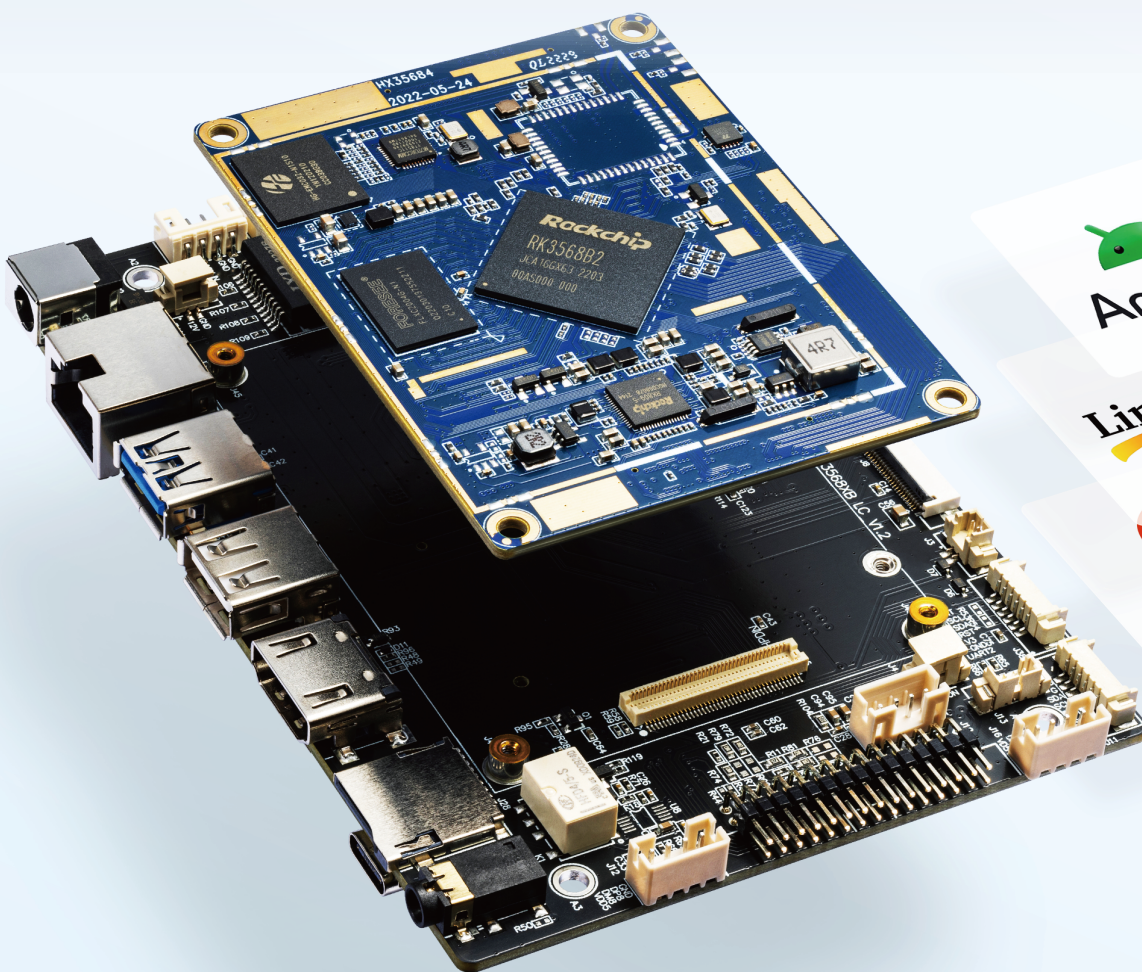**Rockchip** **Qualcomm**

ARM Architecture
Industrial Computer
HMI Human Machine Interface

all the BSP drivers are included

Android

Linux

ubuntu

Key Advantages

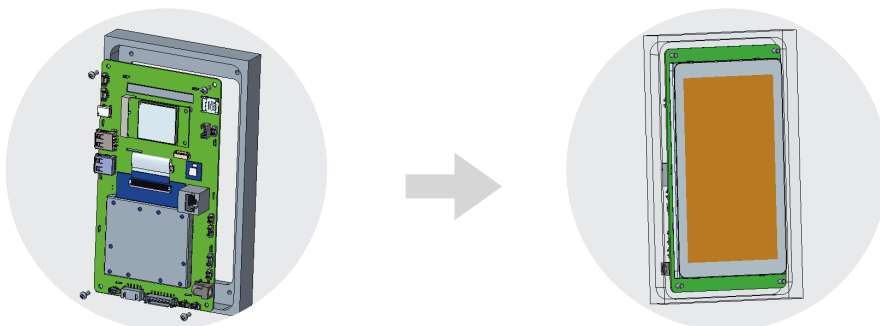Shorten the development
cycle for customers

Assist customers in
shortening the procurement time

5 - 10 year-long
product supply cycle

FAE Technical support
Rapid Response With solution

Installation diagram

Characteristics	Raspberry Pi	Industrial Embedded Motherboard
Stability	Average: suitable for general development and experimentation	High: can remain reliable in harsh environments
Operating Temperature Range	0℃ - 70℃	0℃ - 70℃ (optional : -40℃ - 85℃)
Anti-interference Capability	Prone to be affected by electromagnetic interference	Can work stably in a complex electromagnetic environment
Protection Level	Limited protection capabilities	High protection level against dust, water, shock,etc.
Interface Type	Limited interface type	Rich interfaces to meet diverse requirements
Reliability	Average: mainly used for non-critical applications	High: suitable for mission-critical and industrial control applications
