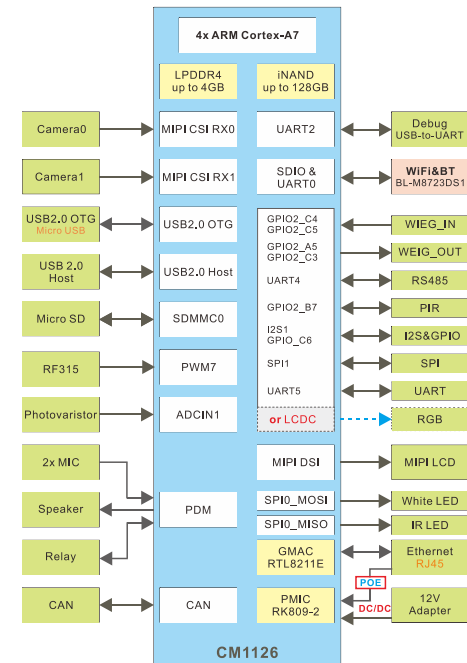
Environmental & Mechanical

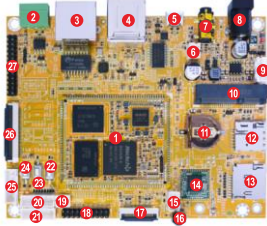
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 162 x 95mm

Block Diagram





Low Power, Scalable Solution for Smart devices



Application Field

- 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

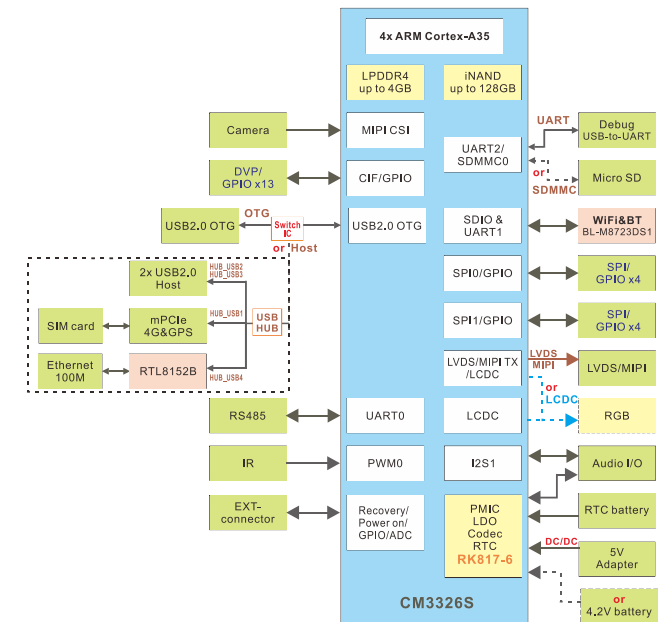
Environmental & Mechanical

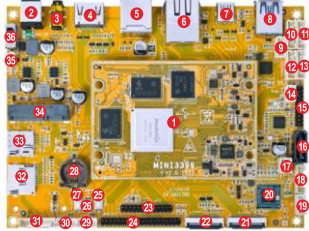
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 110 x 85mm

Block Diagram





Ideal for industrial control and monitoring



Application Field

- 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

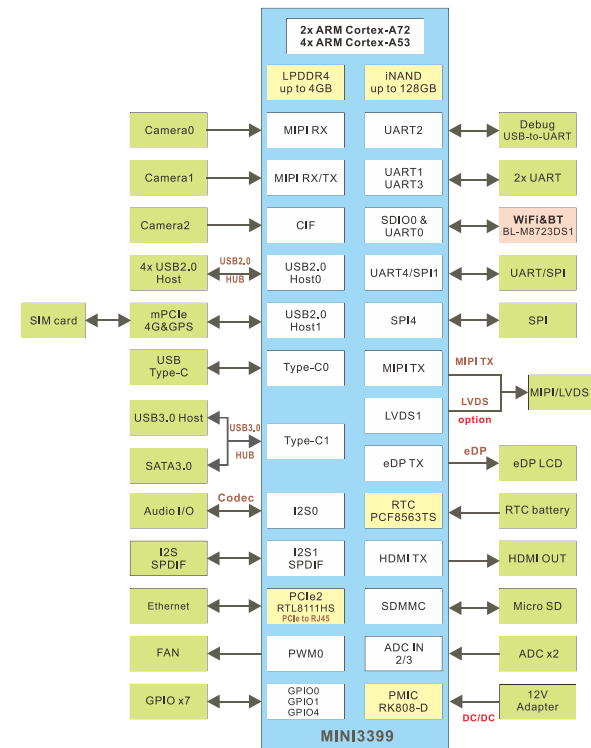
Environmental & Mechanical

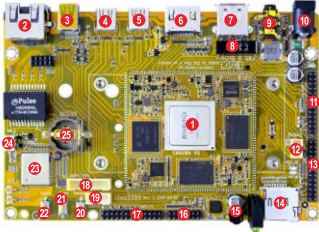
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 150 x 110mm

