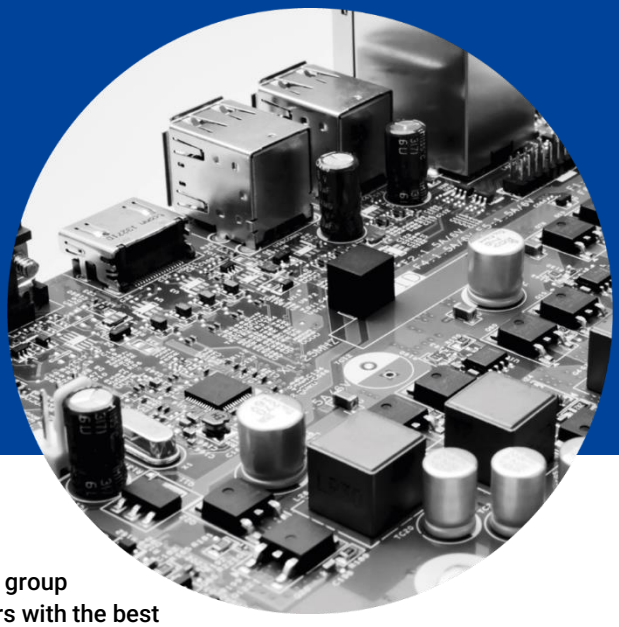
DANNIE

Experts in Electronics Design, PCB Design, Compute Platforms, Embedded Systems, Electronic Manufacturing

Building Robust and Reliable Electronic Products since 2015!



DANNIE is Independent Design House & Electronics Manufacturing Services

Company established in 2015 in Shenzhen China. Since 2021, DANNIE group developed to three locations in different countries to provide customers with the best combination of development and production services.

BMC controllers

Today, all modern corporate servers have such server management controller. Systems Management Architecture for Server Hardware (SMASH) provides the ability to manage a platform independent of machine state remotely, operating system state, server system topology or access method - interoperable management is possible before the OS is operational, when the OS is hung, or while the OS is up.

The DANNIE designed and produced a server management solution in the mezzanine format based on the **ASPEED AST2500** specialized SoC for OpenBMC software.

BMC Board implemented according to ideas of Open Compute Project RunBMC specification «OCP RunBMC Daughterboard Card Design Specification vl .4.1 .pdf» for x86 and ARM server platforms.

The main component is the BMC ASPEED AST2500 chip, can be modified to ASPEED AST2600 defending on SoC price, availability and required performance.

ASPEED AST2500 chip was selected based on grounds:

Well known and popular server management solution	**Interchangeable module**
Open standard	**Possibility to change this module with another hardware implementation**

BMC Board

ARM version of RunBMC board has extensive set of interfaces available via SO-DIMM connector:

- 2 x RGMII;
- 2 x USB;
- 1 x VGA;
- 5 x UART;
- 10 x ADC;
- 6 x i2c (Smbus);
- 2 x SPI for boot flash CPU;
- 1 x QSPI;
- 1 x FW SPI for SPI NOR Flash;
- 1 x JTAG;
- 70 x GPIO;
- 5 PWM & 5 Tach fan control lines;
- 1x PCIe;
- Reset line.

We offer development kit to accelerate the development and adaptation of software to your platform. Development kit include RunBmc board, development carrier board and custom sensor board. Custom sensor board is designed based on customer platform circuit solution.

BMC development carrier board with **RunBMC** installed

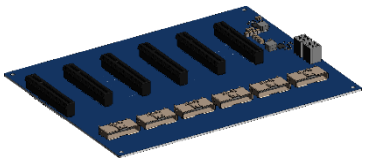
ARM version of RunBMC developer carrier board has following interfaces:

- 6 I2C;
- 70 GPIO;
- 5 PWM+TACH;
- 2 USB;
- 2 Ethernet LAN;
- 1 USB Virtual Com-port to Debug UART5;
- USB Virtual Com-port to UART 1- 4;
- 1 VGA;
- 1 JTAG;
- SPI connector for access to FWSPI flashes;
- SPI connectors for access to host flashes, connected to SPI1 and SP2 of AST2500;
- 1 battery SLOT;
- 1 ESPI;
- 9 ADC and 9 keys to swith ADC from connectors to power lines on board;
- PCIe x16 Edge Finger for PCIe x1;
- 12V supply.

PCIe risers

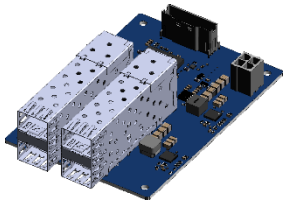
Custom angled Gen3 x4 lanes riser with double SFP+ Ethernet 10GBE interfaces (Microchip) with additional power connector (ATX 4-pin Molex) for extra power

Custom 6 x PCIe GEN3 x8 sockets riser with integrated PCIe redriver with additional power by 2 power connectors (ATX 4-pin Molex)



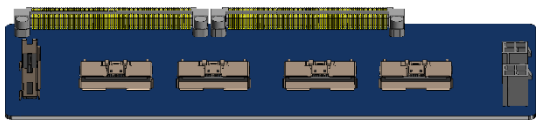
Custom network interface cards

4 x SFP+ 10 GBE Ethernet interface card (Microchip) with PCIe Gen3 x8 cables for host connection (Molex SlimSAS series) with additional power by 1 power connector (ATX 4-pin Molex)



Backplanes

FAN control backplane with 4 external SATA cables, 5 FAN connectors (PWM/TACH) controlled from BMC, 4 ports Ethernet KR 10G from host to external cards, 2 additional power connectors (ATX 4-pin Molex) for extra power



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