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GENERAL CATALOGUE

ODM/OEM MANUFACTURE SERVICE

Overview:

Over 15 years of R&D and manufacture for smart devices, BHS is able to meet all of requirements from customers.

Some of our key products: Mobile products, AI Camera, Network device, Biometric device, Android Car Box, Smart Speaker, AIoT, TWS earphone.

Mobile devices
Various solution, diversified products

Design and manufacture smart phones powered by MediaTek chipset

Bphone A85

Bphone A60

Bphone A50/A40

Design and manufacture smart phones powered by Qualcomm chipset

Bphone B86

Bphone 3

Bphone 2017

Design and manufacture TWS earphone using Qualcomm chipset

AirB Pro

ODM/OEM MANUFACTURE SERVICE

AI Vision products/AI Camera

Outdoor PTZ camera

Resolution:	2MP
Zoom:	33x
Distance view:	200m
Standard:	IP66/IK10

Indoor/Outdoor P series Camera

Resolution:	8MP
Zoom:	2x
Distance view:	30m
Standard:	IP66/IK10

Indoor/Outdoor C series Camera

Resolution:	2MP
Zoom:	N/A
Distance view:	30m
Standard:	IP66/IK10

Outdoor Traffic camera

Resolution:	2MP
Zoom:	33x
Distance view:	350m
Standard:	IP66/IK10

Indoor/Outdoor Bulet Camera

Resolution:	8MP
Zoom:	3x
Distance view:	30m
Standard:	IP66/IK10

Indoor/Outdoor C series Camera

Resolution:	2MP
Zoom:	N/A
Distance view:	30m
Standard:	IP66/IK10

Design and Manufacture base on Customer's requirement.

Network device

Biometric Device

Smart Speaker

Android Car Box

ODM/OEM MANUFACTURE SERVICE

AIoT: Smart home devices

(Home Server)	(6 Channel Controller)	(Central Security Device)	(Multizone Sound Device)
(4 Channel Controller)	(3 Channel Controller)	(2 Channel Controller)	(1 Channel Controller)
(Curtain Controller)	(Gate Controller)	(Stair lighting sensor)	(Smart Power Socket)
(Motion Sensor)	(Air Sensor)	(Infrared Controller)	(Stair lighting sensor)

SOM - KIT BASE ON QUALCOMM CHIP SET

Overview: BHS SOM powered by Qualcomm chipset, supports millions of companies, start-up to create AI modules, AI applications easily, maximize the cost with short time to market, therefore popularize AI technology to our life.

Applications: SOM provides convenient and stable system solution for the AIoT field. It can be embedded in devices on AI camera, Video conferencing, surveillance camera, panoramic camera, Dash camera and Edge Computing, and any other connection fields.

SOM 605

Key specification:
AP: QCS605 64-bit ARM v-8, Upto 2.5GHz, Android OS,
GPU 615 64 bit, 780MHz
LPDDR4X: 8GB, EMMC:
16GB Wi-Fi 2.4G/5G
Bluetooth 5.0
USB 3.1
2 x 4-lane MIPI-DSI, 3 x 4-lane MIPI-CSI

Video Encode:
5.7K30/4K60 8-bit: HVC/H264 + 1080P60

Video Decode:
5.7K30/4K60 10-bit: HEVC/VP9/H.264, HDR 10

SOM 610/410

Key specification:
AP: QCS610/410 64-bit ARM v-8, Upto 2.2GHz,
Android OS, GPU 612 64bit, 845MHz,
LPDDR4X: 8GB, EMMC: 16GB
Wifi 2.4G/5G
Bluetooth 5.0
USB 3.1,
1 x 4-lane MIPI-DSI, 3 x 4-lane MIPI-CSI

Video Encode:
QCS610: 4K30 8-bit H.264/HEVC/VP8
QCS410: 1080p90 8-bit, H.264/HEVC/VP8

Video Decode:
QCS610: 4K30 8-bit H.264/HEVC/VP8/VP9
QCS410: 1080p90 8-bit, H.264/HEVC/VP8/VP9

DEVELOMENT KIT K200

K200 Development Kit powered by Chipset QCS605, support edge computing for images, videos. This design is also reference for R&D easily and shortening the development timeline.

