icbtech

SOLUTIONS FOR INNOVATIVE
& CONNECTED BUSINESSES

SOLUTIONS, SERVICES, COM & SBC

Make synergy happen

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About icbtech

Within the system we ensure the interoperability of IoT devices, web, mobile and cloud regardless of the industry, while offering the possibility to further enhance the solution with AI technology.

Since its founding in 2011 icbtech has been committed to embedded systems technology. Our engineers and specialists are engaged in development of digital devices which in their hardware and functionality exactly meet the given requirements.

We develop intelligent software and hardware solutions for professional and industrial use, then integrate them into complex and customized IoT systems and applications.

Our goal is to provide value for your business, expand your ideas and build your future proof scalable products.

Solutions & Services

IoT Platforms

Applications
for Smart Devices

Embedded Software
Engineering

System Software
Development

Hardware concepts
& Modules

Web Development

Machine Learning
& Computer Vision

Cloud Computing

Multimedia Devices

Development of customized audio and video player, interactive kiosk and multitouch table devices for professional use.

We make hardware concepts, implement firmware and application software for custom use-cases, connect the devices over the Internet to cloud and a central management platform.

Handheld Devices

Professional handheld devices for your business, from solution discovery to deployment.

We make smart multifunctional chargers for the handheld devices we develop, which can be controlled remotely and implement communication with the devices - firmware, application and content update.

Industrial IoT

We engineer complex IoT systems which combine hardware with powerful software, connectivity and management interfaces through cutting-edge technologies.

Our experts enhance IoT devices and embedded systems with machine learning algorithms or computer vision to get the most out of your data.

We also provide:

- Cloud based IoT device management service
- Real-time data collection
- Analytics and visualizations

eCommerce & mCommerce

In this area we provide the following services:

- Build B2B and B2C web and mobile applications
- Implement and integrate Payments
- Deploy Cloud solutions
- Create UI/UX Design
- Develop applications for Smart POS devices

Smart Devices

We develop custom smart devices with wireless or wired connectivity and integrate them into popular ecosystems.

Smart gateways, thermostats, meters, sensors, plugs, switches and other devices connect to a cloud platform for remote operation and control.

Smart Charging

While the intelligent electric vehicle charger manages when and how will the vehicle plugged into a charger receive power, the smart energy management takes into account the grid constraints and other relevant factors and preferences.

Smart EV chargers can be integrated with smart home systems, allowing for more seamless management and automation, offering insights into charging patterns, energy usage thus helping users to make more informed decisions.

Providing OCPP library fitting to various hardware platforms, we offer smart charging solutions.

Customized Solutions

icbtech provides complete solutions with a comprehensive range of services from market research to design, development, deployment, maintenance and support.

We guide your result-oriented digital transformation.

Enjoy flexible customization. You can create remarkable value for business with our solution which is tailored specifically for your business needs.

Maintenance and Support

Maintenance and support does more than just maintain the software but also help to adapt the necessary new updates.

This process is perhaps the last part of the software development lifecycle, but no less important than the development itself. We can help to keep the software updated, error-free, boost system performance and work efficiency.

Computer On Modules and Single Board Computers

As a distributor of Boardcon Technology Limited we offer the latest generation of QFN Style Solder-Down and SODIMM 200 Computer-on-Modules, as well as Single Board Computers.

Boardcon is our reliable partner for custom hardware designs and OEM developments, we have designed entirely new custom hardware for customers or integrated some of existing Computer-on-Module solutions into a device.

Full support and software customization for the embedded hardware is always playing an important role for our business relation, from which our customers benefit.

BOARDCON
Embedded Design

Computer On Module

CM3399

AI devices such as IoT devices, intelligent interactive devices, personal computers and robots

CPU Rockchip RK3399, Dual 64-bitCortex-A72@1.8GHz + Quad Cortex-A53 @ 1.4GHz

GPU ARM Mali-T860MP4 GPU, support OpenGL ES1.1/2.0/3.0/3.1/3.2, OpenCL1.2, DirectX11.1 etc.

