

CAN-to-USB and GPIO modules

MSC Technologies (Germany) delivers its Nano Server NN embedded system with an integrated CAN-to-USB module and galvanically isolated GPIO module.

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(Photo: MSC)

The Nano Server NN box PC is based on the Intel Q-170 chipset and 6th generation Intel Core processors of the Desktop and the low-power Desktop series (former codenamed Skylake). The heart of the CAN-to-USB module is a Cortex M3 micro-controller with an internal CAN controller designed for an extended temperature range. The CAN 11-bit identifier base frame format and the 29-bit identifier extended frame format are supported.

Power is supplied via USB; the USB and CAN channels are galvanically isolated. The galvanically isolated GPIO module provides four outputs and four inputs. The 58 mm slimline Nano Server NN without slot is suited for continuous operation in an industrial environment. On customer request, the Nano system can be adapted to special application requirements.

The scalable Nano Server NN is assembled with the processor variants Intel Core i7-6700(TE), i5-6500(TE) or i3-6100(TE) with two or four CPU cores. Depending on the processor type, Intel vPro, Intel 64, the Intel Virtualization Technology (VT-x), the Intel Virtualization Technology for Directed I/O (VT-d), the Intel Trusted Execution Technology, Intel Advanced Encryption Standard AES-NI, and the Intel Turbo Boost Technology 2.0 are supported. The on-chip Intel HD Graphics supports DirectX 12, OpenGL 4.3/4.4, and OpenCL 2.x.

The DDR4 memory is expandable via two SODIMM sockets up to a capacity of 32 GiB. External connectors include two GB LAN (IEEE1588), four USB 3.0 and USB 2.0 ports each, EIA-232, DVI-D, and two Display Port V1.2. Integrated security features e.g. a secure boot process, password protection, and a Trusted Platform Module (TPM) 2.0 protect the system against unauthorized access.

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