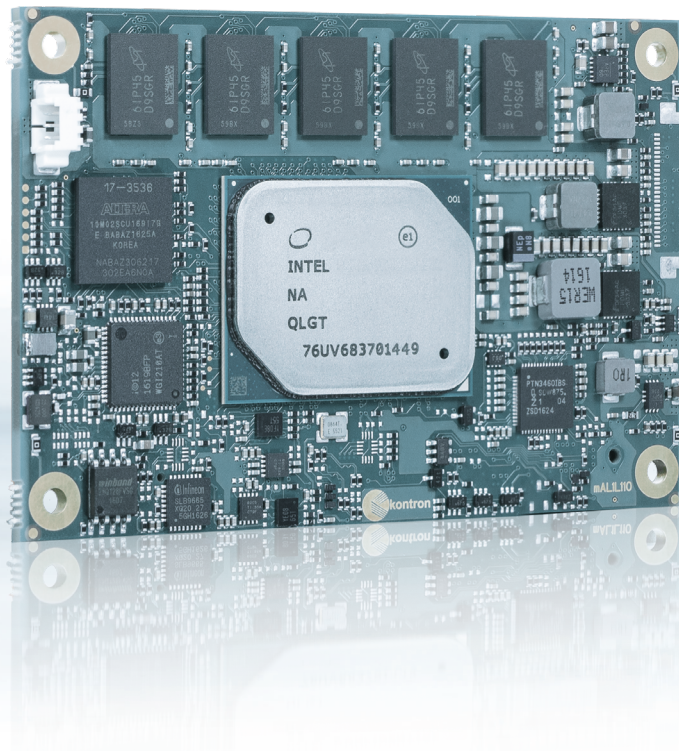


COMe-mAL10 (E2)



COM Express® mini Type 10 with Intel Atom® E3900 Series, Pentium® and Celeron® Processor

- ▶ Low-Power – Performance/Watt optimized small form factor solution
- ▶ Up to 8 GByte DDR3L memory down (ECC/non ECC)
- ▶ 2x USB 3.0/2.0, 6x USB 2.0, USB client optional, 2x SATA, eMMC Flash
- ▶ Industrial grade temperature

