

Data Sheet FUJITSU Mainboard D3598-B ATX

Extended Lifecycle Series

-preliminary-



Powered by the Intel® C422 Workstation chipset (BasinFalls), quad channel DDR4 2666 R-DIMM memory and Intel® Xeon® processors (SKL-W; LGA2066)
Designed & approved for 24/7 continuous operation

Chipset:

Intel® C422 Workstation Chipset



Processors:

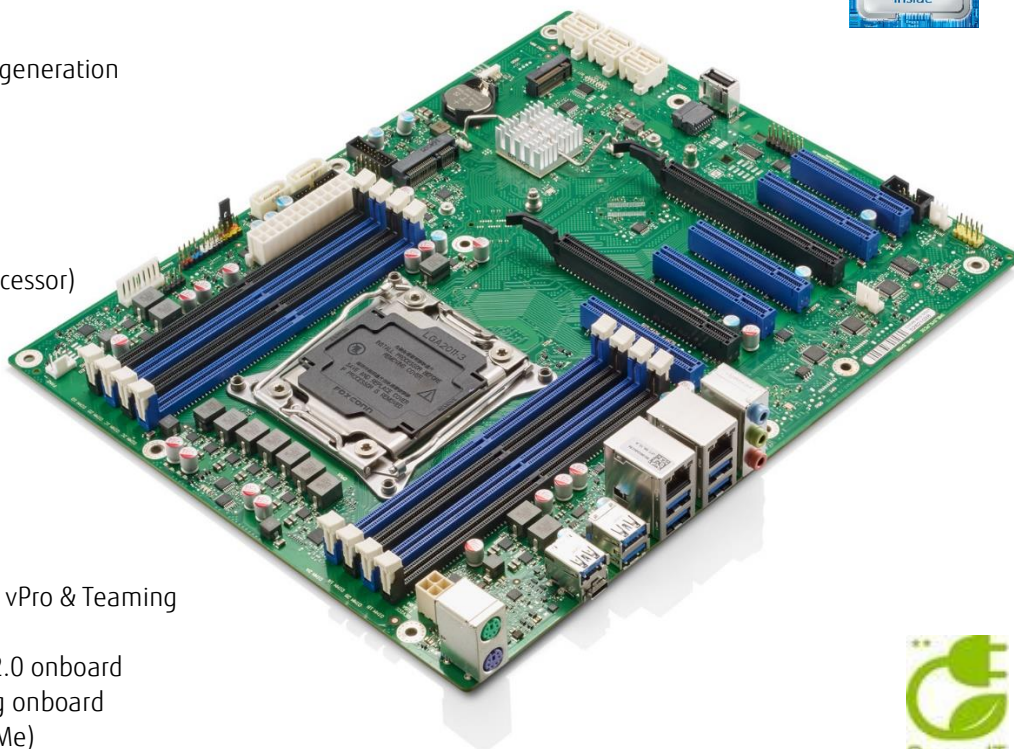
Intel® Xeon® Processor Skylake-W
Intel® Omni-Path Architecture 14nm generation
(up to 140W TDP)

Memory:

DDR4 2666 SDRAM (quad channel)
RDIMM
(memory type/speed depends on processor)
Up to 512GB memory

Product Features:

Mini-PCIe socket incl. USB
7 x PCIe generation 3 onboard
5.1 multichannel audio onboard
USB 3.1, USB 3.0 and USB 2.0
USB 3.1 Type C
Dual Intel GbE LAN supporting iAMT / vPro & Teaming
8 x Serial ATA III incl. RAID onboard
Trusted Platform Modul (Infineon) V2.0 onboard
BIOS-POST/-Boot & OS - HW Watchdog onboard
M.2 SSD 2260/2280 socket (PCIe, NVMe)