Key specification:
SOM on board :QCS605 SOM
CPU: Custom 64-bit ARM v8-compliant
octa-core CPU,
Up to 2.5 GHz,10nm process
RAM: 8GB LPDDR4x SDRAM @ 1866 MHz

Field of application:
Camera AIoT, smart city, smart control…

SOM - KIT BASE ON MEDIATEK CHIP SET

G350 System on Module (SOM) is powered by a 2.0GHz MediaTek Genio 350 AIoT platform that features an integrated AI processor for deep learning, neural network acceleration, and computer vision applications.

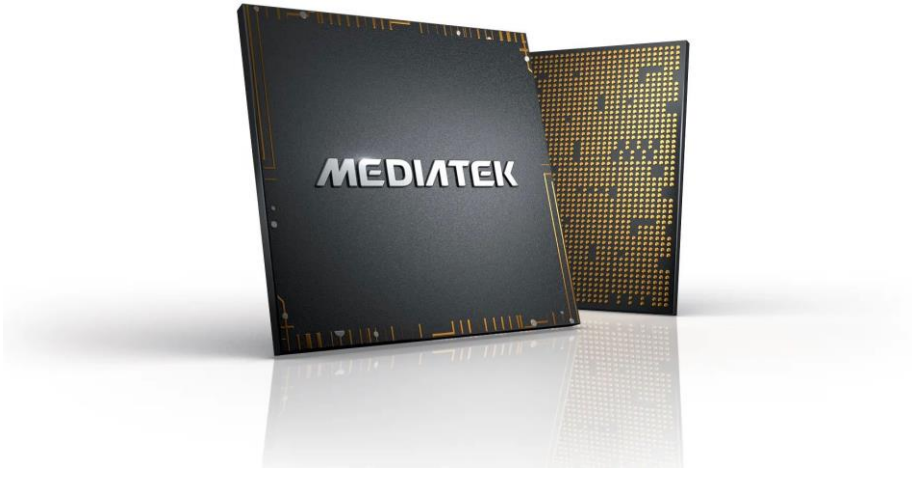
Media-TEK SOM AIoT G350

Key specification:
CPU SOC: MT8365, 4x ARM Cortex-A53 up to 2.0GHz,
OS Support Android 10,
Memory LPDDR4: 2GB, eMMC: 16GB
Wi-Fi 2.4GHz/5GHz
Bluetooth 5.0
GPS
1 x 4 lanes MIPI- DSI
2 x 4 lanes MIPI-CSI

SOM 610/410

Key specification:
CPU SOC: MT8365, 4x ARM Cortex-A53 up to 2.0GHz
OS Support Android
Memory LPDDR4: 2GB,eMMC: 16GB
Wi-Fi 2.4 GHz/5 GHz
Bluetooth 5.0
LAN 100 Mbps,
Dual Camera, Display 7 inch, HDMI 1.4, Audio support,
3 x USB Type A
1 x USB Type C.

Field of application:
Camera AI, smart city, smart control…



AI BOX PRODUCTS

GENERAL INFORMATION

AI Box is a computing on edge device. User can use the box to upgrade the existing supervillain devices to smart AIoT system. BHS provides 2 AI boxes on edge: 4 channels and 24 channels camera inputs.

AI BOX GLORIA 24 CHANNELs

Small dimension, on edge computing device, able to process 200 TOPs at ultra low power consumption.
With build-in Qualcomm® Cloud AI 100 inference accel- erator, it optimizes to perform instantaneous AI task.

Key specification:
CPU SOC: CPU 8-core Qualcomm® Kryo™ 585 CPU with 1 x Kryo™ 585 Gold Prime, and 3 x Kryo™ 585 Gold, 4 x Kryo™
585 Silver
Memory: LPDDR5 8GB
OS Linux Ubuntu 18.04, 5G connectivity

Field of application:
Superior Video Multiprocessing, smart city, smart control…

QCS605 AI Box (full version)

Key specification:
AP: QCS605 64-bit ARM v-8, Up to 2.5GHz, Android OS, GPU 615 64 bit, 780MHz
RAM: LPDDR4X: 8GB, EMMC: 16GB
Alarm I/O (2 In, 2 Out); Wifi, Bluetooth 5.0; Lan 1Gbps
Camera Chanel: 4 channels ; HDMI 4k/30hz Ultra HD