Lifecycle	Relatively short as the product has a fast update and replacement cycle	Relatively long and usually has a multi-year supply and support cycle
Certification Standards	No strict industrial certification standards	Comply with various industrial certification standards, such as CE、ROHS
Technical Support	Forum communication , no online support provided by technical staff	1V1 FAE technical online support

Chipset Solution

Rockchip
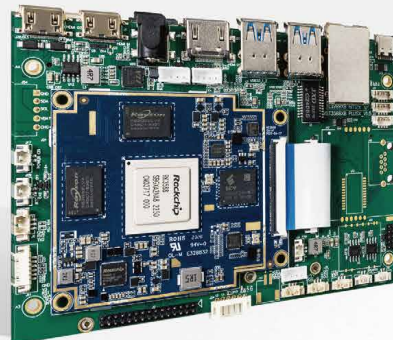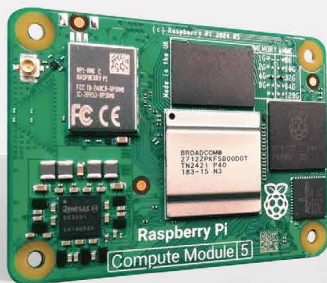
High computing power, meeting lightweight AI computing requirements

Chipset	CPU	GPU	NPU	Memory(DDR)	System
RK 3588	4*A76+4*A55 2.4GHz+1.8GHz	Mali-G610	6TOPS	4G/8G/16G/32G	Android 11 Debain11 Buildroot Ubuntu 20.04
RK 3568	4*A55 2.0GHz	Mai1-G52	1TOPS	2G/4G/8G	Android 11 Debain11 Buildroot Ubuntu 18.04/20.04
RK 3566	4*A55 1.8GHz	Mali-G52	1TOPS	2G/4G/8G	Android 11 Debain 11 Buildroot Ubuntu 18.04/20.04
RK 3399	2*A72+4*A53 1.8GHz+1.4GHz	Mali-T860	/	2G/4G	Android7 ubuntu18.04
RK 3288	4*A17 1.8GHz	Mali-T764	/	2G/4G	Android 5/7
RK 3128	4*A7 1.2GHz	Mali-400	/	1G/2G	Android 5/7
RK 3576	4*A72+4*A53 2.2GHz	Mali-G52	6TOPS	2GB/4GB/8GB/16GB	Android 14 ubuntu 20.04