Memory 1/2/4GB LPDDR4

Storage 8/16/32/64/128GB eMMC

Pin out USB2.0 Host, USB3.0 host, USB OTG, UART, MIPI, Ethernet, SPI, HDMI out, I2C, I2S, PCI-E, SDIO, SDMMC, eDP, Camera, PWM, ADC IN

Dimensions 55 x 50 mm

CM3566

TV box, AI robot, smart POS machine, e-book, face recognition terminal, business display integrated equipment

CPU Rockchip RK3566, Quad-core Cortex-A55, @ 1.8G Hz, 1TOPS

GPU Mali-G52 GPU. Support OpenGL ES 1.1/2.0/3.2, OpenCL 2.0, Vulkan 1.1

Memory 1/2/4/8GB LPDDR4

Storage 8/16/32/64/128GB

Pin out LVDS/MIPI DSI, eDP, MIPI CSI, 3x I2S, HDMI out, 2x USB2.0 Host, 1x USB3.0, 1x USB2.0 OTG, 2x SATA, 2x SDMMC, 4x I2C, 4x SPI, 8x UART, 1x Debug serial port, 14x PWM, 3x ADC IN

Dimensions 40 x 47 mm

Computer On Module

CM3588

AR/VR, edge IoT, AIoT, and computer vision applications.

CPU Rockchip RK3588, 4x Cortex-A76 cores @ 2.4GHz, 4x Cortex-A55 cores @ 1.8 Ghz, 6TOPS

GPU ARM Mali G610 MP4. Support OpenGL ES 1.1/2.0/3.2, OpenCL 2.2, Vulkan 1.2

Memory 8/16GB LPDDR4X

Storage 32/64/128GB

Pin out 5x UART, USB3.0/2.0 Host, USB3.1 Type-C, Ethernet, MIPI CSI, MIPI DSI, MIPI DPHY, HDMI TX/RX, DP, I2C, I2S, PCIe3.0/2.0, SATA3.0, SDMMC, SDIO, PWM, CAN, GPIO, etc.

Dimensions 67 x 53 mm

CM3568

Vehicle control center, industrial control panels, IoT gateways, cloud terminals, etc.

CPU Rockchip RK3568 Quad-core Cortex-A55, 2.0 GHz, 1TOPS

GPU Mali-G52 GPU. Support OpenGL ES 1.1/2.0/3.2, OpenCL 2.0, Vulkan 1.1

Memory 1/2/4/8GB LPDDR4

Storage 8/16/32/64/128GB

Pin out 9x UART, USB3.0 Host, 2x USB2.0 Host, USB2.0 OTG, USB3.0 OTG/SATA3.0, HDMI2.0, eDP, LCD RGB, 2x MIPI DSI (or 1x MIPI DSI, 1x LVDS), MIPI CSI, MDI, 2x SDMMC, RGMII, ADC, I2C, I2S, GPIO, PWM, Audio I/O, etc.

Dimensions 60 x 45 mm

Computer On Module

CM9X35

Embedded control HMI (human machine interface) applications including industrial control terminals, intelligent instruments, medical products,network terminals as well as data acquisition and analysis.

CPU	Atmel AT91SAM9X35, 400 Mhz
Memory	64/128MB DDR2
Storage	256MB/512MB/1GB SLC NAND optional
Pin out	LCD & Touchscreen, Ethernet, CAN, USB OTG&Host, Audio I/O, SD card, UART, I2S, SPI, External interrupt, etc.
Dimensions	40 x 40 mm

PICO-IMX8M-MINI

Advanced graphics, machine vision, and other media applications

CPU	NXP i.MX8M Mini, 4x Cortex-A53 core, 1.8GHz, 1x Cortex-M4F
GPU	GCNanoUltra for 3D acceleration, GC320 for 2D acceleration
Memory	1/2/4GB LPDDR4
Storage	8/16/32/64/128GB eMMC
Pin out	UART, USB Host, USB OTG, Gigabit Ethernet, MIPI CSI, MIPI DSI, PCIe, GPIO, SD, JTAG, I2C, SPI, SPDIF, SAI, etc.
Dimensions	67.6 x 34.3 mm

