

formerly codenamed COMe-D17-BT7

COM Express® Rel.3.0 Basic Type 7 module, with the Intel® Xeon® D-1700 processors (formerly Ice Lake- D)

COM Express® form factor and high performance Intel® SoCs for secure IoT applications



HIGHLIGHTS

CPU

Intel® Xeon® D-1700 processors

4x Superspeed USB 5Gbps; 16x PCI-e Gen4 lanes + 16x PCI-e Gen3 lanes

NETWORKING 4x 10GBASE-KR interfaces + 1x 1GbE port with NC-SI

Up to four DDR4 SO-DIMM Slots supporting DDR4-2933 memory with ECC, up to 128GB





(1) Available in Industrial Temperature Range











MAIN FIELDS OF APPLICATION







Industrial Automation and Control

Telco

Server - High Performance Computing

Watchdog timer

FEATURES

Processor

Memory

Intel Xeon® D-1700 family of processors Up to 10 cores, ~40 to 67W thermal design power (TDP)

Up to four DDR4 SODIMM slots on three DDR4 72-bit channels (up to 2x SODIMM slots on channel #0) Supporting DDR4-2400/2666/2933 memory (both ECC and non-ECC supported), up to 128GB

Supports single-rank or dual-rank per SODIMM module

Mass Storage 2x SATA 3 channels



- 1x Gigabit Ethernet LAN port with NC-SI (Network Controller Sideband Interface) functionality, managed by an Intel® I21x Gigabit Ethernet Controller.
- 4x 10Gigabit Ethernet interfaces (10GBASE-KR), directly managed by the Xeon® D-1700 SoCs



4x Superspeed USB 5Gbps

PCI-e

16x PCI-e Gen4 lanes (up to 4x root ports) 16x PCI-e Gen3 lanes (up to 8x root ports)

Serial Ports

2x legacy UARTs, 16C550 compatible

Other Interfaces

I2C, SPI, SM Bus, LPC/eSPI bus

Optional TPM 2.0 module on-board Intel® QuickAssist Technology 1.7 hardware acceleration for cryptography

Security

Intel® Boot Guard Intel® Total Memory Encryption – Multi-Tenant to protect physical memory and isolate VMs

12C and external SMBus Advanced FAN management 4x GPI (general purpose inputs), 4x GPO (general purpose Embedded outputs) Controller Power state management Functionalities Voltage and temperature monitoring POST code redirection User data storage Board statistics: up-time, boot counter, reset cause log BIOS Dedicated embedded BIOS based on AMI Aptio V Power $+12V_{pc} \pm 10\%$ and $+5V_{sp}$ (optional) Supply Windows 10 IoT Enterprise Windows Server Operating Wind River VxWorks System Yocto Project Linux Linux LTS Kernel Operating 0°C ÷ +60°C (Commercial version) -40°÷+85°C (Industrial version) Temperature* 120 x 95 mm (COM Express® Basic Form factor, Type 7 pinout)

*Measured at any point of SECO standard heatspreader for this product, during any and all times (including start-up). Actual temperature will widely depend on application, enclosure and/or environment. Upon customer to consider applicationspecific cooling solutions for the final system to keep the heatspreader temperature in the range indicated.



JULIET
formerly codenamed COMe-D17-BT7

COM Express® Rel.3.0 Basic Type 7 module, with the Intel® Xeon® D-1700 processors (formerly Ice Lake- D)

BLOCK DIAGRAM