Qualcomm

Native WiFi & BT & 4G & GPS/GNSS
Advanced manufacturing process, lower energy consumption

| Chipset	CPU	GPU	NPU	Memory(Ram)	System
Qualcomm 865	4*A77+4*A55 2.84GHz+1.8GHz	Adreno 650	/	8G	Android 10
Qualcomm 665	4*A73+4*A53 2.0GHz+1.8GHz	Adreno 610	/	4G	Android 10
Qualcomm 450	8*A53 1.8GHz	Adreno 506	/	2G/4G	Android 9
Qualcomm 8909	4*A7 1.1GHz	Adreno 304	/	1G	Android 7

ARM Single Board Computer
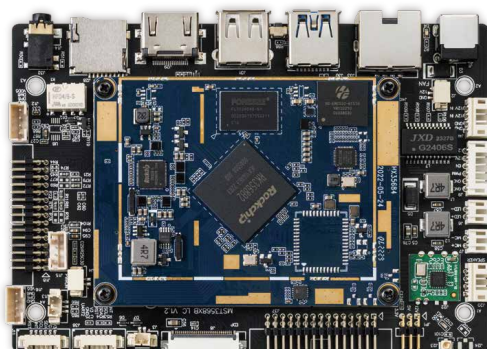
XB LC

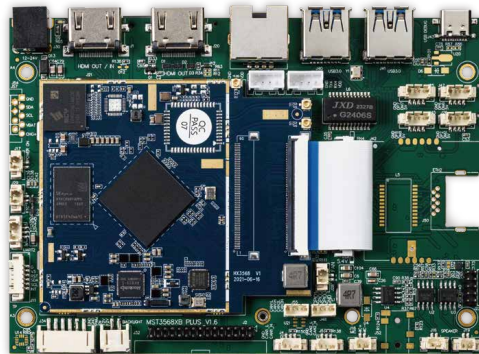**Applicable to medical equipment, industrial all-in-one machines, and other fields.**

Supporting 8-channel GPI0, 6-channel USB, 4G, TF card, headphone jack interfaces.
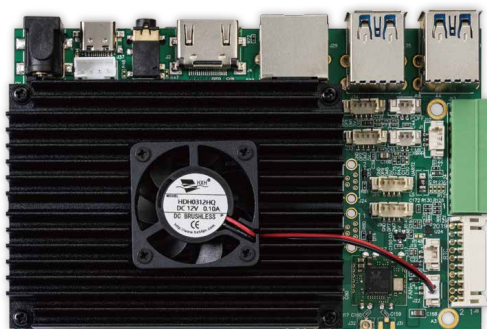
XB NANO

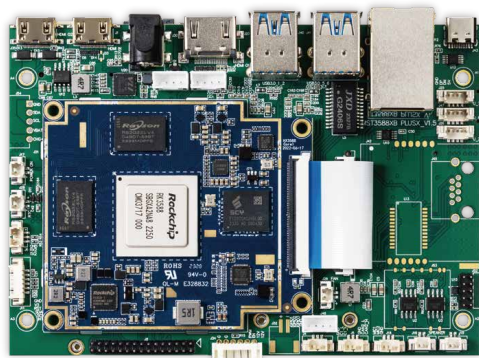**Applicable to fields such as AI, edge computing, and high-algorithm processing.**

Capable of connecting 8*AHD cameras, with 4 onboard USB 3.0 interfaces.

XB PLUS

Applicable to IoT, smart healthcare, smart cities, and other fields.

4G and 5G modules can coexist, with options of dual HDMI OUT or 1 HDMI OUT & 1 HDMI IN.

XB PLUSX

Applicable to industrial servers, smart displays, vehicle-mounted terminals, and other fields.

With 4 onboard USB 3.0 interfaces, 3 1000M Ethernet ports, 2 HDMI OUT & 1 HDMI IN, and supports the coexistence of 4G and 5G modules.

