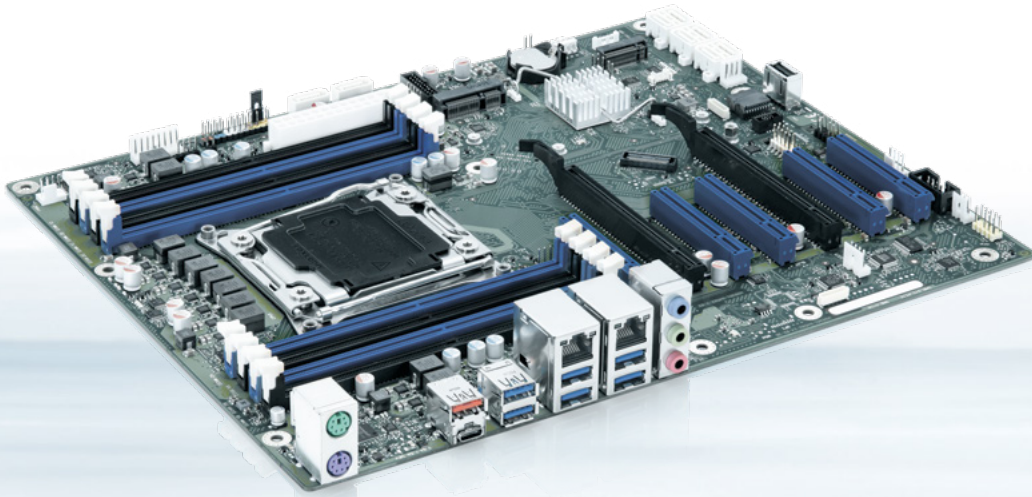


D3598-B ATX

Extended Lifecycle Series



Intel® C422 Workstation chipset and Intel® Xeon® processors

- ▶ 2x PCIe x16
- ▶ Intel® VROC Support
- ▶ Dual LAN & Mini-PCIe
- ▶ HW Watchdog
- ▶ USB 3.1 Gen2 Type C

POSSIBILITIES START HERE



D3598-B ATX

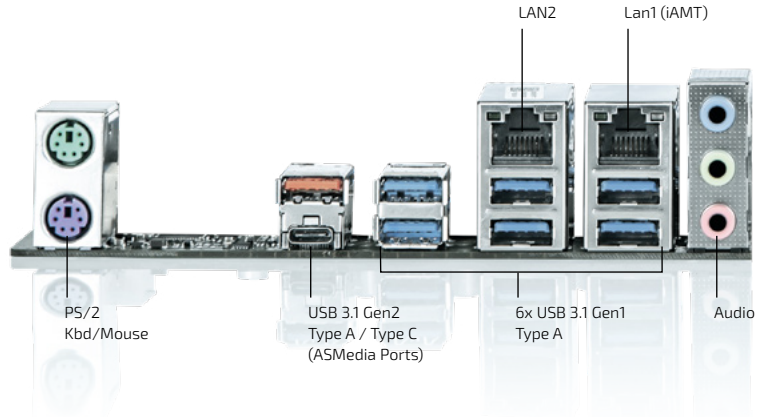
Extended Lifecycle Series

The Extended Lifecycle Motherboard D3598-B ATX is the right choice for any demanding applications and needs. Featured by Intel® C422 Chipset, the D3598-B supports the Intel® Xeon® processors based on LGA2066. The perfect fit for any workstation and high performance computing will be realized with 7 PCIe connectors, Dual Intel® GbE

LAN, Mini-PCIe and M.2 onboard capability as well as M.2 Riser to support two additional M.2 in RAID mode. The D3598-B fulfill the level of semi-industrial needs with 24/7 continuous operation up to 50 °C ambient temperature under heavy load (100 %) and prolonged lifecycle for min. 3 years.