Field of application:
Convert normal camera to AI camera, smart city, smart control…

QCS605 AI Box (lite version)

Key specification:
AP: QCS605 64-bit ARM v-8, Up to 2.5GHz, Android OS, GPU 615 64 bit, 780MHz
RAM: LPDDR4X: 8GB, EMMC: 16GB
Alarm I/O (2 In, 2 Out); Lan 100Mbps
Camera Chanel: 4 channels

Field of application:
Camera AI, smart city, smart control…

RF DESIGN SERVICE

Overview

BHS provide design service, verification service and certification service concerning RF/Antenna.
- We have a lot of experience in designing on many platforms and materials Strict design process
- Our services are extremely diverse from the original design, to the solution for the device, Simulate design, test, verify, Complete product and get certificate for the product.

Types of antennas have been produced by BHS

FPC
B

PC
B

Metal

LDS

Patch

Rubber

Highlights:

Design sevice
RF solution, schematic, PCB layout, BOM Antenna design, BOM

Verification service
RF matching, RF calibration, RF verification Antenna matching, Antenna measurement RF Software tool, RF testing in Manufacturing Antenna testing in Manufacturing

Cetificate service
Pre-test FCC, CE, QCVNGet Certificate FCC, CE, QCVN Get SAR antenna report

Wireless Technology on BHS Device

Bphone
WiFi: 802.11 a/b/g/n/ac, BT 5.x
2G: B2/B3/B5/B8
3G: B1/B2/B4/B5/B8
4G: B1/B2/B3/B5/B7/B8/B20/B28AB
5G: N1/N3/N7/N28/N41/N77/N78 (A85 Only)
GPS: GPS, Glonass, Beidou, Galileo Transfer Jet *
Certifications: CE*

Air B
Bluetooth: BT 5.x

AI Camera
WiFi: MIMO 2x2, 802.11 a/b/g/n/ac
Bluetooth: 5.x
5G: N1/N2/N3/N5/N7/N8/N12/N20/N28/N38/N40/N41/N48/N66/N71/N77/N78/N79
GPS: GPS, Galileo, Beidou, Glonass Certifications: FCC

Smart Home
Zigbee
2G: B2/B3/B5/B8
WiFi: 802.11 b/g/n

AI Box
WiFi: MIMO 2x2, 802.11 a/b/g/n/ac Bluetooth: 5.x
GPS: GPS, Galileo, Beidou, Glonass

Wireless Gateway
WiFi: MIMO 2x2, 802.11 a/b/g/n/ac/ax
Bluetooth: 4.2
5G: N1/N2/N3/N5/N7/N8/N20/N28/N38/N41/N77/N78/N79

Biometric Device
WiFi +Bluetooth : 802.11 a/b/g/n/ac, BT5.x
3G: B1/B2/B5/B8/B34/B39
4G: B1/B2/B3/B4/B5/B13/B17/B19/B20 GPS: GPS, AGPS, Galileo
NFC

Android Car Box
WiFi : 802.11 a/b/g/n/ac
Bluetooth: Dual Chanel 5.x 3G: B1/B8
4G: B1/B3/B8
GPS: GPS, Glonass, Beidou

SOFTWARE SERVICE

Overview

BHS is the first Vietnamese company to design and manufacture smartphone and smart home.
- We have more than 15 years of experience to develop the OS, application software for smartphone, smart home, TWS earphone, AI Camera, Telecommunication devic- es… both in Linux and Android.
- Competence to develop on multi types of Chipsets.
- Provide full software solution
- Getting certificate from Google and other third parties(GMS)
- Large network: Partnership with Qualcomm R&D and Test lab, Excelpoint and pioneer technology universities in Vietnam(HUST, VNU).

Highlights

BSP core
- Bring-up OS system and porting hardware features
- Optimizing the functions of OS system according to the customer's requirements

Tunning and Optimizing
- Tunning and Optimizing for hardware driver.
- Optimizing CPU, RAM, Boot time and memory storage.

Testing
- Validating the hardware, software testing performance.