Computer On Module

CoM name	CM9X35	CM3566	CM3568	CM3399	CM3588	PICO-IMX8M-MINI
Format & Size	QS 40x40mm	QS 40x47mm	QS 60x45mm	QS 55x50mm	QS 67x53mm	SODIMM
Processor	Atmel AT91SAM9X35	Rockchip RK3566	Rockchip RK3568	Rockchip RK3399	Rockchip RK3588	NXP i.MXM8M Mini
Core	1x ARM9 @400MHz	4x Cortex-A55 @1.8GHz	4x Cortex-A55 @2.0GHz	2x Cortex-A72 @1.8GHz, 4x Cortex-A53 @1.4GHz	4x Cortex-A76 @2.4GHz, 4x Cortex-A55 @1.8GHz	4x Cortex-A53 @1.8GHz
Ram	64/128MB DDR2	1/2/4/8GB LPDDR4	1/2/4/8GB LPDDR4	1/2/4GB LPDDR4	8/16GB LPDDR4X	1/2/4GB LPDDR4
Flash / eMMC	256MB/ 512MB/1GB	8/16/32/ 64/128GB	8/16/32/ 64/128GB	8/16/32/ 64/128GB	32/64/128GB	8/16/32/ 64/128GB
Op. Temp.	0..70°C	0..70°C	-20..70°C	0..70°C	0..70°C	0..70°C
Availability	2027	2031	2031	2031	2031	2030

Single Board Computer

EM3566

Designed for AIoT applications such as AI robot, smart POS machine, face recognition terminal, and business display integrated equipment.

CPU Rockchip RK3566 Quad-core Cortex-A55, 1.8 Ghz, 1TOPS

GPU ARM Mali-G52 2EE GPU with support for OpenGL ES 1.1/2.0/3.2. OpenCL 2.0. Vulkan 1.1

Memory 2GB (up to 8GB)

Storage 8GB eMMC flash (up to 128GB)
M.2 PCIe 2.0 socket NVMe SSD
Micro SD card slot

Interfaces 2x UART, Debug serial port, RS485, USB3.0 Host, 4x USB2.0 Host, USB2.0 OTG, Gigabit Ethernet, HDMI, MIPI DSI/LVDS, eDP, MIPI CSI, ADC, GPIO, SD, IR, MEMS, etc.

Dimensions 135 x 95 mm

Expansion Mod. 4G model, WiFi, Camera, 7-inch LCD, 10.1-inch LCD

EM3568

Designed specifically for AIoT and industrial applications.

CPU Rockchip RK3568 Quad-core Cortex-A55 up to 2.0GHz, 1TOPS

GPU ARM Mali-G52 GPU with support for OpenGL ES 1.1/2.0/3.2, OpenCL 2.0, Vulkan 1.1

Memory 2/4/8GB LPDDR4

Storage 8GB eMMC flash (up to 128GB)
MicroSD card slot
SATA3.0

Interfaces 3x UART, Debug serial port, CAN, RS485, USB3.0 Host, 3x USB2.0 Host, USB2.0 OTG, 2x Gigabit Ethernet, HDMI, SATA3.0, MIPI DSI/LVDS, LCD(RGB), eDP, 2x MIPI Camera, GPIO, SD, PCIe, Audio I/O, etc.