PRODUCT HIGHLIGHTS

- ▶ Intel® Xeon® processor W21xx/W22xx
- ▶ DDR4 2666 SDRAM Memory, max. 512 GByte
- ▶ Mini-PCIe socket incl. USB
- ▶ 7x PCIe generation 3 onboard
- ▶ 5.1 multichannel audio onboard
- ▶ USB 3.1 Gen2, USB 3.1 Gen1 and USB 2.0
- ▶ USB 3.1 Gen2 Type C
- ▶ Dual Intel GbE LAN supporting iAMT/vPro & Teaming
- ▶ 8x Serial ATA III incl. RAID onboard
- ▶ Trusted Platform Modul (Infineon) V2.0 onboard
- ▶ BIOS-POST/-Boot & OS - HW Watchdog onboard
- ▶ M.2 SSD 2280 socket (PCIe, for NVMe modules)
- ▶ Socket for optional Intel® VROC HW License Key (NVMe SSD RAID)



TECHNICAL INFORMATION

SYSTEM	PROCESSOR	Intel® Xeon® processor W21xx/W22xx Socket R4 (LGA2066), max. 165 W TDP, integrated Memory Controller (For details on supported processors please refer to our website)
	CHIPSET	Intel® C422 Workstation chipset
	MEMORY	8 DIMM Sockets DDR4, max. 512 GByte, up to 4 channels Single-/dual- rank RDIMM or quad-rank LRDIMM DDR4 2133/2400/2666/2933 1.2 V, 288-pin, ECC Effective memory speed depends on installed processor
VIDEO	GRAPHICS	SLI-Certification for Nvidia Quadro cards as of driver version 391.03 WHQL
AUDIO	AUDIO CODEC	Realtek ALC671
	AUDIO INTERFACE	5.1 Multichannel, High Definition Audio
NETWORK CONNECTION	ETHERNET	Intel® i219LM/Intel® i210 Ethernet Controller with 10/100/1000 MBit/s, iAMT/vPro Wake-on-LAN (WoL) by interesting Packets, Link Status Change and Magic Packet™, PXE Support, BIOS MAC Address Display, Teaming Support
PERIPHERAL CONNECTION	USB	2x USB 2.0 (by header), 6x USB 3.1 Gen1, 4x USB 3.1 Gen1 by header, 2x USB 3.1 Gen2 (ASMedia ASM1142)
	SERIAL PORT	1x RS232 (by header)
STORAGE & EXPANSION	SATA	8x SATA III 600 Interfaces (up to 6Gbit/s, NCQ); AHCI; RAID 0/1/10
	PCIe/PCI SLOTS	PCIe x16: 2x 16 Lanes Gen3 PCIe x8: 1x 8 Lanes, Gen3; 2x 4 Lanes, Gen3; 2x 1 Lane, Gen3
POWER	CONNECTOR	24 Pin Power Connector + 8 Pin (12 V) ATX Power Connector required
	INPUT VOLTAGE	Support for Soft-Off Power Supplies; 12 V and 3.3 V Supply Voltage on PCIe Slots
FIRMWARE	BIOS	AMI Aptio 5.x (UEFI) BIOS modified and adapted by Fujitsu Technology Solutions; Recovery BIOS, SM-BIOS (DMI), BIOS and CPU Microcode Update, Quick Boot, Logo Boot, Quiet Boot, Plug & Play, Automatic DRAM and PCIe Configuration, BIOS Support for S.M.A.R.T., Advanced Power Management, ACPI S3/S4, Wake on time from S5.
	WATCHDOG	Full supervision of BIOS POST and Boot sequence
	REAL TIME CLOCK	Integrated
	TPM	Trusted Platform Module TPM V2.0 (Infineon SLB9670)

► TECHNICAL INFORMATION

SYSTEM CONTROL	FP HEADER	1x Header for Reset button, HDD LED & External Speaker
	SECURITY	1x Header for Power button, Power LED
		Recovery BIOS, System and BIOS Password, Boot Sequence Control, Serial/USB- Port Access Protection, Boot Sector Virus Warning, Write Protection for Flash BIOS, EraseDisk (optional BIOS Feature), Infineon Trusted Platform Module (TPM) V1.2-SLB9660 / V2.0-SLB9665.
SOFTWARE	OS SUPPORT	MS Windows 7-64, MS Windows 10-64, Linux-64
MECHANICAL	DIMENSIONS (L x W)	ATX: 12" x 9.6" (305 x 244 mm)
ENVIRONMENTAL	OPERATION TEMPERATURE	10 °C - 50 °C
CERTIFICATION	EMC & SAFETY	cTÜVus possible upon request, CE Class B, FCC-B verified

