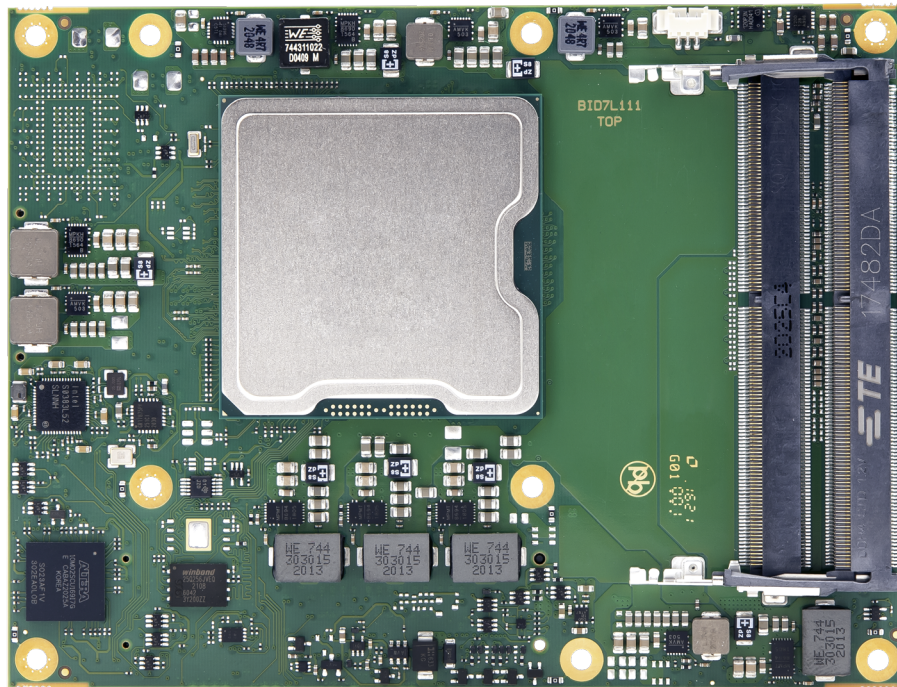


COMe-bID7 (E2)



COM Express® basic Type 7 with Intel® XEON® D-1700/D-1800 SOC processors

- ▶ Server-grade platform
- ▶ Quad 10 GbE interfaces
- ▶ High-speed connectivity 16x PCIe 4.0 + 16x PCIe 3.0, SATA, USB 3.0
- ▶ Up to 1 TByte NVMe SSD onboard
- ▶ Industrial grade versions

