

1) a) Procesor: Intel Core i7 10700K

CPU Specifications

Total Cores	8
Total Threads	16
Max Turbo Frequency	5.10 GHz
Intel® Turbo Boost Max Technology 3.0 Frequency ‡	5.10 GHz
Intel® Turbo Boost Technology 2.0 Frequency‡	5.00 GHz
Processor Base Frequency	3.80 GHz
Cache	16 MB Intel® Smart Cache
Bus Speed	8 GT/s
TDP	125 W
Configurable TDP-down Frequency	3.50 GHz
Configurable TDP-down	95 W


- b) i. CPU: Intel Core i7 10700K
- ii. Placa de bază: MSI MEG Z590I UNIFY
- iii. RAM: CORSAIR DOMINATOR PLATINUM RGB RAM, 32GB
- iv. Placă Grafică: NVIDIA GeForce RTX 3060 Ti
- v. Placă rețea: Integrata in placa de baza
- vi. Cooler: CORSAIR H100i PRO XT RGB
- vii. Sursă: 750W CORSAIR
- viii. Stocare: 480GB CORSAIR Force MP510 NVMe PCIe M.2 SSD
- ix. Carcasă: CORSAIR 4000D AIRFLOW
- x. Dispozitive gaming (opțional): K55 RGB PRO Tastatura, HARPOON RGB WIRELESS Gaming Mouse
- xi. Sistem de operare: Windows 11

SPECIFICATIONS

Model Name	MEG Z590I UNIFY
CPU Support	Supports 10th Gen Intel® Core™ Processors, 11th Gen Intel® Core™ Processors, Pentium® Gold and Celeron® Processors
CPU Socket	LGA 1200
Chipset	Intel® Z590 Chipset
Graphics	1x PCIe 4.0 x16 slot
Interface	
Display Interface	Support 4K@60Hz as specified in HDMI 2.0b DisplayPort 1.4 – Requires Processor Graphics 2x Thunderbolt™ 4 (Type-C), Input from mini DisplayPort
Memory Support	2 DIMMs, Dual Channel DDR4-5600MHz(OC)
Storage	1x M.2 Gen4 x4 64Gb/s slot, 1x M.2 Gen3 x4 32Gb/s slot, supports Intel® Optane™ technology 4x SATA 6Gb/s ports
Thunderbolt™ 4	2x USB Type-C up to 40G, Charging support up to 5V/3A, 15W, 2x Mini DisplayPort input ports
USB ports	3 x USB 3.2 Gen 2 10Gbps (2 Type-A + 1 Type-C) 4 x USB 3.2 Gen 1 5Gbps (4 Type-A) 4 x USB 2.0
LAN	Intel® I225-V 2.5G LAN
WiFi / BT	Intel® Wi-Fi 6E AX210, Bluetooth 5.2
Audio	8-Channel(7.1) HD Audio with Audio Boost 4

ii) Placa de baza:

CONNECTIONS



1. DisplayPort

3. 2.5G LAN

5. Thunderbolt 4 40Gbps (Type-C)

7. Clear CMOS Button

9. USB 3.2 Gen1 5Gbps (Type-A)

11. Mini DisplayPort Input (for Thunderbolt passthrough)

2. USB 2.0

4. Wi-Fi /Bluetooth

6. HD Audio Connectors

8. HDMI

10. USB 3.2 Gen2 10Gbps (Type-A)

iii) RAM:
Specificatii

GENERAL

Tip memorie	DDR4
Capacitate	32 GB
Frecventa (MHz)	3200
Module	Dual channel

ALTELE

Latenta	CL16
Radiator	Da
Voltaj	1.2 V
Altele	XMP 2.0

iv)Placa grafica:

Specificatii

Caracteristici generale

Interfata	PCI Express x16 4.0
Rezolutie maxima (pixeli)	7680 x 4320
Suport SLI	Nu
Suport CrossFireX	Nu
Suport DirectX	12.1
Suport OpenGL	4.6

Chipset

Producator chipset	NVIDIA
Seria	RTX 3000
Procesor video	GeForce RTX 3060 Ti
Frecventa procesor (MHz)	1780
Tehnologie de fabricatie (nm)	8
Versiune Pixel Shader	6.5
Versiune Vertex Shader	6.5
Raster Operators	48
Numar de tranzistoare	13.3 miliarde
CUDA Cores	4864
Procesoare Stream	28

Memorie

Tip memorie	GDDR6
Capacitate memorie	8 GB
BUS memorie (bit)	192
Frecventa memorie (MHz)	15000