► POWER SUPPLY REQUIREMENTS

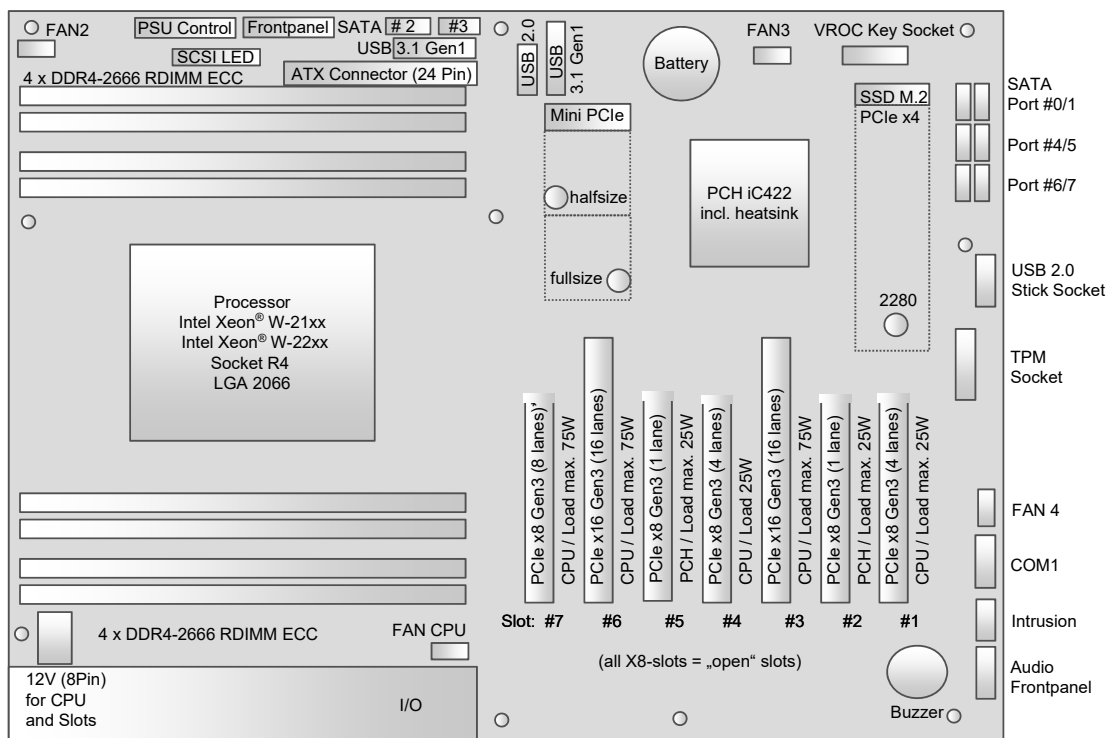
SOURCE	VOLTAGE	MIN. PS LOAD	MAX. VOLTAGE TOLERANCE	MOTHERBOARD CAPACITIVE LOAD	MOTHERBOARD MAX. CURRENT (continuous)
Main Power Supply	+ 12 V _{CPU} (Rail#2)	0.05 A*	± 5 %	1.000 µF	~45 A**, ***
	+ 12 V _{CPU} (Rail#3)	0.05 A*	± 5 %	1.000 µF	~45 A**, ***
	+ 12 V _{SYS} (Rail#1)	0.05 A*	± 5 %	1.000 µF	~45 A**, ***
	- 12 V	0 A	-	-	-
	+ 5 V	0.05 A	± 5 %	2.200 µF	~28 A***
	+ 3.3 V	0.05 A	± 5 %	2.000 µF	~20 A***
Aux	+ 5 Vaux	0 A	+ 5 % / - 3 %	2.200 µF	~2 A***

*) Combined load for all 12 V Rails.