Technical Information

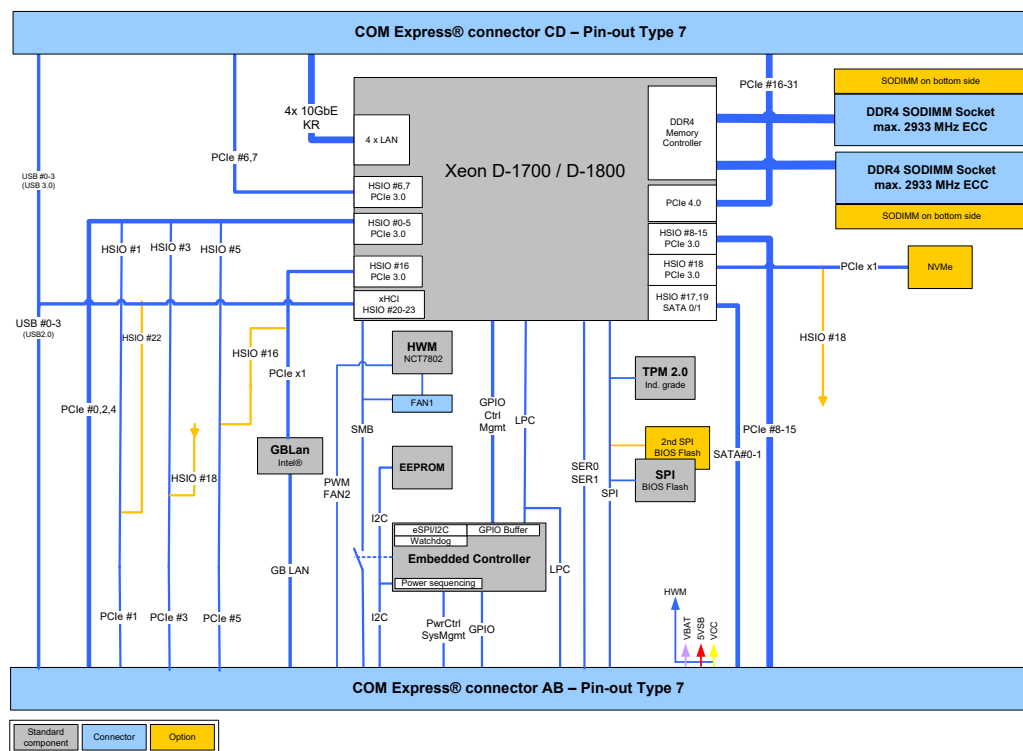
FEATURES	DESCRIPTION
COMPLIANCE	COM Express® Basic, Pin-out Type 7 - COM.0 R3.1 by default, COM.0 R3.0 on request
DIMENSIONS	95 mm x 125 mm
CPU (SOC)	Intel® Xeon® D-1700/D-1800 Processor Series For details see table "CPU variants" given below
CHIPSET	-
MAIN MEMORY	2x DDR4 SODIMM for up to 64 GByte ECC (non ECC on request) on request: 4x DDR4 SODIMM for up to 128 GByte ECC (non ECC on request)
ETHERNET CONTROLLER	Intel® I225LM/IT Intel® Quad 10GbE LAN integrated in SoC
ETHERNET	1x 1/2.5 Gb (1/2.5 GBASE-T) 4x 10GbE (10 GBASE-KR) according COM.0 R3.1
STORAGE	2x SATA 6Gb/s
FLASH ONBOARD	Up to 1 TByte NVMe SSD (on request)
PCI EXPRESS®	16x PCIe Gen4 (1 x16, 2 x8, 4 x4) according COM.0 R3.1 16x PCIe Gen3 (2 x8, 4 x4, 8 x2)
USB	4x USB 3.0 / USB 2.0
SERIAL	2x serial interface (RX/TX only)
OTHER FEATURES	SPI, LPC, SMB, Fast I²C, Staged Watchdog, RTC
SPECIAL FEATURES	TPM 2.0
FEATURES ON REQUEST	4x 10G Ethernet 4x 10G Ethernet-LEK PCI Express® COMe #16-31 PCI Express® COMe #0-7 NVMe SSD 2nd SPI Flash SODIMM sockets SODIMMs CPU BIOS PICMG COM.0 R3.0 compliance Configurations for: SFI native: LEK 1.0-4ports (COM.0 R3.0) 10GBASE-T: LEK 2.1-4ports (COM.0 R3.0) CEI: LEK 7.0-4ports (COM.0 R3.1) PICMG COM.0 R3.0 compliance Enable PCIe x1 lanes on COMe PCIe #1, #3, #5 Up to 1 TByte NVMe PCIe SSD NAND Flash On-module fail-safe 2nd SPI flash implemented for additional safety 4x SODIMM sockets (2x on top side + 2x on bottom side) Non-ECC SODIMMs other CPUs than offered as standard versions custom BIOS configurations
POWER MANAGEMENT	ACPI 6.0
POWER SUPPLY	Commercial temperature: 8.5 V - 20 V Wide Range Industrial temperature: 12 V
BIOS	AMI UEFI
OPERATING SYSTEM	Linux, Windows 10/11, Windows Server 2022
TEMPERATURE	Commercial temperature: 0 °C to +60 °C operating, -30 °C to +85 °C non-operating 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)
SUPPORTED MODULES	COMe-bID7 xxxxx commercial grade COMe-bID7 E2 xxxxx industrial grade

CPU Variants

CPU	STD FOR COME-BID7	GROUP	TDP	NO. OF CORES	IOTG	EX-TEND. TEMP	DDR4 FREQ (MT/S)	BASE FREQ (GHZ)	ALL/ MAX TURBO (GHZ)	LAN BAND-WIDTH (GBE)	QAT BAND-WIDTH (GBE)
D-1746TER	standard	NIC	67/56	10	Yes	Yes	2667	2.0	2.5/3.1	100G	OFF
D-1848TER	on request	NIC	57	10	Yes	Yes	2667	2,0	2,5/3,1	100G	OFF
D-1749NT	standard	QAT	90	10	No	No	2667	3.0	3.5/3.5	100G	20G
D-1748TE	on request	NIC	65	10	No	Yes	2400	2.3	2.8/3.4	50G	OFF
D-1747NTE	standard	QAT	80	10	No	Yes	2933	2.5	3.0/3.5	100G	20G
D-1844NT	on request	QAT	55	10	No	No	2667	2,0	2,6/3,1	50G	20G
D-1735TR	standard	NIC	59	8	Yes	No	2933	2.2	2.7/3.4	50G	OFF
D-1732TE	standard	NIC	52	8	Yes	Yes	2667	1.9	2.4/3.0	50G	OFF
D-1734NT	on request	QAT	50	8	No	No	2667	2.0	2.5/3.1	50G	20G
D-1736NT	on request	QAT	67	8	No	No	2667	2.7	3.2/3.5	50G	20G
D-1733NT	on request	QAT	53	8	No	No	2400	2.0	2.5/3.1	50G	20G
D-1823NT	on request	QAT	55	6	No	No	2400	2,8	3,3/3,5	50G	10G
D-1715TER	standard	NIC	50	4	Yes	Yes	2667	2.4	2.9/3.5	50G	OFF
D-1712TR	standard	NIC	40	4	Yes	No	2400	2.0	2.5/3.1	50G	OFF
D-1718T	on request	NIC	46	4	No	No	2933	2.6	3.1/3.5	50G	OFF
D-1713NT	on request	QAT	45	4	No	No	2400	2.2	2.9/3.5	50G	10G
D-1713NTE	on request	QAT	45	4	No	Yes	2400	2.2	2.7/3.3	50G	10G
D-1813NT	on request	QAT	42	4	No	No	2400	2,2	2,4/2,4	50G	10G
D-1846	on request	No LAN	55	10	No	No	2933	2,0	2,6/3,1	0G	OFF
D-1739	on request	No LAN	83	8	No	No	2933	3.0	3.5/3.5	0G	OFF
D-1736	on request	No LAN	55	8	No	No	2933	2.3	2.8/3.4	0G	OFF
D-1834	on request	No LAN	42	8	No	No	2667	1,8	2,4/2,9	0G	OFF
D-1726	on request	No LAN	70	6	No	No	2933	2.9	3.4/3.5	0G	OFF
D-1722NE	on request	No LAN	36	6	No	Yes	2400	1.7	2.1/2.7	0G	10G
D-1714	on request	No LAN	38	4	No	No	2667	2.3	2.8/3.4	0G	OFF
D1702	on request	No LAN	25	2	No	No	2400	1.6	1.7/1.7	0G	OFF