Features and benefits

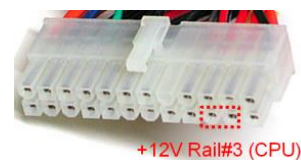
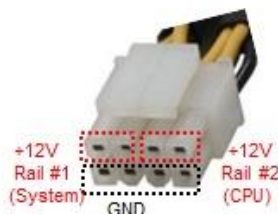
Board Size	ATX: 12" x 9.6" (305 x 244 mm)
Chipset	Intel® "Basin Falls" C422 Workstation chipset
Memory	8 DIMM Sockets DDR4, max. 512GB, Single / Dual / Triple / Quad Channel, 2666MHz (1DPC) / 2133, 2400, 2666MHz (2DPC), single- / dual- / quad-rank RDIMM, Supports ECC RDIMM and non-ECC RDIMM, 1.2V/2.5V, 288-pin, ECC Effective memory speed depends on installed processor
Processors	Intel® Xeon® processor Socket R4 (LGA2066), max. 140W TDP, integrated Memory Controller (For details on supported processors please refer to our website)
Power Specification	24 Pin Power Connector + 8 Pin (12V) Power Connector required Support for Soft-Off Power Supplies; 12V and 3.3V Supply Voltage on PCIe Slots 3.3V Auxiliary Supply Voltage on PCIe Slots (Wake-Up Function) On board CPU Voltage Regulator, 5V / 2A Auxiliary Power required for USB Wake-Up from Save-to-RAM, Save-to-Disk

Power Supply Requirements

Source	Voltage	Min. PS Load	Max.Voltage Tolerance	Mainboard Capacitive Load	Mainboard Max. Current (continuous)
Main Power Supply	+ 12 V _{CPU} (Rail#1)	0.5A ^{A)}	± 5 %	1.000µF	~16A ^{A)}
	+ 12 V _{CPU} (Rail#3)			1.000µF	
	+ 12 V _{Sys} (Rail#2)	0.3A	± 5 %	1.000µF	~19A ^{B)}
	- 12V	0A	± 10 %	--	--
	+ 5V	0.2A	± 5 %	2.200µF	~ 25A ^{B)}
	+ 3.3V	0.5A	± 5 %	2.200µF	~ 21A ^{B)}
Aux	+ 5V _{aux}	0A	+5 % / -3%	2.200µF	~ 2A

A) Combined load for Rail1 & Rail3. Note: Processor peak current = 32A (<250ms)!

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



Note:

(further required rails 5V, 3.3V etc. not shown here)

+12V rails: Each +12V/GND PSU pin must support up to 10A continuous current for full system configuration. Single-rail 12V supply instead of three separate 12V rails is possible. See TechNotes document (FTP) for further details.

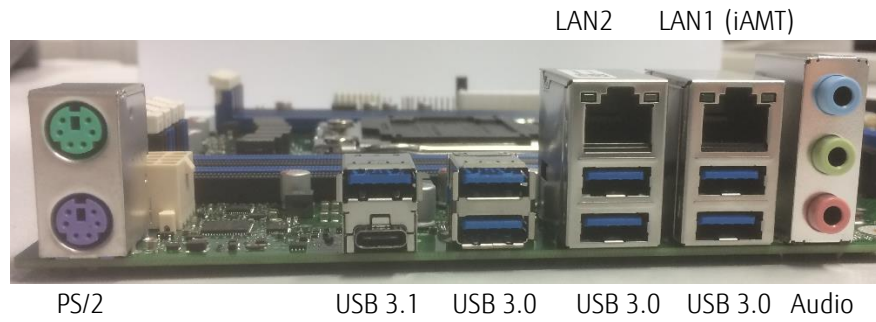
BIOS	<p>AMI Aptio 5.x (UEFI) BIOS modified and adapted by Fujitsu Technology Solutions; Recovery BIOS, SM-BIOS (DMI), BIOS and CPU Microcode Update, Quick Boot, Logo Boot, Quiet Boot, Plug & Play, Automatic DRAM and PCIe Configuration, BIOS Support for S.M.A.R.T., Advanced Power Management, ACPI S3/S4, Wake on time from S5. Boot support for M.2 Carrier Board D3352-A (PCIe-based SSD modules, AHCI/NVME). BIOS integrated HW Diagnostic Tool</p>	
Security Features	<p>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) V2.0-SLB9665.</p>	
Audio	<p>Realtek ALC671, 5.1 Multichannel, High Definition Audio</p>	
LAN	<p>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</p>	
Drives	<p>8 x SATA III 600 Interfaces (up to 6GBit/s, NCQ); AHCI; RAID. 1 x M.2 Socket (2260/2280) for PCIe (4 lanes) based M.2 modules, AHCI / NVME Boot support</p>	
Special Features	<p>Silent Fan</p> <p>System Guard</p> <p>Silent Drives</p> <p>Recovery BIOS</p> <p>Desk Update</p> <p>Multi Boot</p> <p>HDD Password</p> <p>24/7 Operation</p> <p>Boot Watchdog</p>	<p>Independent temperature related processor fan and system fan supervision and control</p> <p>View and adjust Silent Fan features</p> <p>Noise reduction for optical and hard disk drives</p> <p>Restores a corrupted BIOS</p> <p>Easy driver update with Drivers&Utilities DVD</p> <p>Comfortable boot from any boot device</p> <p>Access protection for disk drives</p> <p>Mainboard is designed for continuous operation</p> <p>Full supervision of BIOS POST and Boot sequence</p>