**) Thereof processor peak current up to 32 A (<250 ms)

***) Depends on system configuration (Main focus: 12 V/3.3 V: PCIe Slots; 5 V: Memory/USB)

► CONNECTOR / SOCKET DIAGRAM



*) 8 lanes with i9-109xxX processor only

► TECHNICAL INFORMATION

FEATURES	Board Size / Chipset Stereo Audio / 5.1 Multichannel Audio Buzzer / int. Speaker Support Dual LAN Gbit / 100 Mbit / 10 Mbit DASH / AoL / Boot / iAMT 11.6 / vPro SATA / SATA RAID / eSATA Support / M.2 (PCIe x4) / NVME RAID (VROC)* USB 2.0 / USB 3.1 Gen1 / USB 3.1 Gen2 / USB 3.1 Gen2 Type C FAN controlled & monitored PSU** / CPU / AUX1 / AUX2 / AUX3 TEMP monitored CPU / Onboard Sensors	ATX / Intel® C422 - / + + / + + / + / + - / - / + / + / + + / + / + / + / + + / + / + / + + / + / + / + / + + / +
SPECIAL FEATURES	Silent Fan / System Guard Recovery BIOS / Desk Update / Multi Boot HDD Password / USB Security / EraseDisk Logo Boot Option BIOS POST- / BIOS Boot- / OS - HW Watchdog Operating Mode 24-7 / 8-5 (hrs per day - days per week) Mainboard operating temperature range (chassis inside) Support for additional M.2 SSD modules (via M.2 carrier board D3352)***	+ / + + / + / + + / + / + + + / + / + + / - 10 °C – 50 °C +
INTERNAL CONNECTORS	DIMM Sockets (DDR4 2666/2933 MHz) PCI Express® x16: 16lanes-gen3 PCI Express® x8: 8 lanes-gen3 / 4 lanes-gen3 / 1 lane-gen3 SATA (600) / SATA (300) / M.2 SSD S/PDIF / FireWire™ / Audio Input / Front Panel HD Audio (9-Pin) USB 2.0 channels / USB 3.1 Gen1 channels / USB 3.1 Gen2 channels / socket for USB2.0 stick / USB 2.0 via Mini-PCIe socket Serial (FIFO, 16550 compatible) / SMBus Access FAN PSU** / CPU / AUX1 / AUX2 / AUX3 Intrusion (Case Open) Parallel (EPP/ECP) Pin Connector Power 24 Pin (BTX) / 8 Pin (additional 12 V Supply)	8 2 1 / 2 / 2 8 / 0 / 1 - / - / - / 1 2 / 4 / 0 / 1 / 1 1 / 1 1 / 1 / 1 / 1 / 1 1 - 1 / 1
EXTERNAL CONNECTORS	Graphics Audio Mic. In / Line in / Line out LAN (RJ-45) / PS/2 Mouse / PS/2 Keyboard FireWire™ / Serial (RS232) / Parallel (EPP/ECP) USB 2.0 / USB 3.1 Gen1 / USB 3.1 Gen2 Type A / USB 3.1 Gen2 Type C	- 1 / 1 / 1 2 / 1 / 1 - / - / - - / 6 / 1 / 1

*) Requires VROC HW License Key

**) Not supported by standard Power Supplies

***) D3358-B supports up to two carrier boards D3352-A2 (= max. 4x M.2 SSD module)

► ORDERING INFORMATION

ARTICLE	PART NO.	DESCRIPTION
D3598-B ATX	F5110-V150	Intel® Xeon® W21xx/22xx, Intel® C422 Chipset
ACCESSORIES		
ADAPTER BOARD PCIe TO M.2	F5000-M3	for WiFi modules
SERIAL PORT CABLE	F5000-K5	ATX Slotbracket
M.2 CARRIER BOARD	F5000-M2	2x M.2
M.2 CARRIER BOARD	F5000-M1	1x M.2

► Global Headquarters

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