Dimensions 135 x 100 mm

Expansion Mod. 4G model, WiFi, Camera, 7-inch LCD, 10.1-inch LCD

Single Board Computer

EM2000

EM2000 is an ARM9 SBC targets to control panel/HMI, fitness equipment, smart grid infrastructure, communications gateways, and imaging terminals among others

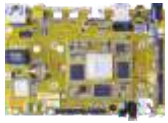
CPU Atmel AT91SAM9X35 @ 400 MHz, or Samsung ARM9 S3C2416X @ 400MHz, or Freescale i.MX287 ARM926EJ-S CPU @ 454 MHz

Memory 64MB/128MB DDR2

Storage 256MB/512MB/1GB optional

Interfaces LCD&Touchscreen, 2x Ethernet, RS485, CAN, 3x UART(DB9), USB OTG, 2x USB HOST, Audio I/O, SD card, SmartDAA(RJ22)

Dimensions 160 x 105 mm



IDEA3399

Includes an mPCIe slot for cellular connectivity, and other interactive interfaces geared towards AI and IoT applications.

CPU Rockchip RK3399, Dual 64-bit Cortex-A72 + Quad Cortex-A53 @ 1.8GHz

GPU ARM Mali-T860MP4 GPU, support OpenGL ES1.1/2.0/3.0/3.1/3.2, OpenCL1.2, DirectX11.1 etc.

Memory 4GB LPDDR4

Storage 8GB eMMC

Interfaces GbE, mDP, 2x Type-C, HDMI, USB2.0 Host, Audio, PWR&Battery, 3x MIPI(LCD, 2x Camera), 3x UARTs, SPI, POE, Micro SD, PCI-E(4G), M.2 slot(SSD), SIM slot, etc.

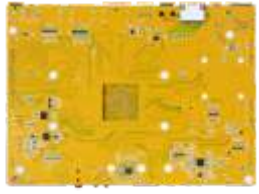
Dimensions 135 x 90 mm

Expansion Mod. 4G model, WiFi, Camera, 10.1-inch LCD

Single Board Computer

Idea3588

Designed for IPCs, high-end tablets, 8K TVs, AR/VR, personal mobile internet equipment, and other AIoT devices



CPU	Rockchip RK3588 octa-core processor, 4x Cortex-A76 cores @ 2.4GHz, 4x Cortex-A55 cores @ 1.8 Ghz, 6TOPS
GPU	ARM Mali-G610 MP4 with support for OpenGL ES 1.1/2.0/3.2, OpenCL 2.2, Vulkan 1.2
Memory	8GB LPDDR4X (up to 16GB)
Storage	32GB eMMC flash (up to 128GB) MicroSD card slot 1x SATA3.0 1x M.2 PCIe SSD
Interfaces	4x USB2.0 Host, 1x USB3.0 Host, 1x USB3.1 Type-C, 2x UART, RS485, CAN, Ethernet, HDMI OUT, HDMI IN, DisplayPort, MIPI CSI, MIPI DSI, PCIe2.0, PCIe3.0, SATA3.0, SD+SIM, Audio I/O, RTC, etc.
Dimensions	165 x 120 mm

Single Board Computer

SBC name	Idea3399	EM3566	EM3568	EM2000	Idea3588
Format & Size	135 x 90 mm	135 x 95 mm	135 x 100 mm	160 x 105 mm	165 x 120 mm
Processor	Rockchip RK3399	Rockchip RK3566	Rockchip RK3568	Atmel AT91SAM9X35, Samsung ARM9 S3C2416X, Freescale i.MX287 ARM926EJ-S	Rockchip RK3588
Core	2x Cortex-A72 @1.8GHz, 4x Cortex-A53 @1.4GHz	4x Cortex-A55 @1.8GHz	4x Cortex-A55 @2.0GHz	1x ARM9 @400/454MHz	4x Cortex-A76 @2.4GHz, 4x Cortex-A55 @1.8GHz
Ram	4GB LPDDR4	2/4/8GB LPDDR4	2/4/8GB LPDDR4	64/128MB DDR2	8/16GB LPDDR4X
Flash / eMMC	8GB	8/16/32/64/128GB	8GB	256MB/512MB/ 1GB optional	32/64/128GB
Op. Temp.	0..70°C	0..70°C	-20..70°C	0..70°C	0..70°C
Availability	2031	2031	2031	2027	2031

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