Specification Table

ITEMS	SOC	Storage	System	Network	CPU	Interface Signal
MST 3568XB	RK3568	2G+8G 2G+32G 4G+32G 4G+64G 8G+128G	Android11 Ubuntu 18.04	WiFi, CAN LAN,4G, GPS	Quad-core ARM-A55@2.0GHz	USB RS232 RS485 TTL UART RJ45
MST 3399XB	RK3399	2G+8G 4G+32G 4G+128G	Android 7.1 Ubuntu 18.04	WiFi, LAN 4G, GPS	Dual-core ARM-A72@1.8GHz Quad-core ARM-A53@1.4GHz	
MST 3588XB	RK3588	4G+32G 4G+64G 8G+64G 16G+64G 16G+128G	Android12 Ubuntu20.04		Quad-core ARM-A76@2.4GHz Quad-core ARM-A55@1.8GHz	
MST 8909XB	MSM8909	1G+8G	Android 7.1	WiFi, LAN 4G CAT4 GNSS	Quad-core ARM-A7@1.1GHz	
MST 450XB	Snapdragon 450	4GB+64GB	Android 9		Octa-core ARM-A53@1.8GHz	
MST 665XB	Snapdragon 665	4G+64G	Android 10		Quad-core ARM-A73@2.0GHz Quad-core ARM-A53@1.8GHz	

ARM Industrial Mini PC

MST-RK3588XB NANO BOX

Chipset	RK3588
Model no.	MST-RK3588XB NANO BOX
Storage	4G+32G (optional: 8G+64G，16+128G，32GB+256GB，M.SATA)
Network	WIFI，LAN，BT
System	Android，Linux
Interface	1*RS232，1*RS485，USB*4，HDMIOUT*1，1000M Ethernet*1，8-channel GPIO*1
CPU	Octa-core 64bit，Quad-core CORTEX-A76+Quad-core CORTEX-A55，Frequency up to 2.4GHz
NPU	GPU:MALI-G610 GPU，Support: OpenGL ES1.1/2.0/3.1/3.2, Vulkan 1.1/1.2/2.0，6TOPS

MST-RK3588XB PLUSX BOX

| Chipset	RK3588
Model no.	MST-RK3588XB PLUS BOX
Storage	4G+32G (optional: 8G+64G，16+128G，32GB+256GB，M.SATA)
Network	WIFI，LAN，BT
System	Android，Linux
Interface	USB*4，HDMI OUT*1，HDMIIN*1(optional)，1000M Ethernet*2，UART*2
CPU	Octa-core 64bit，Quad-core COR TEX-A76+Quad-core COR TEX-A55，Frequency up to 2.4GHz
NPU	GPU:Mail-G610 GPU，Support: OpenGL ES1.1/2.0/3.1/3.2, Vulkan 1.1/1.2/2.0，6TOPS

ARM Industrial Display Module

5-inch to 32-inch high-resolution, high-brightness displays with flexible options for customization available


