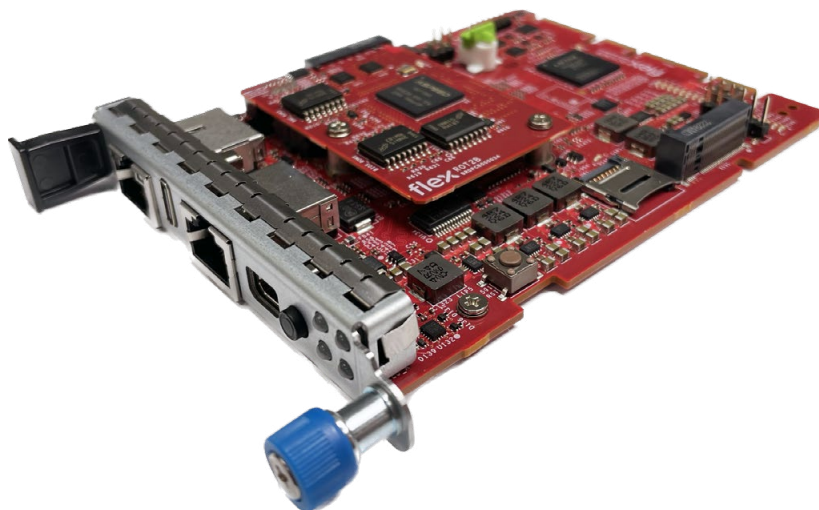


Flex Secure Control Module (DC-SCM 2.0)

The SCM202A is based on the OCP DC-SCM 2.0 specification. The Flex SCM provides common server management, security, and control functions in a common form factor module. The SCM supports both DC-SCM 2.0 Host Processor Module (HPM) implementations, as well as server platforms with a Data Center-Ready Secure Control Interface (DC-SCI 2.0).

The Flex SCM features a DC-SCM 2.0 compliant-board, a RoT module, a TPM module, and accompanying management software. Typical use cases include managing server, storage, networking, and other applicable IT equipment that support a DC-SCI 2.0 connector interface between the HPM and the Flex SCM. Flex offers an OpenBMC software stack as the accompanying default management software on this module with the option to qualify additional management software stacks.

The Flex SCM supports a horizontal form factor, with options to support a vertical orientation or other custom form factors.



Flex Data Center Solutions

Flex data center solutions are tailored to meet your needs to deliver outstanding flexibility, performance, and value across a range of data center applications and workloads.

Industry standard components from a broad array of trusted suppliers are used to improve cost effectiveness and supply chain resiliency.

Flex will innovate based on your unique requirements to deliver a solution optimized for your application, producing a balance of performance, efficiency, and cost.

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flex.

SCM202A Features

DC-SCM 2.0 board

- Compliant with 'DC-SCM 2.0 specification, Version 1' and 'DC-SCI 2.0 pinout, Version 1.0'
- PCB-edge gold-fingers, compatible with 'SFF-TA-1002 4C+' mating connector on HPM, with DC-SCI 2.0 keying
- Optional 12V power-connector for stand-alone operation and evaluation
- 1 M.2 2260 card connector, with 'NVMe/PCIe 2.0 x2' interface to HPM
- 1 Micro-SD storage device, connected to BMC/CMC

- 1 UART interface, between 'BMC/CMC on DC-SCM' and HPM
- 1 JTAG interface between 'BMC/CMC on DC-SCM' and HPM
- 1 USB 3.1 loopback interface from host domain to HPM, through DC-SCM board
- 1 USB 2.0 loopback interface from host domain to HPM or 1 USB 2.0 interface from BMC domain to HPM
- Alternate access to BMC/CMC through HPM network interface, via NC-SI

- I/O, externally accessible on DC-SCM faceplate
 - 1 RJ45 1GbE management port connector, connected to BMC/CMC
 - 1 USB-C USB 3.1 interface connector, with host CPU as master
 - 1 RJ45 serial port connector, connected to BMC/CMC
 - 1 mini-DP video display port connector, with host CPU as master
 - 1 UID button with integrated LED, for Chassis identification
 - 4 general purpose bi-color LEDs

RoT module

- Choice of platform Root of Trust (RoT) module with Aspeed AST1060 or Lattice MachXO5D™-NX security controller device
- Commercial National Security Algorithm (CNSA) Suite 2.0 and Quantum Computing support with PQC algorithms XMSS and LMS (with Lattice MachXO5D™-NX RoT)
- Support for Intel Platform Firmware Resiliency (PFR) 4.0
- Dual 256MB QSPI NOR Flash devices for BMC/CMC firmware storage
- Dual 64MB QSPI NOR Flash devices for BIOS image storage
- I2C/I3C/GPIO connectivity to 'host Node CPUs' and BMC/CMC
- Runtime SPI and I2C/SMBus monitoring and filtering
- Hardware acceleration supporting ECDSA-384 and RSA (256 to 4096 bits)

Baseboard Management Controller (BMC)

- Aspeed AST2600 management controller, with 512MB DDR4 SDRAM on DC-SCM 2.0 PCB

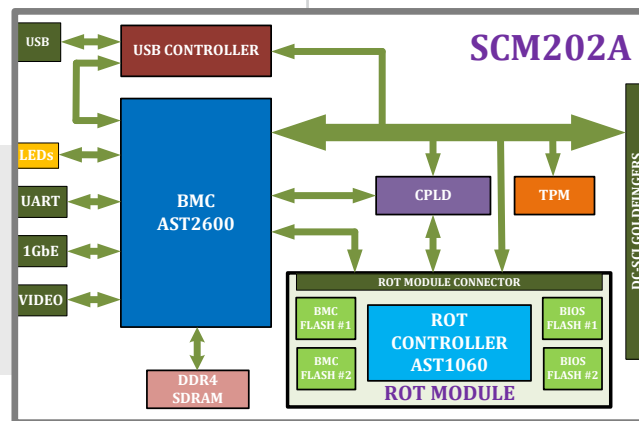
TPM module

- Based on Infineon SLB9672 TPM controller
- Compliant with the TPM 2.0 specification

Software

- Flex OpenBMC firmware stack
- Features typical inventory, sensor monitoring, firmware updates, power management, and thermal management functions
- NC-SI, MCTP, PLDM and SPDM attestation support
- User interface access with WebGUI, Virtual KVM/Media (HTML5), IPMI, Redfish, ssh, and serial port
- Support for CA Assembly Bill A.B.1906 and Senate Bill SB-327

Flex SCM Block Diagram



We provide cloud infrastructure solutions from design, integration, and manufacturing to sustainable circular economy services, all at cloud scale. We enable our customers to accelerate innovation and time-to-market with our server reference designs, racks, power modules, power supplies, and critical power infrastructure.

Flex (Reg. No. 199002645H) is the manufacturing partner of choice that helps a diverse customer base design and build products that improve the world. Through the collective strength of a global workforce across 30 countries and responsible, sustainable operations, Flex delivers technology innovation, supply chain, and manufacturing solutions to various industries and end markets.

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