Application software
- Developing software for Embedded device using either Linux or Android (AI Box, AI Camera, Router, Hub, Phone)
- Installing, maintaining, upgrading services

Certificate
Testing and certificating for hardware product, such as GMS(Google Mobile Services)

Technologies on BHS products

Handset devices
Security smart phone
Customize OS
Completed gestures

Wearable devices
True Wireless Stereo
Active Noise Canceling
Smart controls

Surveillant devices
AI on edge
Able to use on all the popular IP Cameras

Smart home
Wireless sensors
Wireless controlls
Completed hardware and software platform

IoT Devices
Full type of connectivity High security

Telecom devices
High efficiency, high security
Add-on software

PROCUREMENT SERVICE

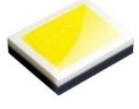
Overview:

Advantage: One Stop Services for electronic and mechanical components with more than 300 suppliers, provides the short lead time and competitive price.

BHS guarantees to provide standard product testing and mechanical design services according to customers' requirements.

SUPPLY OF ELECTRONIC COMPONENTS

Chipset	Memory	IC	Sensor	LED	Passive



MAJOR SUPPLIERS

Qualcomm · SAMSUNG · MEDIATEK · TOSHIBA · LOCTITE

Panasonic · BROADCOM · muRata INNOVATOR IN ELECTRONICS · MICROCHIP · multicomp PRO The Engineer's Choice

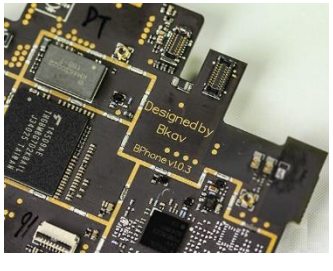
dialog SEMICONDUCTOR · WISOL 와이솔 · SONY · nexperia · RECOM

PROCUREMENT SERVICE

SUPPLY OF ASSEMBLY COMPONENTS

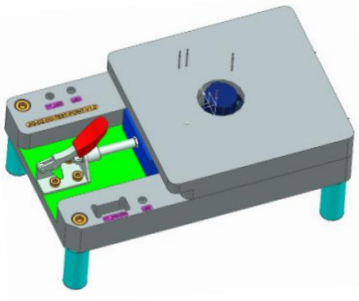
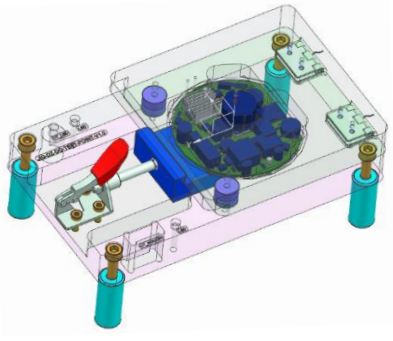
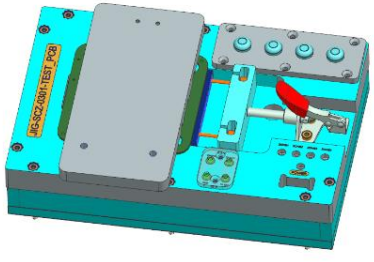
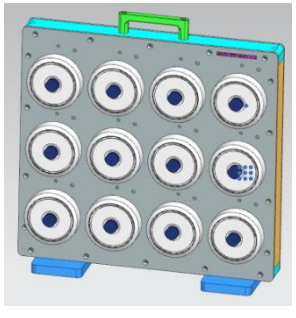
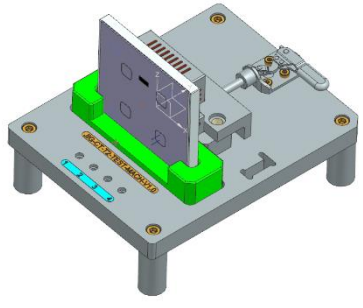
LCD Display	Module Camera	Battery	Frame	Speaker	SIM Tray	Antenna

DESIGN AND MANUFACTURE PCBA



PROCUREMENT SERVICE

DISTRIBUTION OF MATERIALS, MECHANICAL TOOLS, JIG, MOLDS FOR PRODUCTION

PRODUCT TESTING SERVICE

Automatic Testing

Fingerprint Test

Address: 123 Lane, Nguyen Van Giap, Nam Tu Liem Dist, Hanoi
Phone number: +84 978 712 713
Fax: (84-24) 3782 2136
Email: sale-bhs@bhs.ai | info-bhs@bhs.ai