Touch Screen

Metal frame

Display

Core Board

Base Board
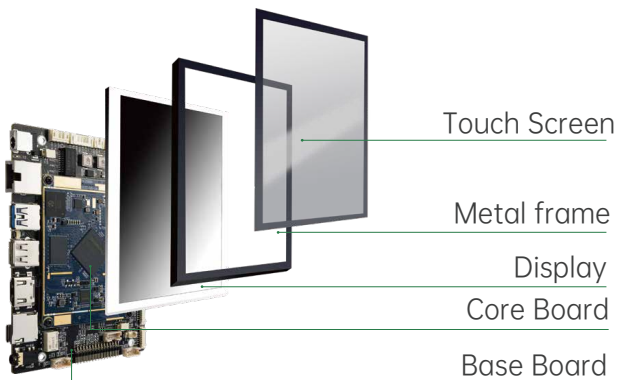
Size： 5inch-32inch

Brightness： 250nit-1500nit

Storage： 2G+8G、4G+16G、8G+64G、16G+128G

Specification Table

| Size	System	Resolution	Internet	UART	
5"	Android Linux	800X480 LVDS (option 720X1280 MIPI)	WIFI 802.11 b/g/n LAN 4G(option) GPS(option)	UART5:RS232/TTL UART6:RS232/TTL	UART_USB:RS485
7"		1024X600 LVDS (option 800X1280 MIPI) (option 1200X1920 MIPI)		UART5:RS232/TTL UART6:RS232/TTL	UART_USB:RS485
8"		1024X768 LVDS 800X1280 MIPI (option 1200X1920 MIPI)		UART1:RS232/TTL UART3:RS232	UART_USB:RS485 UART4:RS232/TTL
10.1"		1024X600 LVDS (option 800X1280 MIPI) (option 1200X1920 MIPI)		UART5:RS232/TTL UART6:RS232/TTL	UART_USB:RS485
12.1"		1280X800 LVDS		UART5:RS232 UART6:TTL	UART_USB:RS485 UART9:TTL
13.3"		1366X768 LVDS 1920X1080 eDP		UART1:RS232/TTL UART3:RS232	UART_USB:RS485 UART4:RS232/TTL
15"		1024x768 LVDS		UART1:RS232/TTL UART3:RS232	UART_USB:RS485 UART4:RS232
15.6"		1920X1080 eDP		UART1:RS232/TTL UART3:RS232	UART_USB:RS485 UART4:RS232/TTL
18.5"		1366X768 LVDS (option 1920X1080 LVDS)		UART1:RS232/TTL UART3:RS232	UART_USB:RS485 UART4:RS232/TTL
21.5"		1920X1080 LVDS		UART1:RS232/TTL UART3:RS232	UART_USB:RS485 UART4:RS232/TTL
32"		1920X1080 LVDS		UART1:RS232/TTL UART3:RS232	UART_USB:RS485 UART4:RS232/TTL

ARM Industrial Panel PC
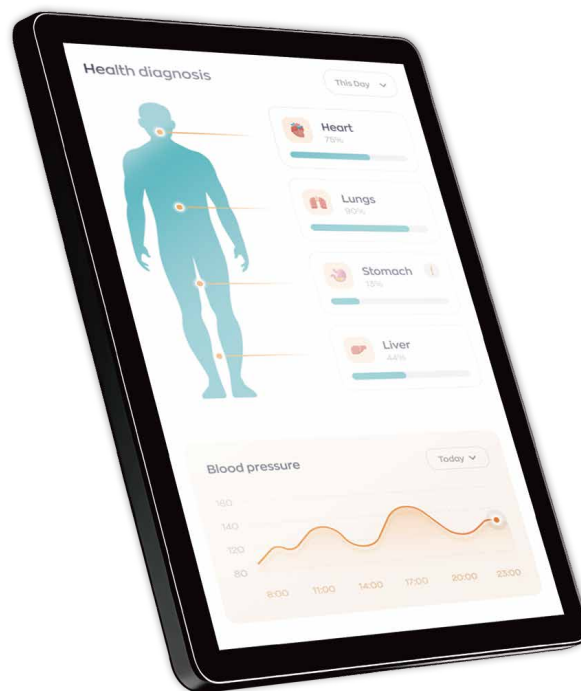
Full-featured interface standard covering
Customization sizes from 5 to 43 inches

Industrial-grade touch display product for harsh environments

Interface Description
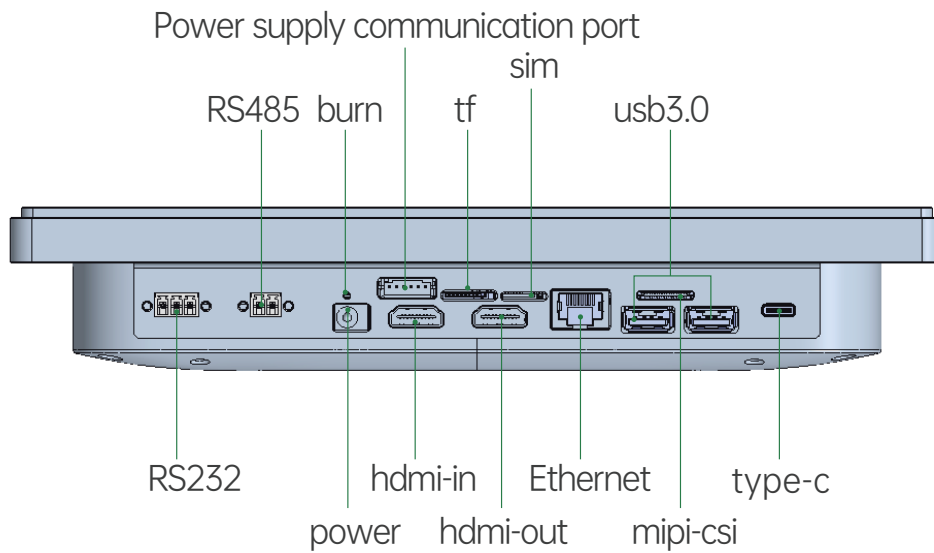
Can meet the requirements of a variety of interfaces
Optional:WIFI, Bluetooth, 4G modules

