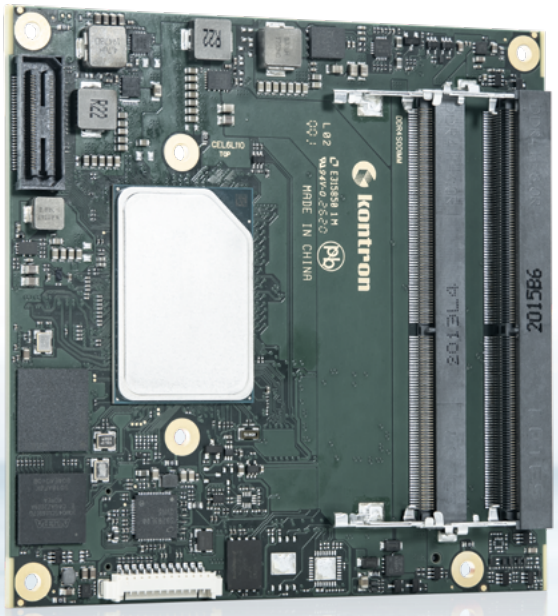
COMe-cEL6 (E2)



COM Express® Compact Type 6 with Intel Atom® x6000E, Pentium® and Celeron® Series

- Low-power – performance/watt optimized form factor solution
- Up to 32 GByte DDR4-3200 Memory via 2x SODIMM sockets (In-Band ECC)
- Triple display support
- 6x PCIe 3.0 lanes, up to 4x USB 3.1/2.0, 4x USB 2.0, 2x SATA, eMMC Flash
- 1 GbE (optional 2.5 GbE) with TSN support

POSSIBILITIES START HERE kontron S&T Group

TECHNICAL INFORMATION

COMPLIANCE	COM Express® compact Pin-out Type 6
DIMENSIONS (H x W)	95 x 95 mm
CPU	Intel Atom® x6000E Series, Pentium® and Celeron® Processors For details see table (CPU variants) given below
CHIPSET	-
MAIN MEMORY	Up to 32 GByte DDR4-3200 via 2x SODIMM sockets (In-Band ECC)
GRAPHICS CONTROLLER	SOC: Intel® HD Gfx Gen11: 1x LVDS/eDP (3840 x 2160 @ 60 Hz) 2x DP (++) on DDI1/DDI2 up to 4K
ETHERNET CONTROLLER	SOC + LAN PHY GPY115 (GPY215 on request)
ETHERNET	1GBit Ethernet (2.5GBit on request with GPY215)
STORAGE	2x SATA 6Gb/s, SDIO Interface (shared with GPIO)
FLASH ONBOARD	eMMC option – up to 128 GByte eMMC MLC
PCI EXPRESS®	6x PCIe Gen 3.0 lanes - PCIe lane configurations: 1 x4 /2 x2 / 4 x1 + 1 x2 / 2 x1
DISPLAY	DDI 1/2: DP++, LVDS: Dual Channel up to 48-bit or eDP on request
USB	Default: 2x USB 3.1 (incl. USB 2.0) + 6x USB 2.0 Option: 4x USB 3.1 (incl. USB 2.0) + 4x USB 2.0 USB 2.0 port7 does support dual role (Client/Host)
SERIAL	2x serial interface (RX/TX only), optional CAN
AUDIO	Intel® High Definition Audio
OTHERS FEATURES	SPI, LPC, SMB, Fast I²C, Staged Watchdog, RTC
SPECIAL FEATURES	Industrial grade temperature
FEATURES ON REQUEST	eMMC Flash configuration (up to 64 GByte pSLC, up to 128 GByte MLC) eDP instead of LVDS General Purpose SPI instead of Boot SPI eSPI instead of LPC to the COMe connector 4x USB3.1 w/ add USB-Hub instead of 2x USB 3.1 USB client, Trusted Platform Module TPM 2.0, de-populated LAN PHY
POWER MANAGEMENT	ACPI 6.0
POWER SUPPLY	8.5 V – 20 V Wide Range, Single Supply Power
BIOS	AMI Aptio V
OPERATING SYSTEM	Windows®10, Linux, VxWorks
TEMPERATURE	COMe-cEL6- commercial temperature: 0 °C to +60 °C operating, -30 °C to +85 °C non-operating COMe-cEL6 E2 - industrial temperature: -40 to +85 °C operating, -40 °C to +85 °C non-operating
HUMIDITY	93 % relative Humidity at 40 °C, non-condensing (according to IEC 60068-2-78)

CPU VARIANTS

BRAND	PROCESSOR NUMBER	TDP	CORES	THREADS	CACHE	BASE FREQ	MAX TURBO FREQ	GRAPHICS GEN 11	ECC	PREMIUM IO	FUNC-TIONAL SAFETY CERTIFIED	USE CONDI-TION
Intel® Celeron® Processor	J6413	10 W	4	4	1.5 MByte	1.8 GHz	3.0 GHz	16 EU	no	Intel® PSE	no	PC Client
Intel® Pentium® Processor	J6426	10 W	4	4	1.5 MByte	2.0 GHz	3.0 GHz	32 EU	no	Intel® PSE	no	PC Client
Intel® Celeron® Processor	N6211	6.5 W	2	2	1.5 MByte	1.2 GHz	3.0 GHz	16 EU	no	Intel® PSE	no	PC Client
Intel® Pentium® Processor	N6415	6.5 W	4	4	1.5 MByte	1.2 GHz	3.0 GHz	16 EU	no	Intel® PSE	no	PC Client
Intel Atom® processor	x6211E	6 W	2	2	1.5 MByte	1.3 GHz	3.0 GHz	16 EU	Yes– In Band	Intel® PSE	no	Embedded
Intel Atom® processor	x6413E	9 W	4	4	1.5 MByte	1.5 GHz	3.0 GHz	16 EU	Yes– In Band	Intel® PSE	no	Embedded
Intel Atom® processor	x6425E	12 W	4	4	1.5 MByte	2.0 GHz	3.0 GHz	32 EU	Yes– In Band	Intel® PSE	no	Embedded
Intel Atom® processor	x6212RE	6 W	2	2	1.5 MByte	1.2 GHz	n/a	16 EU	Yes– In Band	Intel® PSE, Intel® TCC	no	Industrial
Intel Atom® processor	x6414RE	9 W	4	4	1.5 MByte	1.5 GHz	n/a	16 EU	Yes– In Band	Intel® PSE, Intel® TCC	no	Industrial
Intel Atom® processor	x6425RE	12 W	4	4	1.5 MByte	1.9 GHz	n/a	32 EU	Yes– In Band	Intel® PSE, Intel® TCC	no	Industrial

BLOCK DIAGRAM