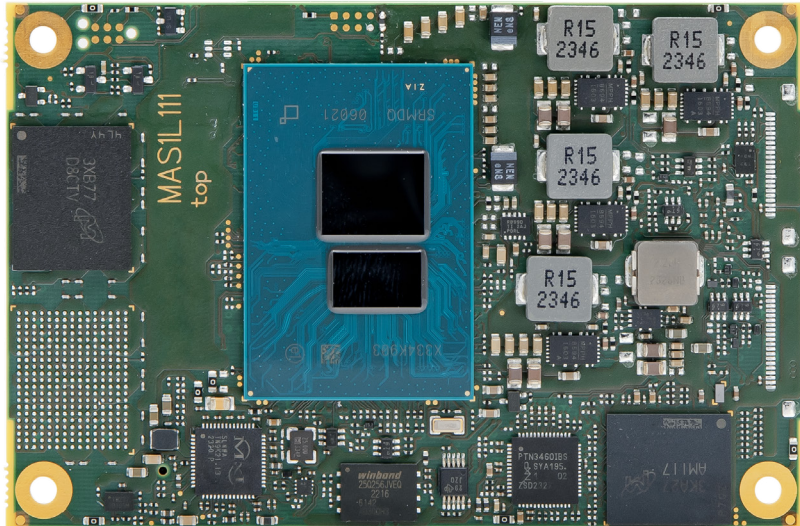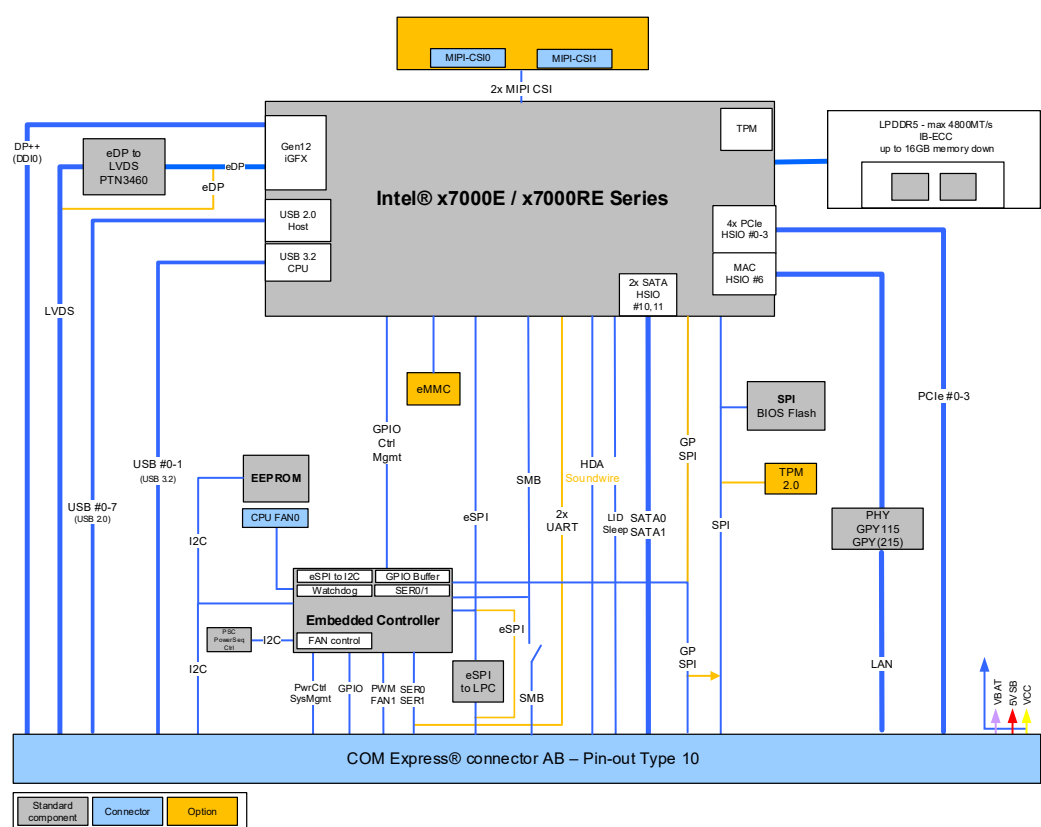# COMe-mAS10 (E2)

COM Express®

COM Express® mini Type 10 with Intel Atom® x7000E / x7000RE Series

- ▶ Low-Power – Performance/Watt optimized form factor solution
- ▶ Up to 16 GByte LPDDR5 memory down (In-Band ECC)
- ▶ 2x USB 3.2 Gen2/2.0, 6x USB 2.0
- ▶ 1 GbE (optional 2.5 GbE) with TSN support
- ▶ Industrial grade temperature