V)Cooler: Caracteristici generale

Tip racire	Lichid
Iluminare	RGB
Facilitati	PWM; Lungime tub: 380mm
Continut pachet	Cooler procesor, Documentatie

Radiator

Socket	1200, 1150, 1151, 1155, 1156, 1366, 2011, 2066, AM2, AM3, AM4, sTR4, STRX4
Material radiator	Cupru-aluminiu
Dimensiune radiator (L x A x I mm)	277 x 120 x 27

Ventilator

Viteza (rpm)	2400
Flux aer max. (CFM)	75
Numar ventilatoare	2
Ventilator (mm)	120
Presiune aer	4.2 mmH2O
Nivel zgomot (dB)	10 - 37

Garantie

Garantie comerciala	24 luni
Garantie de conformitate	24 luni

Vi)Sursa:

Specificatii

Caracteristici generale

Tip	ATX
Putere (W)	750
Ventilatoare	1 x 120mm
Tensiune/Ampera[j	+3.3V 25A; +5V 25A; +12V 1 62A; -12V 0.8A; +5Vsb 3A
PFC	Activ
Sursa modulara	Da
Eficienta	85%
Conectori	1 x 20+4-pin, 1 x 4+4-pin CPU, 4 x 6-pin PCI-E, 8 x SATA, 6 x 4-pin Peripheral, 2 x FDD
Protectii	OVP, OPP, UVP, SCP

Informatii suplimentare

Iluminare	Nu
Certificare	80+ Bronze
Timp functionare (ore)	100.000

Vii) Stocare:

CARACTERISTICI GENERALE

Form Factor	M.2
Capacitate	480 GB
Interfata	PCIe
Rata de transfer la citire (MB/s)	3480
Rata de transfer la scriere (MB/s)	2000
Altele	TBW: 360
Dimensiuni (W x D x H cm)	80 x 22 x 1.8
Greutate (g)	0.055 Kg
Line-up	Force Series™ MP510
Tip Memorie	3D TLC NAND

viii) Carcasa:

Specificatii:

General

Recomandat pentru Gaming	Da
Tip carcasa	MiddleTower
Pozitionare sursa	Jos
Culoare	Alb
Sursa	Fara sursa
Bays 2.5 interne	2
Bays 3.5 interne	2
Dimensiuni (H x D x W)	466 x 453 x 230 mm
Greutate	7.8 kg
Panou lateral transparent	Da, tempered glass
Sloturi expansiune	x7 + 2
Suport radiator	Fata - 1 x 120/240/280/360mm Spate 1 x 120mmTavan 1x 120/240mm
Inaltime cooler CPU	170 mm (Max)
Lungime video GPU	360 mm (Max)

Placi Baza Compatibile

ATX	Da
mATX	Da
mITX	Da

Conectori

USB 3.0	1
USB 3.1 tip C	1
3.5 mm jack	1

Ventilatoare

Total ventilatoare incluse	2
Numar maxim compatibile	6

Ventilatoare Incluse

Fata	1x 120 mm
Spate	1x 120 mm

Ventilatoare Optionale

Fata	3x 120 mm sau 2x 140 mm (1x 120 mm included)
Tavan	2x 120 mm sau 2x 140 mm

CARACTERISTICI GENERALE

Tip	Gaming
Numar taste	110
Interfata tastatura	USB
Tastatura iluminata	Da (RGB)
Tehnologie	Cu fir
Culoare	Negru
Taste programabile/Hotkeys	6 macro keys
Greutate (g)	0.81
Altele	Inaltime ajustabila Media controls Palm rest detasabil Compatibil cu Corsair iCUE Anti Ghosting

ix) Tastatura:

