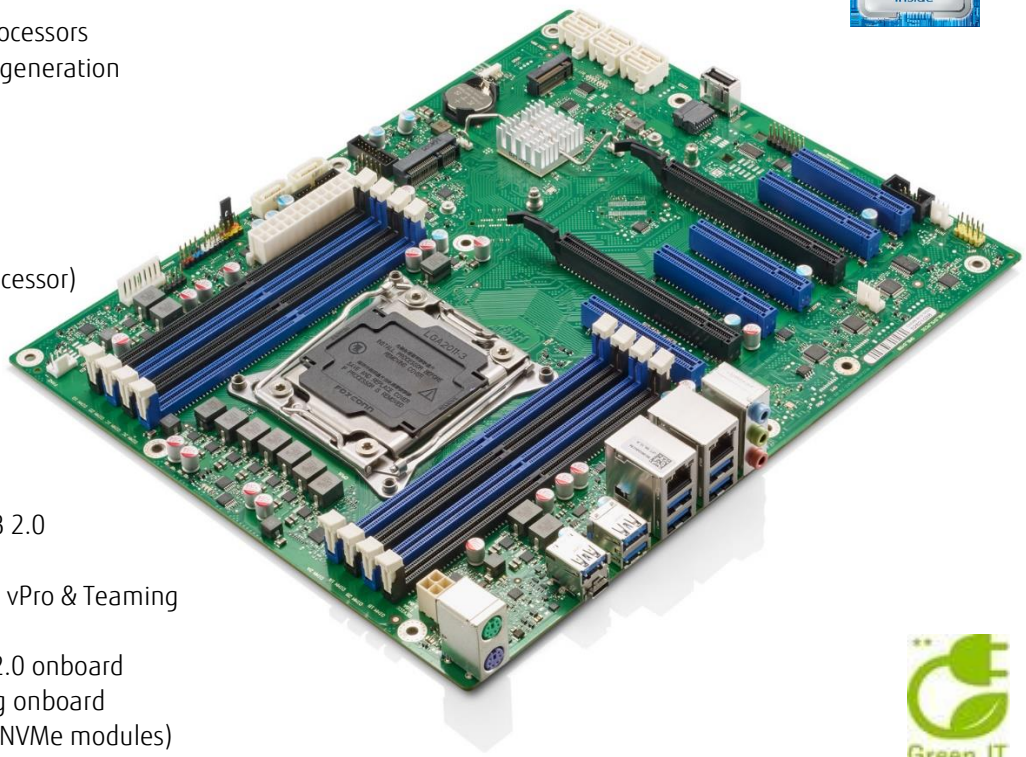
Data Sheet
FUJITSU Mainboard D3598-B ATX
Extended Lifecycle Series

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

Chipset:
Intel® C422 Workstation Chipset

Processors:
Intel® Xeon® W-21xx (Skylake-W) Processors
Intel® Omni-Path Architecture 14nm generation
(up to 160W TDP)

Memory:
DDR4 2666 SDRAM (quad channel)
RDIMM & LRDIMM,
(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 Gen2, USB 3.1 Gen1 and USB 2.0
USB 3.1 Gen2 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, for NVMe modules)
Socket for optional Intel® VROC HW License Key (NVMe SSD RAID)

Silent Fan | System Guard | Silent Drives | Multi Boot | HDD Password | Recovery BIOS | Desk Update | 24/7 Operation | Watch Dog | Erasedisk | USB 3.0 | Designed in Germany

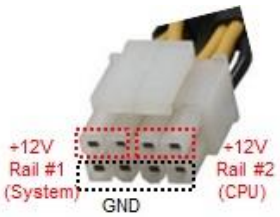
Features and benefits

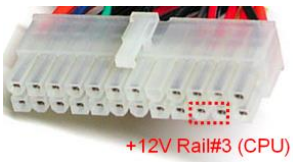
Board Size	ATX: 12" x 9.6" (305 x 244 mm)
Chipset	Intel® "Basin Falls" C422 Workstation chipset
Memory	8 DIMM Sockets DDR4, max. 512GB, up to 4 channels Single- / dual- rank RDIMM or quad-rank LRDIMM DDR4 2133 / 2400 / 2666, 1.2V, 288-pin, ECC Effective memory speed depends on installed processor
Processors	Intel® Xeon® processor W21xx Socket R4 (LGA2066), max. 160W 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#2)	0.05A A)	± 5 %	1.000µF	~45A B,C)
	+ 12 V_{CPU} (Rail#3)			1.000µF	
	+ 12 V_{Sys} (Rail#1)			1.000µF	
	- 12V	0A	--	--	--
	+ 5V	0.05A	± 5 %	2.200µF	~ 28A C)
	+ 3.3V	0.05A	± 5 %	2.000µF	~ 20A C)
Aux	+ 5Vaux	0A	+5 % / -3%	2.200µF	~ 2A C)