Block Diagram





Highly customizable SBC with ultra-multimedia performance



Application Field

- 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

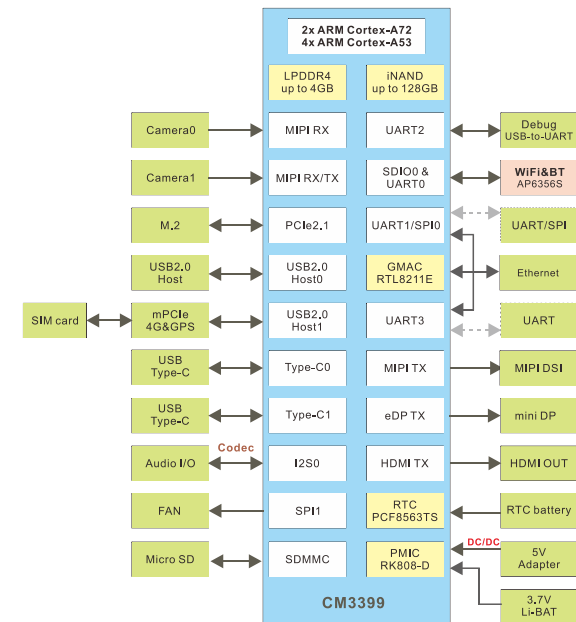
Environmental & Mechanical

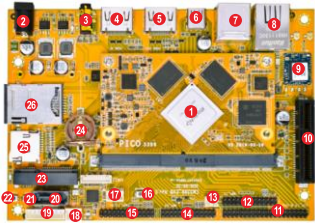
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 135 x 90mm

Block Diagram





Extensive wireless and
wired connectivity
Modular and easy to service



Application Field

- 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

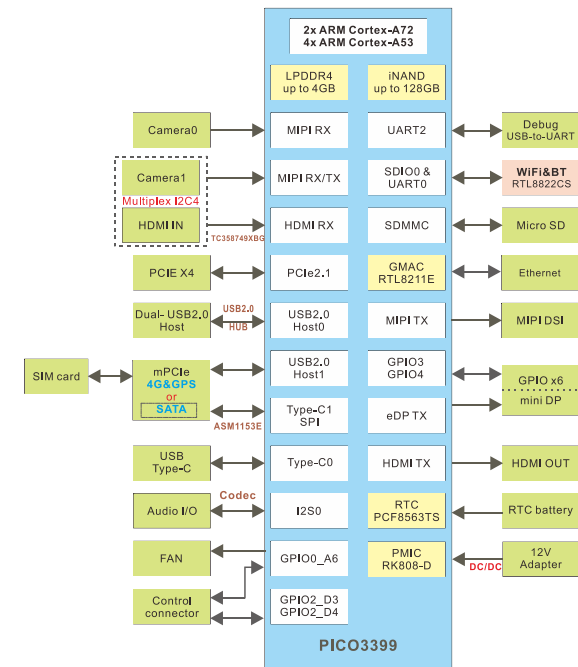
Environmental & Mechanical

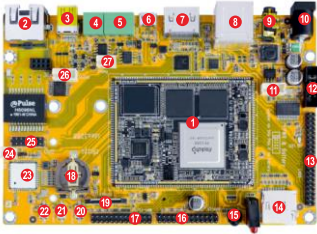
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 145 x 100mm