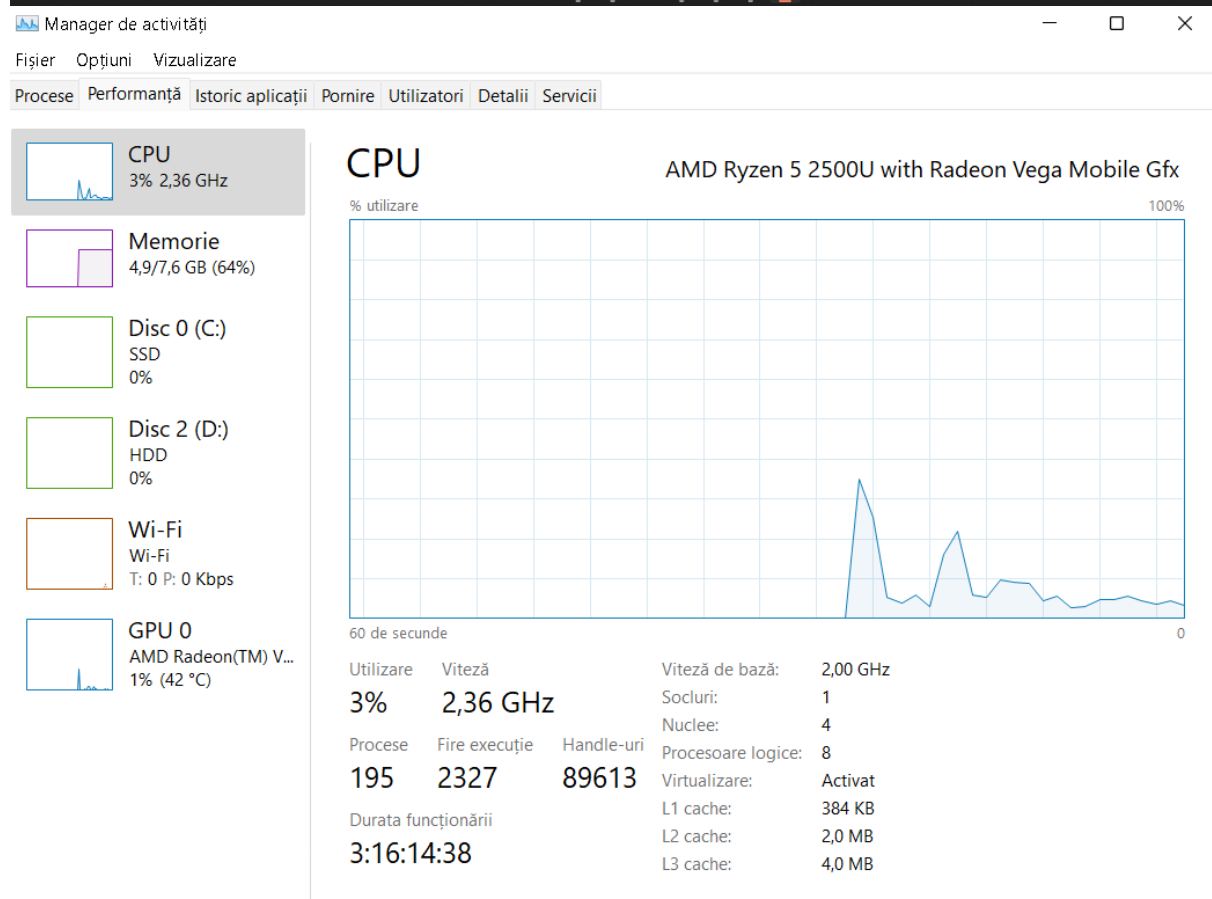
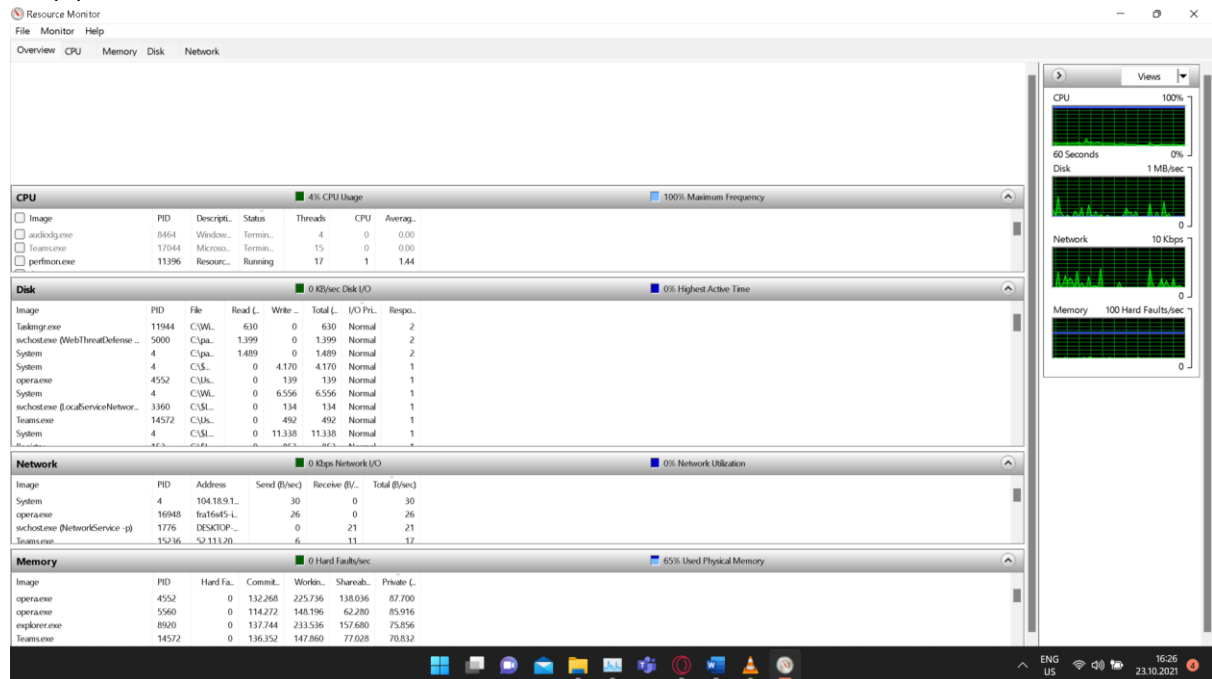
Specificatii