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Technical Information

FEATURES	DESCRIPTION
COMPLIANCE	COM Express® mini, Pin-out Type 10
DIMENSIONS	84 mm x 55 mm
CPU	Intel Atom® x7000E / x7000RE Series For details see table (CPU variants) given below
CHIPSET	Integrated in SOC
MAIN MEMORY	Up to 16 GByte LPDDR5 4800 MT/s memory down (In-Band ECC)
GRAPHICS CONTROLLER	SOC: Intel® HD Gfx Gen12: LVDS/eDP, 1x DP
ETHERNET CONTROLLER	SOC + LAN PHY GPY115 (GPY215 on request)
ETHERNET	1GBit Ethernet (2.5GBit on request with GPY215)
STORAGE	2x SATA 6Gb/s
FLASH ONBOARD	eMMC option – up to 256 GByte eMMC TLC
PCI EXPRESS®	PCIe Gen 3.0 - PCIe lane configurations: 4 x1, 2 x1 + 1 x2, 2 x2
DISPLAY	DDI: DP++, LVDS: Single Channel 18/24 bit or eDP
USB	2x USB 3.2 Gen2 (incl. USB 2.0) + 6x USB 2.0
SERIAL	2x serial interface (RX/TX only)
AUDIO	Intel® High Definition Audio
OTHER FEATURES	SPI, LPC, SMB, Fast I²C, Staged Watchdog, RTC
SPECIAL FEATURES	Industrial grade temperature
FEATURES ON REQUEST	eMMC up to 256 GByte TLC, eDP instead of LVDS, eSPI instead of LPC, General Purpose SPI instead of Boot SPI, Trusted Platform module TPM 2.0, de-populated LAN PHY, 2.5GBit LAN instead of 1Gbit
POWER MANAGEMENT	ACPI 6.0
POWER SUPPLY	4.75 V – 20 V Wide Range, Single Supply Power
BIOS	AMI Aptio V
OPERATING SYSTEM	Windows® 10/11, Linux
TEMPERATURE	COMe-mAS10- commercial temperature: 0° C to +60° C operating, -30° C to +85° C non-operating COMe-mAS10 E2 - industrial temperature: -40° C 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)

Block Diagram

CPU Variants

PROCESSOR NUMBER	TDP W	CORES	EUS	BASE FREQ GHZ	1C TURBO FREQ GHZ	TJUNCTION MIN °C	TJUNCTION MAX °C	ECC	USE CONDITION
X7211E	6	2	16	1,00	3,20	0	105	No	Embedded
X7213E	10	2	16	1,70	3,20	0	105	No	Embedded
X7425E	12	4	24	1,50	3,40	0	105	No	Embedded
X7211RE	6	2	16	1,00	3,20	-40	105	Yes–In Band	Embedded/Industrial*
X7213RE	9	2	16	2,00	3,40	-40	105	Yes–In Band	Embedded/Industrial*
X7433RE	9	4	32	1,50	3,40	-40	105	Yes–In Band	Embedded/Industrial*
X7835RE	12	8	32	1,30	3,60	-40	105	Yes–In Band	Embedded/Industrial*

*For Industrial use condition turbo needs to be disabled

DTR applies to these processors. See user guide for further information

Standard Variants

PART NO.	CPU	MEMORY	ETH PHY (1GBE OR 2.5GBE)	FLASH - EMMC	VARIOUS	OP. TEMPERATURE
34017-0432-R1-2	x7211RE	4GB, 4800MT/s	1GbE	32GB TLC	LPC, LVDS	-40 °C to + 85 °C
34017-0432-R2-2	x7213RE	4GB, 4800MT/s	1GbE	32GB TLC	LPC, LVDS	-40 °C to + 85 °C
34017-0432-R2-4	x7433RE	4GB, 4800MT/s	1GbE	32GB TLC	LPC, LVDS	-40 °C to + 85 °C
34017-0832-R2-8	x7835RE	8GB, 4800MT/s	1GbE	32GB TLC	LPC, LVDS	-40 °C to + 85 °C
34017-1632-R2-8	x7835RE	16GB, 4800MT/s	1GbE	32GB TLC	LPC, LVDS	-40 °C to + 85 °C

Please contact your sales representative for other versions

Carrier

ARTICLE	PART NO.	DESCRIPTION
COME EVAL CARRIER T10 GEN3	34101-0000-00-3	COM Express® Eval Carrier Type 10 Gen 3

Cooling

ARTICLE	PART NO.	DESCRIPTION
HSP COME-MAS10 (E2) THREAD	34017-0000-99-0	Heatspreader for COMe-mAS10 commercial and E2, threaded mounting holes
HSP COME-MAS10 (E2) THROUGH	34017-0000-99-1	Heatspreader for COMe-mAS10 commercial and E2, through holes
HSP COME-MAS10 (E2) SLIM THREAD	34017-0000-99-2	Heatspreader Slimline 6.5mm for COMe-mAS10 commercial and E2,
THREADED MOUNTING HOLES		
HSP COME-MAS10 (E2) SLIM THROUGH	34017-0000-99-3	Heatspreader Slimline 6.5mm for COMe-mAS10 commercial and E2,
THROUGH HOLES		
COME MINI ACTIVE UNI COOLER	34099-0000-99-0	COM Express® mini Universal Active Cooler for Heatspreader Mounting
COME MINI PASSIVE UNI COOLER	34099-0000-99-1	COM Express® mini Universal Passive Cooler for Heatspreader Mounting
COME MINI PASSIVE UNI COOLER SLIM TOP MOUNT	34099-0000-99-3	COM Express® mini Universal Passive Cooler Slim for Heatspreader Top Mounting

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