72-hour production high-temperature test
8000-hour durability test

Industrial
Touch Panel Monitor

HDMI interface,optional resolution and brightness

· A sturdy all-aluminum alloy body

· Wide temperature operation:-10~60℃

· Industrial-grade chip

· Industrial anti-glare and corrosion-resistant AG process

· Wide voltage power supply: DC12V - 36V

· Support multiple installation methods

FAE Technical Support

Rapid Response With Solution

Warranty for 1 year

Repairs can be shipped back
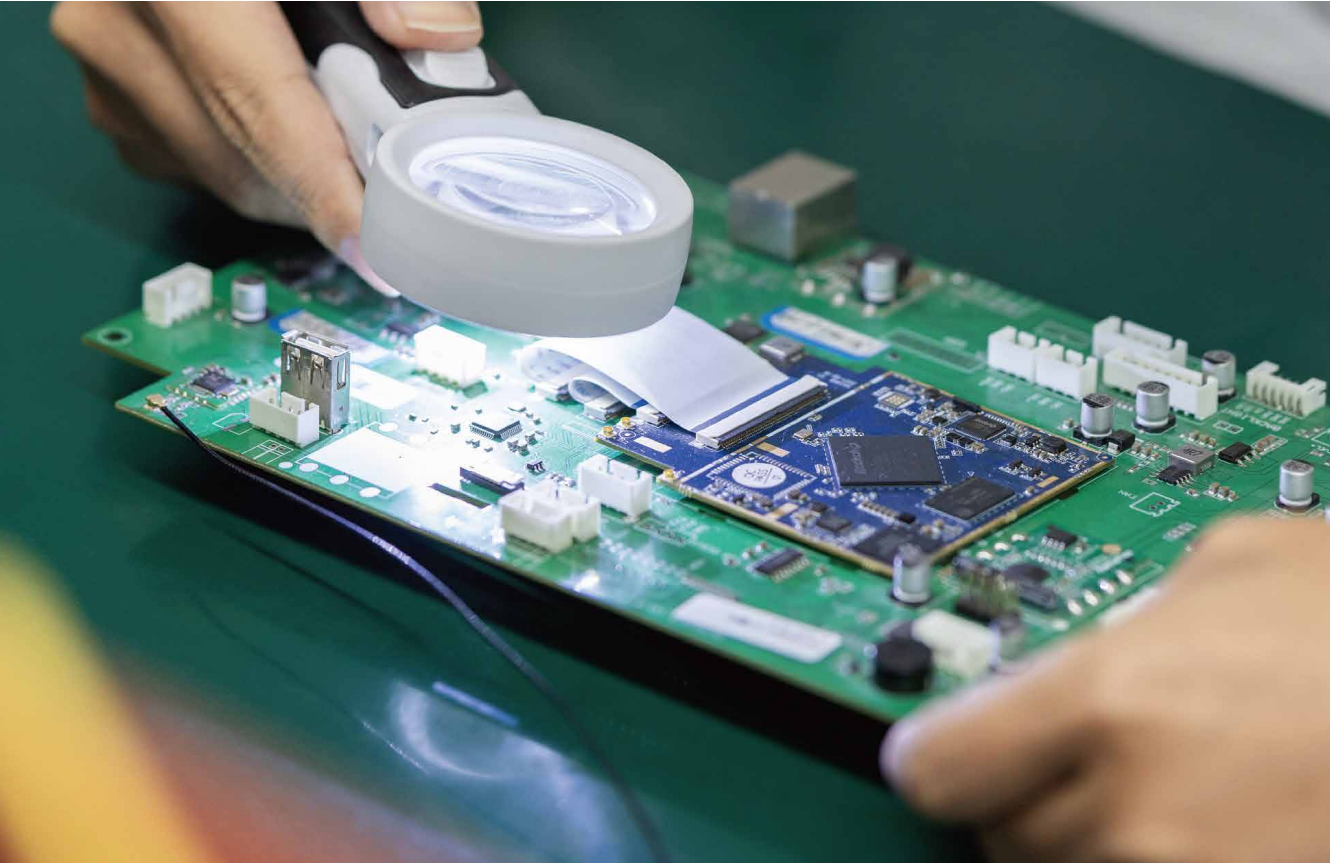or replaced with a new one