Block Diagram





Powerful CPU, robust GPU Performance & functionality



Application Field

- 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

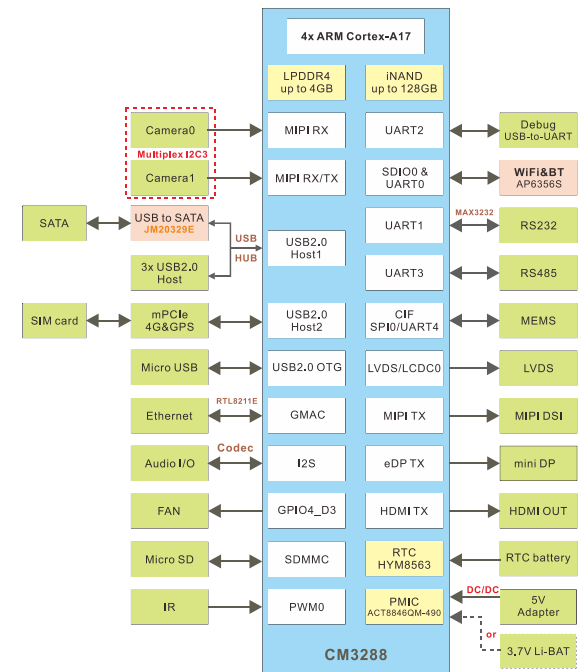
Environmental & Mechanical

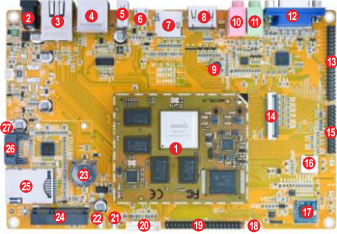
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 135 x 90mm

Block Diagram





Modular design
Suitable for manual assembly and removal



Application Field

- 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

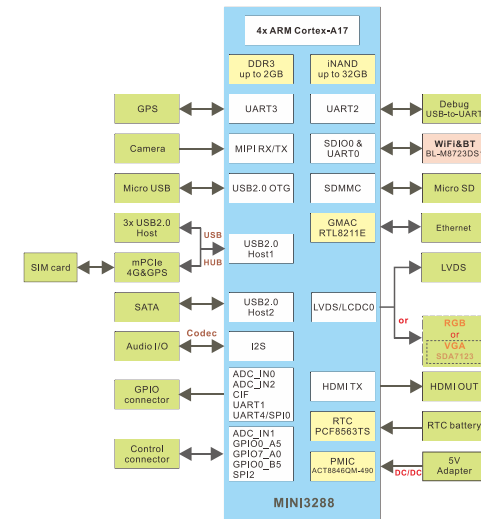
Environmental & Mechanical

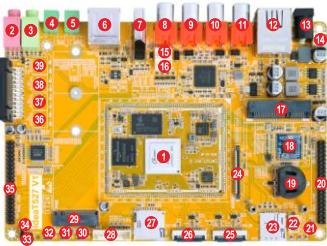
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 175.3 x 117.5mm

Block Diagram





Ideal choice for demanding applications in industries



Application Field

- Vehicle panoramic system

Specifications

System

CPU module CMT527(1)

Network

Ethernet 1000Mbps, RJ45(12)

WiFi&BT 2.4G WiFi (802.11b/g/n) with Bluetooth 4.2(18)

Cellular Mini PCIe socket(17) with Nano SIM card port(23) to support 4G LTE

Video & Audio

Display HDMI2.0(7), 2x dual-channel LVDS(20,35), RGB(24)

Audio Line in(2), Line out(3), 2x MIC(21,34), 4x Speaker(36,37,38,39), 8-channel audio via HDMI

Camera/Video in 4x AHD(8,9,10,11), 2x MIPI CSI(25,26)

I/O & Other Features

2x CAN(4,5), 2x USB2.0 Host(6), 2x Debug(15,16), RTC(19), RS485(22), Micro SD(27), ADC(28), M.2(29), Power(30), Reset(31), FEL(32), IR(33)

Electrical & Specifications

Supply Voltage 12V/3A(13,14)

Optional Modules

4G model, Camera, 10.1" LCD

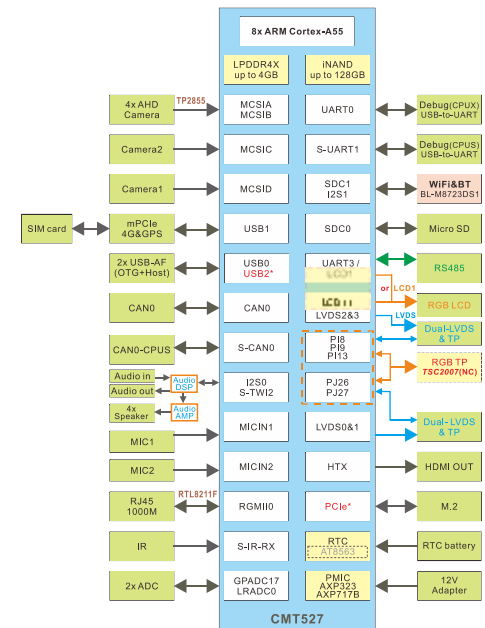
Environmental & Mechanical

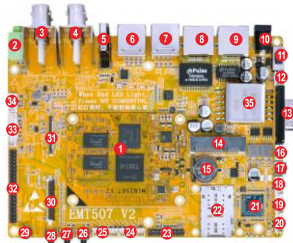
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 155 x 105mm

