

COM EXPRESS® basic

Tech Specs At-a-Glance



COM EXPRESS® basic

COMe-bSL6/-bSL6R E2S



COMe-bKL6/-bKL6R E2S



COMe-bBD6



COMe-bBD7/-bBD7R E2

COMPLIANCE	COM Express® basic, Pin-out Type 6	COM Express® basic, Pin-out Type 6	COM Express® Basic, Pin-out Type 6	COM Express® Basic, Pin-out Type 7
DIMENSIONS (H X W X D)	125 x 95 mm	125 x 95 mm	95 x 125mm	95 x 125 mm
CPU	Intel® Xeon® E3-1515M v5, 4x 2.8 GHz (3.7 GHz), GT4e, 45/35 W Intel® Xeon® E3-1505M v5, 4x 2.8 GHz (3.7 GHz), GT2, 45/35 W Intel® Xeon® E3-1505L v5, 4x 2.0 GHz (2.8 GHz), GT2, 25 W Intel® Core™ i7-6820EQ, 4x 2.8 GHz (3.5 GHz), GT2, 45 W Intel® Core™ i7-6822EQ, 4x 2.0 GHz (2.8 GHz), GT2, 25 W Intel® Core™ i5-6440EQ, 4x 2.7 GHz (3.4 GHz), GT2, 45/35 W Intel® Core™ i5-6442EQ, 4x 1.9 GHz (2.7 GHz), GT2, 25 W Intel® Core™ i3-6100E, 2x 2.7 GHz, GT2, 35 W Intel® Core™ i3-6102E, 2x 1.9 GHz, GT2, 25 W Intel® Celeron® G3900E, 2x 2.4 GHz (2.7 GHz), GT1, 35 W Intel® Celeron® G3902E, 2x 1.6 GHz, GT1, 25 W	Intel® Xeon® E3-1505M v6, 4x 3.0 GHz (4.0 GHz), GT2, 45/35 W Intel® Xeon® E3-1505L v6, 4x 2.2 GHz (3.0 GHz), GT2, 25 W Intel® i7-7820EQ Core™ i7, 4x 3.0 GHz (3.7 GHz), GT2, 45/35 W Intel® i5-7440EQ Core™ i5, 4x 2.9 GHz (3.6 GHz), GT2, 45/35 W Intel® i5-7442EQ Core™ i5, 4x 2.1 GHz (2.9 GHz), GT2, 25 W Intel® i3-7100E Core™ i3, 2x 2.9 GHz, GT2, 35 W Intel® i3-7102E Core™ i3, 2x 2.1 GHz, GT2, 25 W	Intel® Xeon® Processor D-1577, 16 C, 1.3 GHz, 24 MByte, 45 W, Intel® Xeon® Processor D-1548, 8 C, 2.0 GHz, 12 MByte, 45 W, Intel® Xeon® Processor D-1537, 8 C, 1.7 GHz, 12 MByte, 35 W, Intel® Xeon® Processor D-1528, 6 C, 1.9 GHz, 9 MByte, 35 W, Intel® Xeon® Processor D-1527, 4 C, 2.2 GHz, 6 MByte, 35 W, Intel® Xeon® Processor D-1517, 4 C, 1.6 GHz, 6 MByte, 25 W, Intel® Pentium® Processor D1508, 2 C, 2.2 GHz, 6 MByte, 25 W, Intel® Xeon® Processor D-1559, 12 C, 1.5 GHz, 18 MByte, 45 W, ind. Temp Intel® Xeon® Processor D-1539, 8 C, 1.6 GHz, 12 MByte, 35 W, ind. Temp Intel® Pentium® Processor D1519, 4 C, 1.6 GHz, 6 MByte, 25 W, ind. Temp	Intel® Xeon® Processor D-1577, 16 C, 1.3 GHz, 24 MByte, 45 W, Intel® Xeon® Processor D-1548, 8 C, 2.0 GHz, 12 MByte, 45 W, Intel® Xeon® Processor D-1537, 8 C, 1.7 GHz, 12 MByte, 35 W, Intel® Xeon® Processor D-1528, 6 C, 1.9 GHz, 9 MByte, 35 W, Intel® Xeon® Processor D-1527, 4 C, 2.2 GHz, 6 MByte, 35 W, Intel® Xeon® Processor D-1517, 4 C, 1.6 GHz, 6 MByte, 25 W, Intel® Pentium® Processor D1508, 2 C, 2.2 GHz, 6 MByte, 25 W, Intel® Xeon® Processor D-1559, 12 C, 1.5 GHz, 18 MByte, 45 W, ind. Temp Intel® Xeon® Processor D-1539, 8 C, 1.6 GHz, 12 MByte, 35 W, ind. Temp Intel® Pentium® Processor D1519, 4 C, 1.6 GHz, 6 MByte, 25 W, ind. Temp
CHIPSET	Intel® Mobile CM236 / Intel® Mobile QM170 (Core™ i5 & Core™ i7)	Intel® Mobile CM238 / Intel® Mobile QM175 (Core™ i5 & Core™ i7)	-	-
MAIN MEMORY	2x DDR4-2133 SO-DIMM up to 2x 16 GByte (non-ECC/ECC)	2x DDR4-2400 SO-DIMM up to 2x 16 GByte (non-ECC/ECC)	2x DDR4 SODIMM dual channel up to 32 GByte ECC or non ECC	2x DDR4 SODIMM dual channel up to 32 GByte ECC or non ECC
GRAPHICS CONTROLLER	Intel® Iris™ Pro Graphics P580 (GT4e), Intel® HD Graphics P530 (GT2), Intel® HD Graphics P510 (GT1)	Intel® HD Graphics P630 for Xeon® processors Intel® HD Graphics 630 for Core™ processors	-	-
ETHERNET CONTROLLER	Intel® I219LM	Intel® I219LM	Intel® I210IT	Intel® I210IT (uses one lane of PCIe 2.0) Intel® Dual 10GbE LAN integrated in SoC