Provide SDK Toolkit

Provide API

Product Documentation

Tutorials and Examples

ODM Service

Applications cover a wide range of fields, including Industrial motherboard,HMI Human Machine Interface,
Intelligent manufacturing and more.

Medical Equipment

Smart Transportation

HMI Human Machine Interface

Smart Energy

Industrial All-in-one Machines

Self-Service Vending Machine

Customization Process

Contact Customer Service

Determine Detailed Development Requirements

Technical Alignment Evaluation of Development Timeline and Cost

Sign Custom Development Contract

Design and Development

Testing of Custom Samples

Sample Finalization

Project Acceptance and Delivery

Ongoing Technical Support
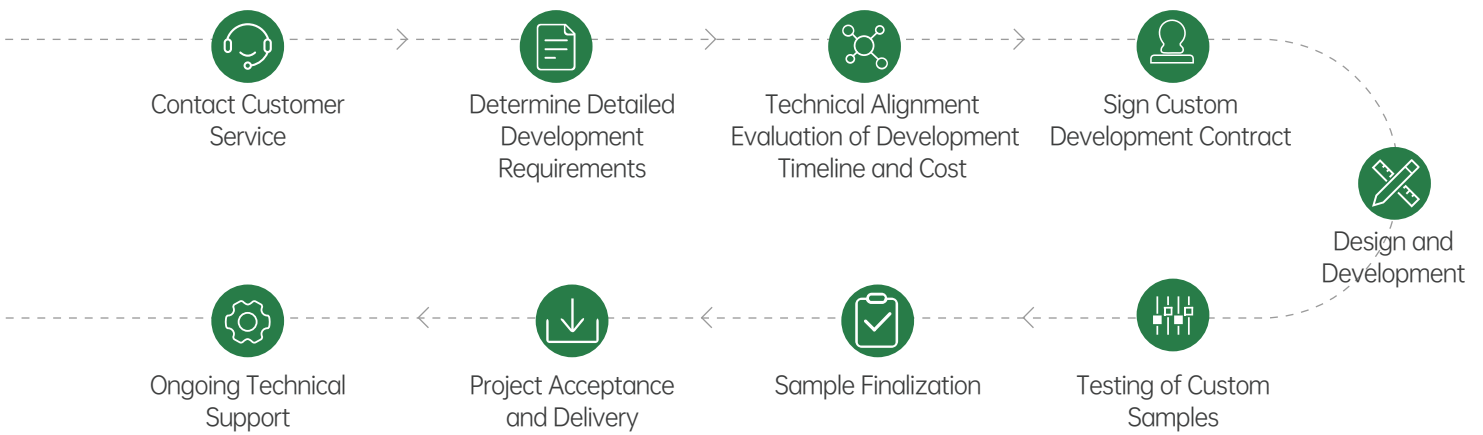
Core Board Customization

Customized Core Board
(Compatible with existing baseboards, saving costs and development cycles, achieving perfect replacement and upgrade)

Full Board Customization

Based on the customer's product positioning, functions, and technical requirements list, we provide comprehensive personalized customization services to meet the overall needs of the product.