Block Diagram





Seamless integration of high-performance and extensive functionality



Application Field

- 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

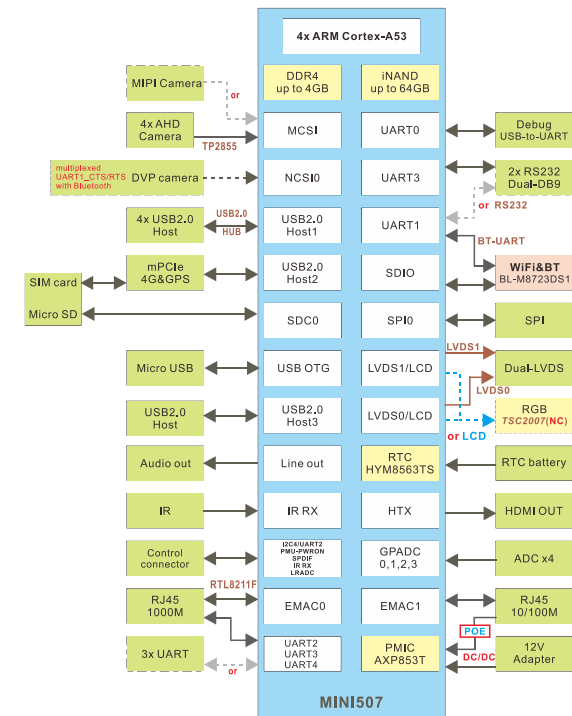
Environmental & Mechanical

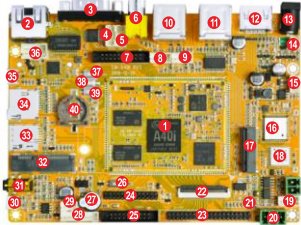
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 150 x 110mm

Block Diagram





Ideal solution for
cost-sensitive industrial systems



Application Field

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

Specifications

System

CPU module CMA40i(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

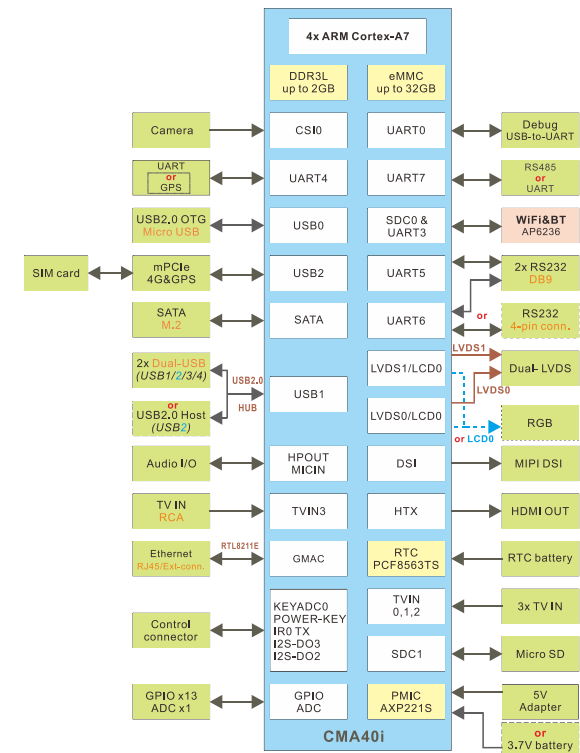
Environmental & Mechanical

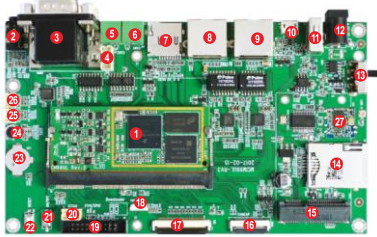
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 140 x 100mm