POSSIBILITIES START HERE



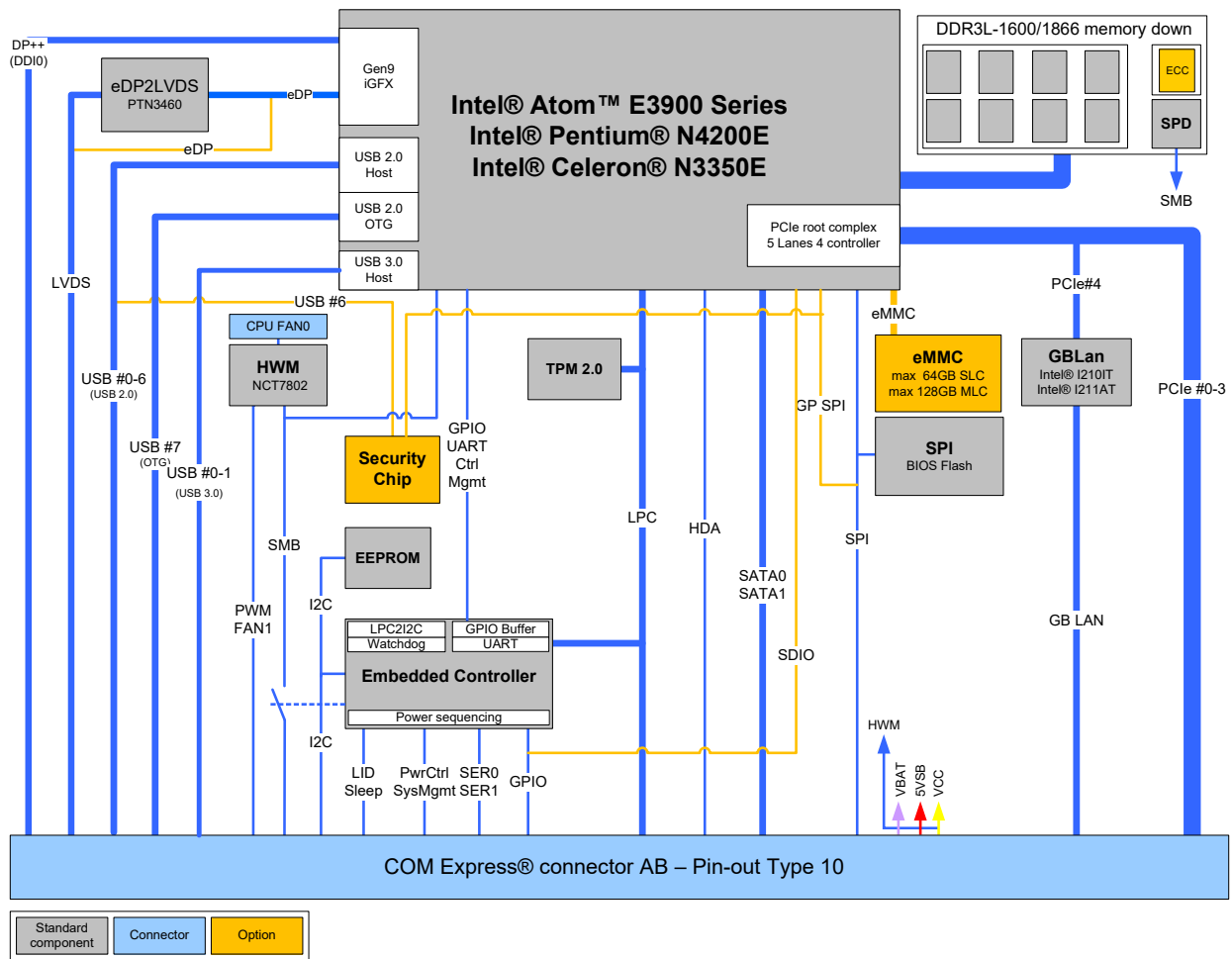
► TECHNICAL INFORMATION

COMPLIANCE	COM Express® mini, Pin-out Type 10
DIMENSIONS (H x W)	84 x 55 mm
CPU	Intel Atom® E3900 Series, Pentium® and Celeron® Processor For details see table (CPU variants) given below
CHIPSET	-
MAIN MEMORY	Up to 8 GByte DDR3-1866 (-1600) memory down (ECC for Atom-versions)
GRAPHICS CONTROLLER	Intel® HD Gfx Gen9: LVDS/eDP, 1x DP++, up to 4K
ETHERNET CONTROLLER	Intel® I210IT/I211AT
ETHERNET	10/100/1000 MBit Ethernet
STORAGE	2x SATA 6 Gb/s, SDIO Interface (shared with GPIO)
FLASH ONBOARD	32 GByte eMMC
PCI EXPRESS®	PCIe lane configurations: 3 x1 / 2 x1 + 1 x2 / 2 x2
DISPLAY	DDI: DP++, LVDS: Single Channel 18/24 bit or eDP
USB	2x USB 3.0 (incl. USB 2.0) + 6x USB 2.0, Port 7 is dual role (Client/Host)
SERIAL	2x serial interface (RX/TX only)
AUDIO	Intel® High Definition Audio
COMMON FEATURES	SPI, LPC, SMB, Fast I ² C, Staged Watchdog, RTC
BIOS	AMI Aptio V
HUMIDITY	93 % relative Humidity at 40 °C, non-condensing (according to IEC 60068-2-78)
FEATURES ON REQUEST	w/o onboard LAN: PCIe lane configuration 4 x1, MMC Flash onboard (up to 64 GByte pSLC, up to 128 GByte MLC), eDP instead of LVDS, General Purpose SPI instead of Boot SPI, AES-NI, USB client, Security Chip (Support of Kontron APPROTECT),
POWER MANAGEMENT	ACPI 4.0
POWER SUPPLY	4.75 V – 20 V Wide Range, Single Supply Power
SPECIAL FEATURES	Trusted Platform Module TPM 2.0, 4k Resolutions, GPIO/SDIO Switch, General Purpose SPI optional, Industrial Temperature Grade versions
OPERATING SYSTEM	Windows® 10, Enterprise, Windows 10 IoT, Linux, VxWorks
TEMPERATURE	COMe-mAL10: Commercial temperature: 0 °C to +60 °C operating, -30 °C to +85 °C non-operating COMe-mAL10 E2: Industrial temperature: -40 °C to +85 °C operating, -40 °C to +85 °C non-operating