A) Combined load for all 12V Rails. B) Thereof processor peak current up to 32A (<250ms)
C) 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	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, NVME required). BIOS integrated HW Diagnostic Tool		
Security Features	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), Trusted Platform Module TPM V2.0 (Infineon SLB9670)		
Audio	Realtek ALC671, 5.1 Multichannel, High Definition Audio		
USB 3.1 Gen2	ASMedia ASM1142		
LAN	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		
Drives	8 x SATA III 600 Interfaces (up to 6GBit/s, NCQ); AHCI; RAID 0/1/10. 1 x M.2 Socket (2280) for PCIe (4 lanes) based M.2 modules (NVME required), Prepared for Intel VROC (Virtual RAID on CPU) for NVME SSD RAID [1] NVME Boot support		
Special Features	Silent Fan	Independent temperature related processor fan and system fan supervision and control	
	System Guard	View and adjust Silent Fan features	
	Silent Drives	Noise reduction for optical and hard disk drives	
	Recovery BIOS	Restores a corrupted BIOS	
	Desk Update	Easy driver update with Drivers&Utilities DVD	
	Multi Boot	Comfortable boot from any boot device	
	HDD Password	Access protection for disk drives	
	24/7 Operation	Mainboard is designed for continuous operation	
	Boot Watchdog	Full supervison of BIOS POST and Boot sequence	
Operating Systems	**OS**	**"Runnable"**	**"Tested/Released by Fujitsu"**
	MS Windows 7-64	X	X
	MS Windows 10-64	X	X
	Linux-64	X	(planned)

1 Supported via PCIe Slots only, requires VROC HW License Key

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 / AoL / Boot / iAMT 11.6 / vPro	- / - / ✓/ ✓/ ✓
	SATA / SATA RAID / eSATA Support / M.2 (PCIe x4) / NVME RAID (VROC)[2]	✓ / ✓ / ✓ / ✓/ ✓
	USB 2.0 / USB 3.1 Gen1 / USB 3.1 Gen2 / USB 3.1 Gen2 Type C	✓/ ✓/ ✓/ ✓
	FAN controlled & monitored PSU[3] / 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[4]	✓ / ✓/ ✓
	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)[5]	✓
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 3.1 Gen1 channels / USB 3.1 Gen2 channels / socket for USB2.0 stick / USB 2.0 via Mini-PCIe socket	2 / 4 / 0 / 1 / 1
	Serial (FIFO, 16550 compatible) / SMBus Access	1 / 1
	FAN PSU[3] / 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 3.1 Gen1 / USB 3.1 Gen2 Type A / USB 3.1 Gen2 Type C	- / 6 / 1 / 1