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

Block Diagram



Variants

PART NO.	COM.0 REV	CPU	1 GbE	SOC-LAN	SOC-LEK	SO-DIMM SOCKETS	NVMe	OP. TEMPERATURE
68008-0000-12-1	3.1	D-1712TR	I225LM	4x 10GBASE	07. Jun	2	no	0 °C to 60 °C
68008-0000-35-1	3.1	D-1735TR	I225LM	4x 10GBASE	07. Jun	2	no	0 °C to +60 °C
68008-0000-49-2	3.1	D-1749NT	I225LM	4x 10GBASE	07. Jun	2	no	0 °C to +60 °C
68009-0000-15-1	3.1	D-1715TER	I225IT	4x 10GBASE	07. Jun	2	no	-40 °C to +85 °C
68009-0000-32-1	3.1	D-1732TE	I225IT	4x 10GBASE	07. Jun	2	no	-40 °C to +85 °C
68009-0000-46-1	3.1	D-1746TER	I225IT	4x 10GBASE	07. Jun	2	no	-40 °C to +85 °C
68009-0000-47-2	3.1	D-1747NTE	I225IT	4x 10GBASE	07. Jun	2	no	-40 °C to +85 °C

Please contact your sales representative for other CPU versions or LAN configurations
Please contact tech support for custom UEFI firmware

Carrier

ARTICLE	PART NO.	DESCRIPTION
COME EVAL CARRIER T7 G2	68301-0001-00-8	COM Express® Eval Carrier Type 7 G2
ADA-COME-T7-G2 4X10G RJ45 - DEV-TOOL	68301-0000-01-4	Adapter Card with 4x RJ45 ports for use with COM Express® Eval Carrier Type 7 G2 – X557 PHY
ADA-COME-T7-G2 4X10G DAC - DEV-TOOL	68301-0000-04-4	Adapter Card with 4x 10G-KR ports for use with COM Express® Eval Carrier Type 7 G2 – no PHY
ADA-COME-T7-G2 4X10G SFP+ - C827-IM1	68301-0000-05-4	Adapter Card with 4x SFP+ ports for use with COM Express® Eval Carrier Type 7 G2 – C827-IM1 PHY

Cooling

ARTICLE	PART NO.	DESCRIPTION
HSP COME-BID7 (E2) THREAD	68009-0000-99-0	Heatspreader for COMe-bID7 commercial and E2, threaded mounting holes
HSP COME-BDV7 (E2) THROUGH	68009-0000-99-1	Heatspreader for COMe-bID7 commercial and E2, through holes
"HSK COME-BASIC ACTIVE (W/O HSP)"	38025-0000-99-0C05	Active Cooler for COMe-bxL6/bDV7/bID7 to be mounted on HSP
HSK COME-BASIC PASSIVE (W/O HSP)	38025-0000-99-0C06	Passive Cooler for COMe-bxL6/bDV7/bID7 to be mounted on HSP

Memory

PART NO.	MIN. SPEC.	SIZE	ECC/NON-ECC	OP. TEMPERATURE
97030-0832-BID7	DDR4-3200	8 GByte	ECC	0 °C to +60 °C
97030-1632-BID7	DDR4-3200	16 GByte	ECC	0 °C to +60 °C
97030-3232-BID7	DDR4-3200	32 GByte	ECC	0 °C to +60 °C
97031-0832-BID7	DDR4-3200	8 GByte	ECC	-40 °C to +85 °C
97031-1632-BID7	DDR4-3200	16 GByte	ECC	-40 °C to +85 °C
97031-3232-BID7	DDR4-3200	32 GByte	ECC	-40 °C to +85 °C

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