Features D3598-B	Board Size / Chipset	ATX / Intel C422
	Stereo Audio / 5.1 Multichannel Audio	- / ✓
	Buzzer / int. Speaker Support	✓ / ✓
	Dual LAN Gbit / 100 Mbit / 10 Mbit	✓ / ✓ / ✓
	DASH 1.1 / AoL / Boot / iAMT 11.6 / vPro	- / - / ✓ / ✓ / ✓
	SATA / ATA / RAID / eSATA Support / M.2 (PCIe x4)	✓ / - / ✓ / ✓ / ✓
	USB 2.0 / USB 3.0 / USB 3.1 Type C	✓ / ✓ / ✓
	FAN controlled&monitored PSU ¹ / CPU / AUX1 / AUX2 / AUX3	✓ / ✓ / ✓ / ✓ / ✓
TEMP monitored CPU / Onboard Sensors	✓ / ✓	
Special Features D3598-B	Silent Fan / Silent Fan LT / System Guard / Silent Drives	✓ / - / ✓ / ✓
	Recovery BIOS / Desk Update / Multi Boot	✓ / ✓ / ✓
	HDD Password / USB Security / EraseDisk ²	✓ / ✓ / ✓
	Logo Boot Option / Intel On Screen Branding	✓ / ✓
	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)	10°C - 50°C
	Support for additional M.2 SSD modules (via M.2 carrier board D3352)	1 or 2 modules
Internal Connectors D3598-B	DIMM Sockets (DDR4 2666MHz)	8
	PCI Express x16: 16lanes-gen3	2
	PCI Express x8: 8 lanes-gen3 / 4 lanes-gen3 / 1 lane-gen3	1 / 2 / 2
	SATA (600) / SATA (300) / M.2 SSD	8 / 0 / 1
	S/PDIF / FireWire™ / Audio Input / Front Panel HD Audio (9-Pin)	- / - / - / 1
	USB 2.0 channels / USB 3.0 channels / USB 3.1 channels / socket for USB2.0 stick / USB 2.0 via Mini-PCIe socket	2 / 4 / 0 / 1 / 1
	Serial (FIFO, 16550 compatible) / SMBus (Temperature)	1 / -
	FAN PSU ¹ / CPU / AUX1 / AUX2 / AUX3	1 / 1 / 1 / 1 / 1
	Intrusion (Case Open)	1
	Parallel (EPP/ECP) Pin Connector	-
Power 24 Pin (BTX) / 8 Pin (additional 12V Supply)	1 / 1	
External Connectors D3598-B	Graphics	-
	Audio Mic. In / Line in / Line out	1 / 1 / 1
	LAN (RJ-45) / PS/2 Mouse / PS/2 Keyboard	2 / 1 / 1
	FireWire™ / Serial (RS232) / Parallel (EPP/ECP)	- / - / -
	USB 2.0 / USB 3.0 / USB 3.1 Type A / USB 3.1 Type C	- / 6 / 1 / 1