CARACTERISTICI GENERALE

Tip	Gaming
Rezolutie (dpi)	10000
Butoane/rotite	6/1
Interfata mouse	USB
Tehnologie	Fara fir Optic
Senzor	PMW3325
Interfata receiver	USB
Culoare	Negru
Greutate (g)	0.099
Altele	Baterie reincarcabila Cablul de 1.8m Memorie onboard Forma tip Claw Suporta iCUE Tehnologia Slipstream 2.4GHz

Mouse:

2. a) i)



^ Mai puține detalii | Deschidere Monitor resurse

ii)

The screenshot shows a Windows 11 desktop environment. In the foreground, a Command Prompt window is open, displaying the output of the `netstat` command. The output lists active network connections, including protocols (TCP, UDP), local addresses, foreign addresses, and connection states (ESTABLISHED, CLOSE_WAIT, TIME_WAIT, SYN_SENT). The Resource Monitor application is also open, showing the 'Network' tab. It displays a table of processes with network activity, including Image, PID, Send (B/sec), Receive (B/sec), and Total (B/sec). The 'Network Activity' section shows 0 KB/s Network I/O and 0% Network Utilization. The 'TCP Connections' and 'Listening Ports' sections are also visible, showing details for various network services and ports.

Command Prompt Output:

```

C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.22478.1012]
(c) Microsoft Corporation. Toate drepturile rezervate.

C:\Users\maria>netstat

Active Connections

Proto Local Address Foreign Address State
TCP 127.0.0.1:58842 DESKTOP-RDLSNAO:4843 SYN_SENT
TCP 192.168.0.107:54676 20.199.120.85:https ESTABLISHED
TCP 192.168.0.107:56310 151.101.114.49:https ESTABLISHED
TCP 192.168.0.107:57973 52.109.88.210:https TIME_WAIT
TCP 192.168.0.107:58006 52.109.88.210:https ESTABLISHED
TCP 192.168.0.107:59390 151.101.2.49:https ESTABLISHED
TCP 192.168.0.107:60918 a104-117-76-105:https CLOSE_WAIT
TCP 192.168.0.107:61299 a92-123-8-217:https CLOSE_WAIT
TCP 192.168.0.107:62507 151.101.1.44:https ESTABLISHED
TCP 192.168.0.107:63215 52.113.205.243:https ESTABLISHED
TCP 192.168.0.107:63222 52.114.75.115:https ESTABLISHED
TCP 192.168.0.107:63362 151.101.2.49:https ESTABLISHED
TCP 192.168.0.107:64427 wa-in-f188:5228 ESTABLISHED
TCP 192.168.0.107:65013 a92-123-19-250:https CLOSE_WAIT
  
```

Resource Monitor - Network Activity:

Image	PID	Send (B/sec)	Receive (B/sec)	Total (B/sec)
Image				
WINWORD.EXE	10176	202	399	602
svchost.exe (NetworkService - p)	1776	2	11	14
System	4	10	0	10
svchost.exe (NetworkService - p)	15236	3	6	9
svchost.exe (NetworkService - p)	5956	2	3	5
svchost.exe (NetworkService - p)	16948	1	3	4
svchost.exe (NetworkService - p)	4552	0	3	3
svchost.exe (NetworkService - p)	8264	1	1	2

Network Activity: 0 KB/s Network I/O, 0% Network Utilization

TCP Connections:

Image	PID	Address	Port	Protocol	Firewall Sta.
svchost.exe (LocalService)	13320	IPv4 unsp...	123	UDP	Allowed, r...
svchost.exe (LocalService)	13320	IPv4 unsp...	123	UDP	Allowed, r...
svchost.exe (RPCSS - p)	1164	IPv4 unsp...	135	TCP	Allowed, r...
svchost.exe (RPCSS - p)	1164	IPv4 unsp...	135	TCP	Allowed, r...
System	4	192.168.0...	137	UDP	Not allowe...
System	4	192.168.0...	138	UDP	Not allowe...
System	4	192.168.0...	139	TCP	Not allowe...
System	4	IPv4 unsp...	445	TCP	Not allowe...
System	4	IPv4 unsp...	445	TCP	Not allowe...

