

B100_A

High performance smart AI module

Powered with AI Hardware acceleration

Embedded WIFI、BT、GPS



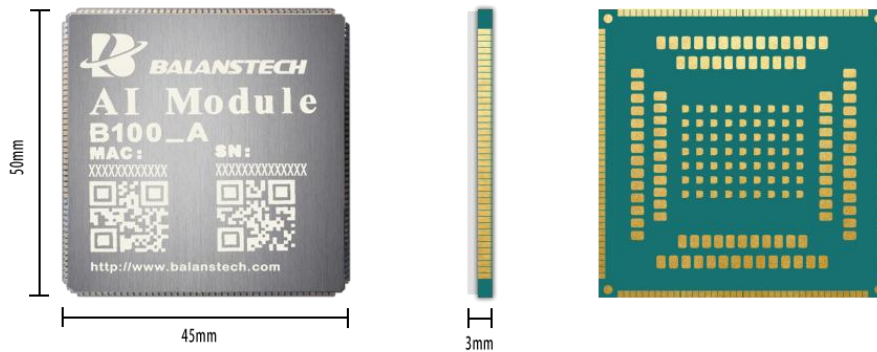
B100_A is a smart AI module launched by Shanghai Balanstech Information Technology Co., Ltd., with a built-in neural network processor NPU, supporting a variety of AI development tools and development/debugging interfaces. B100_A is supported by Android10/Ubuntu18.04 OS with complete software components. B100_A provides excellent computing power, high performance video encoding/decoding hardware, interfaces to multi-channel cameras and built-in ISP. Widely meet the real-time requirement of high performance image/video processing.

B100_A has built-in WIFI, BT and GPS, supporting 5.8G WIFI. Provides USB3.0, PCIE3.0 interfaces and supports external 5G modem. B100_A integrates rich interfaces (including I/F to LCM, camera, touch screen, microphone and speaker, and UART, USB3.0, I2C, SPI, PCIE3.0, PCIE2.0 and SDIO).



Features

- ✓ 8-core high performance processor, utilizing 4 big-endian A75 and 4 small-endian A55 architecture, frequency up to 2.0 GHz, offering powerful computing performance
- Super NPU with AI computing capability, built-in AI NPU, supporting 8bit/16bit computing , comprehensive computing power up to 4.2 TOPS, with very high efficiency ratio of computing power
- ✓ Support TensorFlow/Caffe/Onnx general model be applied directly; provide AI development tool of model conversion, endian conversion API and etc., support development interface of TensorFlow
- ✓ Strong hardware encoding/decoding capability , support MIPI-DSI I/F and 4K@30fps , support H.264, H.265, vp8and vp9
- ✓ Provide dual MIPI/CSI I/F , support up to 4-channel camera. Built-in ISP hardware , support up to 24M pixel + 8M pixel
- ✓ Support Android/Ubuntu OS ,with rich function and stable performance
- ✓ Support WIFI 802.11a/b/n/ac



Electrical Characteristics

Supply voltage: 3.55V~4.4V, typical 3.8V

Power consumption: 300uA@shutdown 3mA@sleep mode, typical

Processor

CPU: 4 * A75 @ 2.0GHz + 4 * A55 @ 1.8GHz

GPU: IMG9446 @ 800MHz

Memory

RAM: 2*16 LPDDR 4/4x@1866Mhz, Maximum 8GB

ROM: eMMC 5.1, UFS 2.1

AI NPU

Architecture: Heterogeneous dual-core

Computing power : Up to 3.2 TOPs(INT 8)

Energy efficiency: 2.5 TOPs / W

Precision: INT4 INT8 INT16 FP16

Model: TensorFlow/Caffe/Onnx

Multi-media

Video codec: H.263 / H.264 / H.265 / MPEG4 / VP8

Display: QHD+ @ 60fps, 3200 * 1440

ISP: VDSP, 24MP @ 10fps ZSL, or 16+16MP @30fps

Audio codec: MP3/AAC/ADPCM/AMR/AMR-WB/PLAC

Wireless

WIFI: 802.11a/b/n/ac

Bluetooth: BT5.0

GNSS: GPS/Galileo/GLONASS/Beidou(B1C)

Interface

LCM: 1 channel, 4-lan MIPI DSI

Camera: 3 channel, 4-lan MIPI CSI

Touch Screen: Capacitive touch screen

UART: 4 channel, UART0 with Hardware Flow Control, UART1 with default debug

USB: USB 3.0, supporting OTG support HUB

Charge : fast charge and 9V2A , supporting Coulombic meter

Audio : 2-channel analog MIC, 4-channel digital MIC , 1-channel Speaker 、 1-channel earphone, 1-channel Headphone

PCIE: PCIE 2.0、PCIE 3.0

SDIO: 2-channel SDIO, support SD card

SPI: 3 channel

I2C: 5 channel

Motor Drive: 1 channel

ADC: 3 channel

I2S: 1 channel

LED: 3 channel

Flashlight: 2 channel, current < 2A

RTC: external power supply

GPIO: 20 channel

General features

OS: Android10/Ubuntu18.04

Memory: 64GB eMMC + 4GB LPDDR4

Temperature: -20 ~ 65 °C

Size: 50mm * 45mm * 3mm

Package: LCC + LGA

单击下面可查看定价，库存，交付和生命周期等信息

[>>UNISOC\(紫光展锐\)](#)