Block Diagram





Optimized for industrial embedded applications



Application Field

- 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

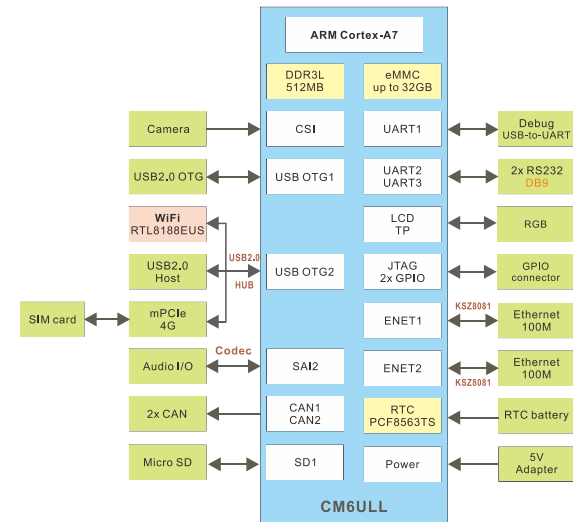
Environmental & Mechanical

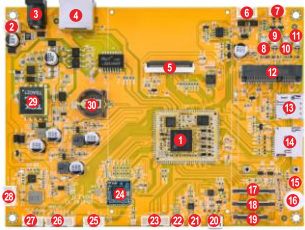
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 155 x 90mm

Block Diagram





Ultra-low power embedded solution for security camera



Application Field

- Security camera
- IP camera
- Video conference camera

Specifications

System

CPU module CMT41Z(1)

Network

Ethernet 10/100 Mbps, RJ45(4)

WiFi&BT 2.4G WiFi (802.11 b/g/n) with Bluetooth 4.2(24)

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

Video & Audio

Display RGB(5)

Audio Speaker(21), MIC(22)

Camera 2-lane MIPI CSI(17,18,19)

I/O & Other Features

RS485(6), Debug(7), Wake up(8), Reset(9), User key(10), Boot select(11), Micro SD(14), LDR(15), PIR(16), USB2.0 OTG(20), ADC&GPIO(23), GPIO(25), LED connector(26), UART(27), RTC(30)

Electrical & Specifications

Supply Voltage 12V/3A(2,3), 8.4V Li-battery(28), POE(29)

Optional Modules

4G model, Camera, 4.3" LCD

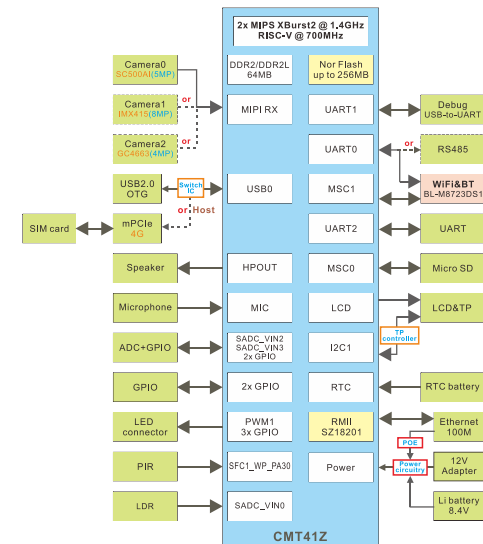
Environmental & Mechanical

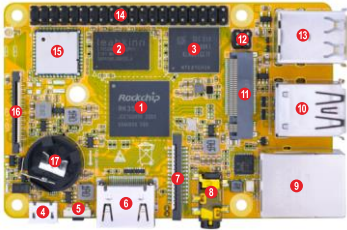
Temperature Commercial: 0° to 70° C

Humidity 10% to 90%

Dimensions 150 x 110mm

Block Diagram





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



Application Field

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

Specifications

CPU core

CPU	Rockchip RK3566, Quad-core Cortex-A55 ⁽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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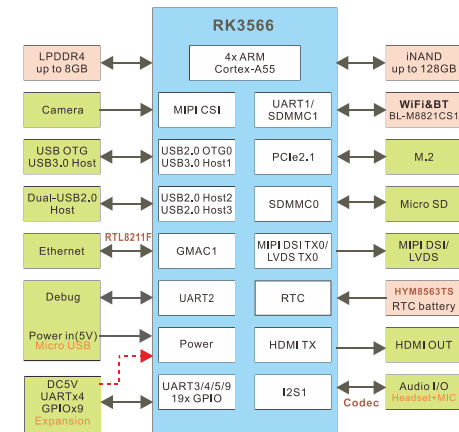
Optional Modules

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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