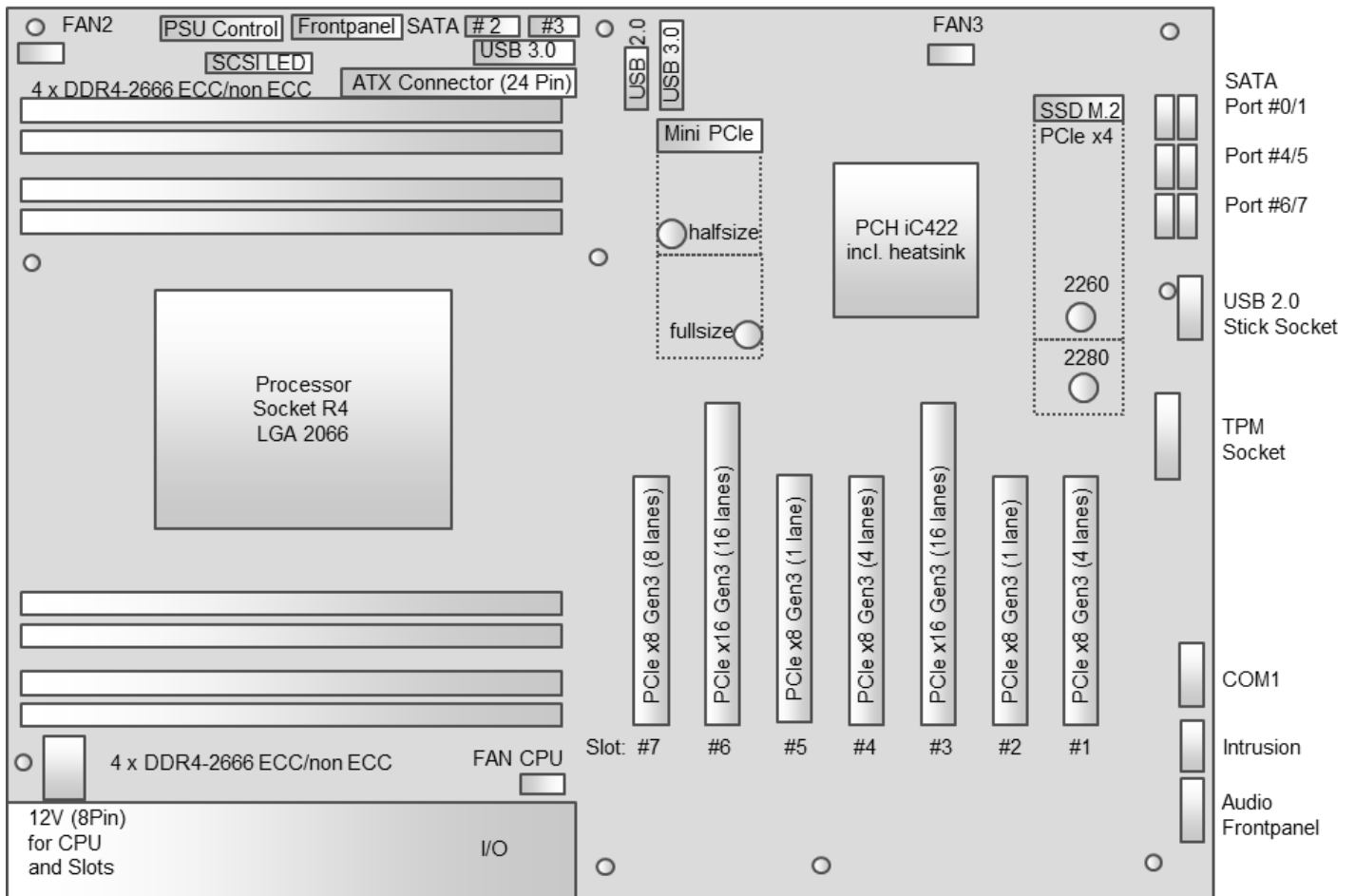
¹ Not supported by standard Power Supplies

² Optional BIOS Feature (License required)

External Connectors



Connector / Socket Diagram



preliminary layout!

Accessories

Adapter Board PCIe to M.2 Wi-Fi modules D3436-S S26361-F5000-M3



Serial Port Cable "ATX Slotbracket" S26361-F5000-K005



M.2 Carrier Board (2 x M.2) D3352-A2 S26361-F5000-M2



M.2 Carrier Board (1 x M.2) D3352-A1 S26361-F5000-M1



Further industrial products offered by Fujitsu

- Connectors
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24 Volt Kiosk Printers



Multi-Input Touch Panels

Contact:

Fujitsu Components Europe, B.V.
Tel.: +31 (0)23 556 0910
Fax: +31 (0)23 556 0950
Website: emea.fujitsu.com/components
Address: Diamantlaan 25
2132 WV Hoofddorp
Netherlands

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Contact

Fujitsu Technology Solutions GmbH
OEM Mainboard Sales
Email: oem-sales@ts.fujitsu.com

Website: <http://ts.fujitsu.com>
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