ETHERNET	10/100/1000 MBit Ethernet	10/100/1000 MBit Ethernet	1x 10/100/1000 MBit Ethernet Special Communication interface block (alternate pin out, not standardized) 2nd 10/100/1000 MBit Ethernet, Intel® I210IT Dual 10GbE Interface (KR) integrated in SoC	1x 10/100/1000 MBit Ethernet Dual 10GbE Interface (KR) and NC-SI
HARD DISK	4x SATA 6Gb/s	4x SATA 6Gb/s	4x SATA3, 6Gb/s	2x SATA3, 6Gb/s
FLASH ONBOARD	-	-	SATA SSD up to 32 GByte (option)	-
PCI EXPRESS® / PCI SUPPORT	8x PCIe x1, 1x PEG x16	8x PCIe x1, 1x PEG x16	16x PCIe 3.0 (4 controllers, x16, x8, x4, x1 operation) + 8x PCIe2.0 (8 controllers, x8, x4, x1 configuration) one lane used by onboard 1GbE LAN controller	24x PCIe 3.0 (6 controllers, x16, x8, x4, x1 operation) 8x PCIe 2.0 (8 controllers, x8, x4, x1 configuration), one lane used by onboard 1 GbE LAN controller
PANEL SIGNAL	DDI1: DP++, DDI2: DP++, DDI3: DP++, VGA: -, LVDS: Dual Channel 18/24bit	DDI1: DP++, DDI2: DP++, DDI3: DP++, VGA: -, LVDS: Dual Channel 18/24bit	-	-
USB	4x USB 3.0 (incl. USB 2.0) + 4x USB 2.0	4x USB 3.0 (incl. USB 2.0) + 4x USB 2.0	4x USB 3.0/2.0	4x USB 3.0/2.0
SERIAL	2x serial interface (RX/TX only)	2x serial interface (RX/TX only)	2x serial interface (RX/TX only)	2x serial interface (RX/TX only)
AUDIO	Intel® High Definition Audio	Intel® High Definition Audio	-	-
COMMON FEATURES	SPI, LPC, SMB, Fast I²C, Staged Watchdog, RTC	SPI, LPC, SMB, Fast I²C, Staged Watchdog, RTC, support of Intel® Optane™ memory technology via PCIe	SPI, LPC, SMB, Fast I²C, Staged Watchdog, RTC	SPI, LPC, SMB, Fast I²C, Staged Watchdog, RTC
BIOS	AMI Aptio V	AMI Aptio V	AMI UEFI	AMI UEFI
ON REQUEST	vPRO (AMT/TXT/AES Support), eDP instead of LVDS, VGA, Intel® Mobile HM170 Chipset	vPRO (AMT/TXT/AES Support), eDP instead of LVDS, VGA, Intel® Mobile HM175 Chipset	Onboard SATA SSD up to 32 GByte SLC	-
POWER MANAGEMENT	ACPI 4.0, S5 Eco	ACPI 4.0, S5 Eco	ACPI 4.0, S5 Eco	ACPI 4.0, S5 Eco
POWER SUPPLY	8.5 V - 20 V Wide Range, Single Supply Power	8.5 V - 20 V Wide Range, Single Supply Power	ATX, 8.5 V - 20 V Wide Range, Single Supply Power	ATX, 8.5 V - 20 V Wide Range, Single Supply Power
SPECIAL FEATURES	POSCAP capacitors, Trusted Platform Module TPM 2.0, Security Chip, 4k Resolutions, Flexible PEG lane configuration by Setup Option, Rapid Shutdown (R E2S variants)	POSCAP capacitors, Trusted Platform Module TPM 2.0, Security Chip, 4k Resolutions, Flexible PEG lane configuration by Setup Option Rapid Shutdown (R E2S variants)	Trusted Platform Module TPM 2.0	Trusted Platform Module TPM 2.0, Security Chip for Kontron security stack (Approtect)
TEMPERATURE	COMe-bSL6 - Commercial temperature: 0 °C to +60 °C operating, -30 °C to +85 °C non-operating COMe-bSL6R E2S - Industrial temperature: -40 °C to +85 °C operating, -40 °C to +85 °C non-operating	COMe-bKL6 - Commercial temperature: 0 °C to +60 °C operating, -30 °C to +85 °C non-operating COMe-bKL6R E2S - Industrial temperature: -40 °C to +85 °C operating, -40 °C to +85 °C non-operating	COMe-bBD6 - Commercial temperature: 0 °C to +60 °C operating, -30 °C to +85 °C non-operating COMe-bBDi6 - Industrial temperature: -40 °C to +85 °C operating, -40 °C to +85 °C non-operating	COMe-bBD7 - Commercial temperature: 0 °C to +60 °C operating, -30 °C to +85 °C non-operating COMe-bBD7R E2 - Industrial temperature: -40 °C to +85 °C operating, -40 °C to +85 °C non-operating
OPERATING SYSTEM	Windows® 10, Windows® 8.1, Windows® 7, WE18, WE85, WE87, Linux, VxWorks	Windows® 10, Linux, VxWorks	Linux, Windows® Server 2012 / 2012 R2 / 2016, Windows® 7, Windows® 10, VxWorks 7.x	Linux, Windows® Server 2012 / 2012 R2 / 2016, Windows® 7, Windows® 10, VxWorks 7.x