

BIOS Settings GigaByte Z390 M Gaming:

>> **Load Optimized Defaults** then make the following settings – important settings in bold:

- **M.I.T.**
 - Advanced Frequency Settings: Extreme Memory Profile (X.M.P.) >> **Profile 1**
 - CPU Internal AC/DC load line - Power Saving
 - CPU Vcore Loadline Calibration - **Low** - +/- keys oder pgup/pgdn !

- **BIOS**
 - Fast Boot: Disabled
 - Windows 8/10 Features >> Other OS also Windows
 - CSM Support >> **Disabled**
 - Secure Boot >> disabled by default, aber besser überprüfen!

- **Peripherals**
 - Initial Display Output: PCIe Slot 1 (oder iGFX)
 - Intel Platform Trust Technology (PTT) >> Disabled

Super IO Configuration

Serial Port: Disabled

USB Configuration

- Legacy USB Support >> Enabled
- XHCI Hand-off >> **Enabled**
- EHCI Hand-off >> **Enabled**

Network Stack Configuration

- Network Stack >> Disabled
- **SuperIO Serial Port** >> Disabled
- **Security Device Support** >> Disabled

Thunderbolt(TM) Configuration - keine Karte vorhanden

- TBT V-t-d Base Security >> **Disabled**
 - Thunderbolt Boot Support >> **Disabled**
 - Security Level >> **No Security**
 - Discrete Thunderbolt(TM) Configuration:
 - Thunderbolt USB Support: Enabled
 - GPIO Force Pwr: Enabled
- (bei Frage: „Save configuration and exit“ hier „No“ auswählen.)
Zur Sicherheit checken: PCIe x4 Switch: PCH Side - nicht gesehen

- **Chipset**
 - Vt-d >> **Disabled**
 - Internal Graphics >> Enabled
 - DVMT Pre-Alloc >> 64M
 - DVMT Total Gfx Mem >> 256M
 - Audio Controller >> Enabled
 - Above 4G Decoding >> Disabled (später testen ob eingeschaltet werden kann)
 - PCH LAN Controller: Enabled
 - Wake on LAN: Disabled
 - IOAPIC 24-119 Entries: Enabled - nicht gesehen

- **Power**
 - ErP >> Disabled
 - RC6 (Render Standby) >> Enabled

- SATA And RST Configuration:
Zur Sicherheit checken: SATA Mode Selection: AHCI

- **Smart Fan:**
Die Lüftersteuerung (Smart Fan) müsst ihr nach euren Bedürfnissen einrichten. Ich habe bei mir den CPU-Lüfter auf "Silent", den Rest auf "Manual" und meine eigenen Lüfterkurven eingestellt, die alle noch deutlich leiser sind als die "Silent"-Einstellung. Außer beim CPU-Lüfter habe ich bei allen Lüftern "VRM MOS" als Sensor ausgewählt (also nicht "System 1", "System 2" etc.).



-> Memory Frequency Settings
-> Extreme Memory Profile (X.M.P.) -> Profile 1
-> System Memory Multiplier -> 26.66
-> Memory Ref Clock -> Auto
-> Memory Odd Ratio -> Auto
-> Memory Boot Mode -> Normal
-> Memory Frequency -> 2666 MHz

Uhrzeit richtig einstellen, Woche -Monat -Jahr.

Save and Exit!

- Advanced Frequency Settings
- Advanced Memory Settings
- Advanced Voltage Settings
- PC Health Status
- Miscellaneous Settings

Smart Fan 5 Settings

CPU Internal AC/DC Load line	Power Saving	
CPU Vcore Loadline Calibration	Low	
VAXG Loadline Calibration	Normal	
CPU Vcore/VAXG Protection	Normal	
CPU Vcore Current Protection	Normal	
VAXG Current Protection	Normal	
CPU Vcore PWM Switch Rate	Normal	400.0KHz
VAXG PWM Switch Rate	Normal	400.0KHz
PWM Phase Control	Balanced	
VAXG Phase Control	High Perf	

CPU Vcore	Normal	1.200V
Dynamic Vcore(DVID)	+0.000V	+0.000V
BCLK Adaptive Voltage	Enabled	
SVID offset	Disabled	
CPU Graphics Voltage (VAXG)	Auto	1.200V
CPU VCCIO	Auto	0.950V
CPU System Agent Voltage	Auto	1.050V
VCC Substained	Auto	1.020V
VCCPLL	Auto	1.020V
VCCPLL OC	Auto	1.250V
VCCVTT	Auto	1.020V
VCCDMI_PEG	Auto	1.000V
CPU Core PLL Overvoltage (+mV)	Auto	-
RING PLL Overvoltage (+mV)	Auto	-
GT PLL Overvoltage (+mV)	Auto	-
SA PLL Overvoltage (+mV)	Auto	-
MC PLL Overvoltage (+mV)	Auto	-

Adjust the voltage.
Auto = BIOS configures Vcore voltage entered manually



PCIE Bifurcation Support

- Initial Display Output
- EZ RAID
- LEDs in System Power On State
- Intel Platform Trust Technology (PTT)
- Software Guard Extensions (SGX)
- OffBoard SATA Controller Configuration
- Trusted Computing
- Super IO Configuration
- Intel(R) Bios Guard Technology
- USB Configuration
- Network Stack Configuration
- NVMe Configuration
- SATA And RST Configuration
- Intel(R) Ethernet Connection (7) I219-V - B4:2E:99:10:28:F9

PCIE x16

PCle 1 Slot

On
Disabled
Software Controlled

USB Configuration

- Legacy USB Support Enabled
- XHCI Hand-off Enabled
- USB Mass Storage Driver Support Enabled
- Port 60/64 Emulation Disabled
- Mass Storage Devices: Spaceloop 16GB 1100 Auto

Super IO Configuration

- Serial Port Disabled

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M.I.T. System BIOS Peripherals **Chipset** Power Save & Exit

VT-d	Disabled
Internal Graphics	Disabled
Audio Controller	Enabled
Above 4G Decoding	Disabled
PCH LAN Controller	Enabled
Wake on LAN Enable	Disabled
IOAPIC 24-119 Entries	Enabled

Alt Help

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M.I.T. System BIOS Peripherals Chipset **Power** Save & Exit

Platform Power Management	Enabled
PEG ASPM	Disabled
PCH ASPM	Disabled
DMI ASPM	Enabled
AC BACK	Always Off
Power On By Keyboard	Disabled
Power On Password	
Power On By Mouse	Disabled
ErP	Disabled
Soft-Off by PWR-BTTN	Instant-Off
Resume by Alarm	Disabled
Wake up day	0
Wake up hour	0
Wake up minute	0
Wake up second	0
Power Loading	Auto
CEC 2019 Ready	Disabled
RC6(Render Standby)	Enabled

Alt Help