► CPU VARIANTS

BRAND	PROCESSOR NUMBER	TDP	CORES	THREADS	CACHE	BASE FREQ	MAX TURBO FREQ	GRAPHICS GEN 9	ECC	USE CONDITION
Celeron®	N3350E	6 W	2	2	2 MByte	1.1 GHz	2.4 GHz	12	no	PC Client
Pentium®	N4200E	6 W	4	4	2 MByte	1.1 GHz	2.5 GHz	18	no	PC Client
Intel Atom®	x5-E3930	6.5 W	2	2	2 MByte	1.3 GHz	1.8 GHz	12	yes	Embedded
Intel Atom®	x5-E3940	9.5 W	4	4	2 MByte	1.6 GHz	1.8 GHz	12	yes	Embedded
Intel Atom®	x7-E3950	12 W	4	4	2 MByte	1.6 GHz	2.0 GHz	18	yes	Embedded

► BLOCK DIAGRAM



▶ VARIANTS

PART NO.	CPU	MEMORY	MEM-FREQ.	ETHERNET	FLASH - EMMC	VARIOUS	OP. TEMP.
34008-0400-11-2	N3350	4 GByte	DDR3L-1866	I211-AT	-	LVDS, no SecurityChip	0 °C - +60 °C
34008-0408-11-2	N3350	4 GByte	DDR3L-1866	I211-AT	8 GByte pSLC	LVDS, no SecurityChip	0 °C - +60 °C
34008-0800-11-4	N4200	8 GByte	DDR3L-1866	I211-AT	32 GByte pSLC	LVDS, no SecurityChip	0 °C - +60 °C
34008-0832-11-4	N4200	8 GByte	DDR3L-1866	I211-AT	32 GByte pSLC	LVDS, no SecurityChip	0 °C - +60 °C
34009-0400-13-5	E3930	4 GByte ECC	DDR3L-1600	I210-IT	-	LVDS, no SecurityChip	-40 °C - +85 °C
34009-0408-13-5	E3930	4 GByte ECC	DDR3L-1600	I210-IT	8 GByte pSLC	LVDS, no SecurityChip	-40 °C - +85 °C
34009-0400-16-5	E3940	4 GByte ECC	DDR3L-1600	I210-IT	-	LVDS, no SecurityChip	-40 °C - +85 °C
34009-0832-16-5	E3940	8 GByte ECC	DDR3L-1600	I210-IT	32 GByte pSLC	LVDS, no SecurityChip	-40 °C - +85 °C
34009-0800-16-7	E3950	8 GByte ECC	DDR3L-1600	I210-IT	-	LVDS, no SecurityChip	-40 °C - +85 °C
34009-0832-16-7	E3950	8 GByte ECC	DDR3L-1600	I210-IT	32 GByte pSLC	LVDS, no SecurityChip	-40 °C - +85 °C

Please contact your sales representative for other versions.

▶ CARRIER

ARTICLE	PART NO.	DESCRIPTION
COMe Eval Carrier T10 GEN2	34101-0000-00-2	COM Express® Eval Carrier Type 10 Gen 2
COME REFCARRIER-I T10 TNIP	34105-0000-00-0	COM Express® Reference Carrier-i Type 10 Thin-nanoITX Professional

▶ COOLING

ARTICLE	PART NO.	DESCRIPTION
HSP COMe-mAL10 (E2) THREAD	34009-0000-99-0	Heatspreader for COMe-m(4)AL10 commercial and E2, threaded mounting holes
HSP COMe-mAL10 (E2) THROUGH	34009-0000-99-1	Heatspreader for COMe-m(4)AL10 commercial and E2, through holes
HSP COMe-MAL10 (E2) SLIM THREAD	34009-0000-99-2	Heatspreader Slimline 6.5mm for COMe-m(4)AL10 commercial and E2, threaded mounting holes
HSP COMe-MAL10 (E2) SLIM THROUGH	34009-0000-99-3	Heatspreader Slimline 6.5mm for COMe-m(4)AL10 commercial and E2, through holes

▶ GLOBAL HEADQUARTERS

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