Listening Ports:

Image	PID	Address	Port	Protocol	Firewall Sta.
svchost.exe (LocalService)	13320	IPv4 unsp...	123	UDP	Allowed, r...
svchost.exe (LocalService)	13320	IPv4 unsp...	123	UDP	Allowed, r...
svchost.exe (RPCSS - p)	1164	IPv4 unsp...	135	TCP	Allowed, r...
svchost.exe (RPCSS - p)	1164	IPv4 unsp...	135	TCP	Allowed, r...
System	4	192.168.0...	137	UDP	Not allowe...
System	4	192.168.0...	138	UDP	Not allowe...
System	4	192.168.0...	139	TCP	Not allowe...
System	4	IPv4 unsp...	445	TCP	Not allowe...
System	4	IPv4 unsp...	445	TCP	Not allowe...

b)

The screenshot shows a Windows 11 desktop environment. A Command Prompt window is open, displaying the output of the `tracert` command. The output shows the path from the local machine to youtube.com, including the IP addresses of the hops and the time taken for each hop. The traceroute shows 11 hops, with the final destination being youtube.com [142.250.184.206].

Command Prompt Output:

```

C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.22478.1012]
(c) Microsoft Corporation. Toate drepturile rezervate.

C:\Users\maria>tracert youtube.com

Tracing route to youtube.com [142.250.184.206]
over a maximum of 30 hops:

  0  7 ms  2 ms  2 ms  192.168.0.1
  1  2 ms  2 ms  2 ms  gw.c5.campus.utcluj.ro [172.25.0.1]
  2  3 ms  2 ms  2 ms  obs2-campus-gw.utcluj.ro [193.226.6.225]
  3  89 ms  8 ms  4 ms  unassigned.roedu2.net [217.73.171.37]
  4  12 ms  10 ms  11 ms  37.128.233.149
  5  9 ms  10 ms  16 ms  hu-0-0-0-0.core1.nat.roedu.net [37.128.239.109]
  6  104 ms  11 ms  220 ms  te-0-6-0-0.peers1.nat.roedu.net [37.128.239.14]
  7  41 ms  36 ms  37 ms  Google-buc.RoNIX.Ro [217.156.113.94]
  8  36 ms  47 ms  38 ms  108.170.251.129
  9  41 ms  36 ms  38 ms  142.251.64.185
 10  36 ms  36 ms  36 ms  fra24s11-in-f14.1e100.net [142.250.184.206]
  
```

```
C:\WINDOWS\system32\cmd.exe
Trace complete.

C:\Users\maria>
C:\Users\maria>
C:\Users\maria>
C:\Users\maria>
C:\Users\maria>
C:\Users\maria>tracert youtube.com

Tracing route to youtube.com [142.250.184.206]
over a maximum of 30 hops:

  1    2 ms    2 ms    2 ms  192.168.0.1
  2    6 ms    2 ms    6 ms  gw.c5.campus.utcluj.ro [172.25.0.1]
  3    2 ms    9 ms    2 ms  obs2-campus-gw.utcluj.ro [193.226.6.225]
  4   59 ms    8 ms   204 ms  unassigned.roedu2.net [217.73.171.37]
  5    9 ms   11 ms   10 ms  37.128.233.149
  6   19 ms   12 ms   11 ms  hu-0-0-0-0.core1.nat.roedu.net [37.128.239.109]
  7  206 ms  216 ms  224 ms  te-0-6-0-0.peers1.nat.roedu.net [37.128.239.14]
  8   39 ms   36 ms   36 ms  Google-buc.RoNIX.Ro [217.156.113.94]
  9   37 ms   38 ms   38 ms  108.170.251.129
 10   37 ms   43 ms   36 ms  142.251.64.185
 11   36 ms   36 ms   45 ms  fra24s11-in-f14.1e100.net [142.250.184.206]

Trace complete.

C:\Users\maria>
```