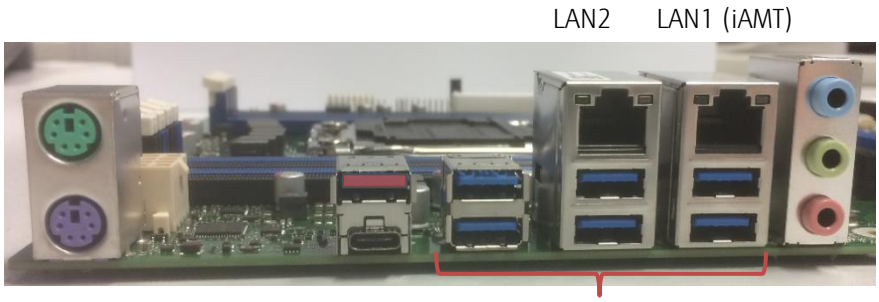
2 Requires VROC HW License Key

3 Not supported by standard Power Supplies

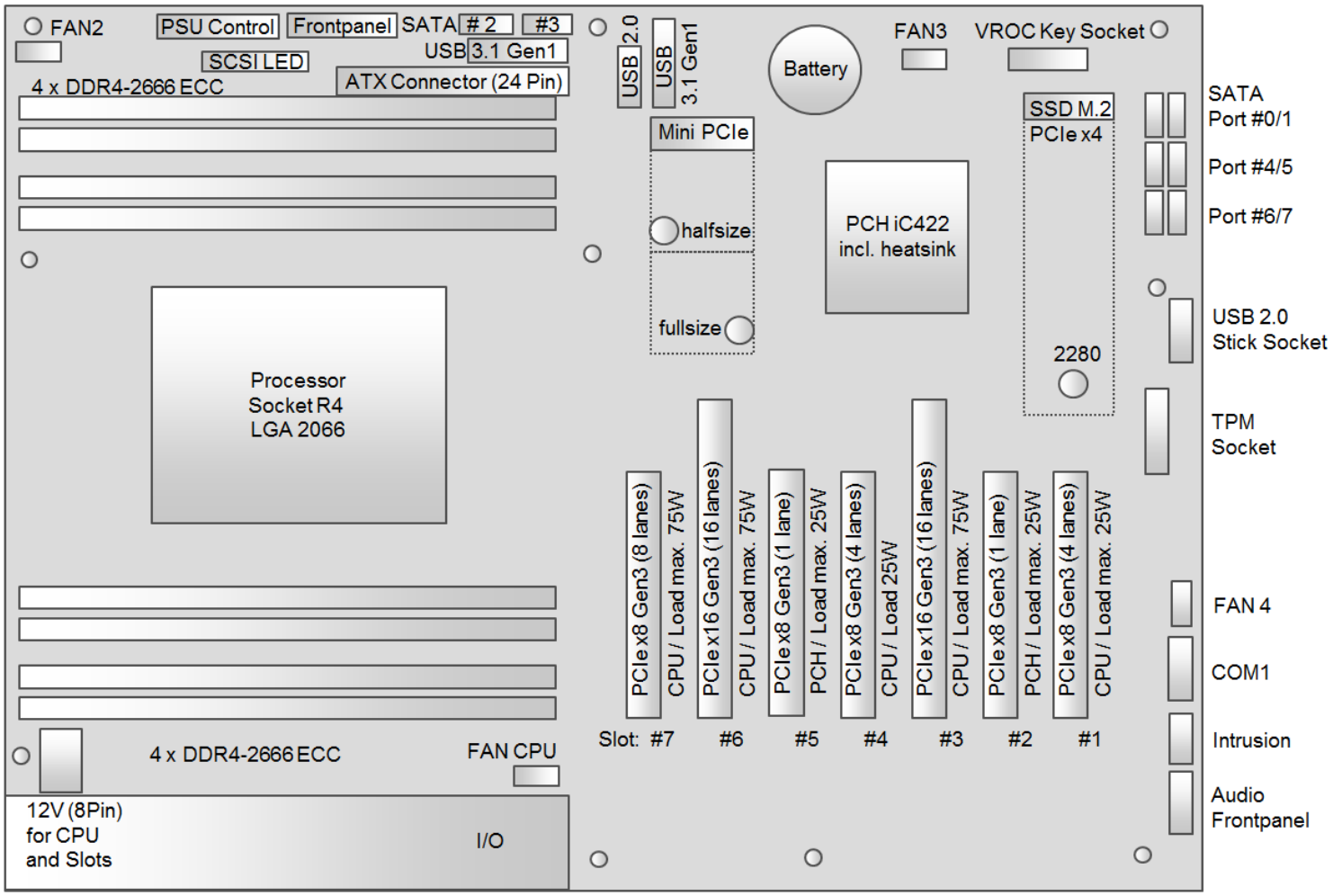
4 Optional BIOS Feature (License required)

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

External Connectors



Connector / Socket Diagram



Accessories

Adapter Board PCIe to M.2 2230 (for WiFi modules)	D3436-S	S26361-F5000-M3	
Serial Port Cable "ATX Slotbracket"		S26361-F5000-K005	
M.2 Carrier Board (2 x M.2) (for PCIe/NVME modules)	D3352-A2	S26361-F5000-M2	
M.2 Carrier Board (1 x M.2) (for PCIe/NVME module)	D3352-A1	S26361-F5000-M1	

Further industrial products offered by Fujitsu

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- Thermal Printers
- Wireless Modules



24 Volt Kiosk Printers



Multi-Input Touch Panels

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2132 WV Hoofddorp
Netherlands

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