LAPORAN PRAKTIKUM

PRAKTIKUM ARSITEKTUR KOMPUTER

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PROGRAM STUDI SARJANA TERAPAN
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POLITEKNIK ELEKTRONIKA NEGERI SURABAYA
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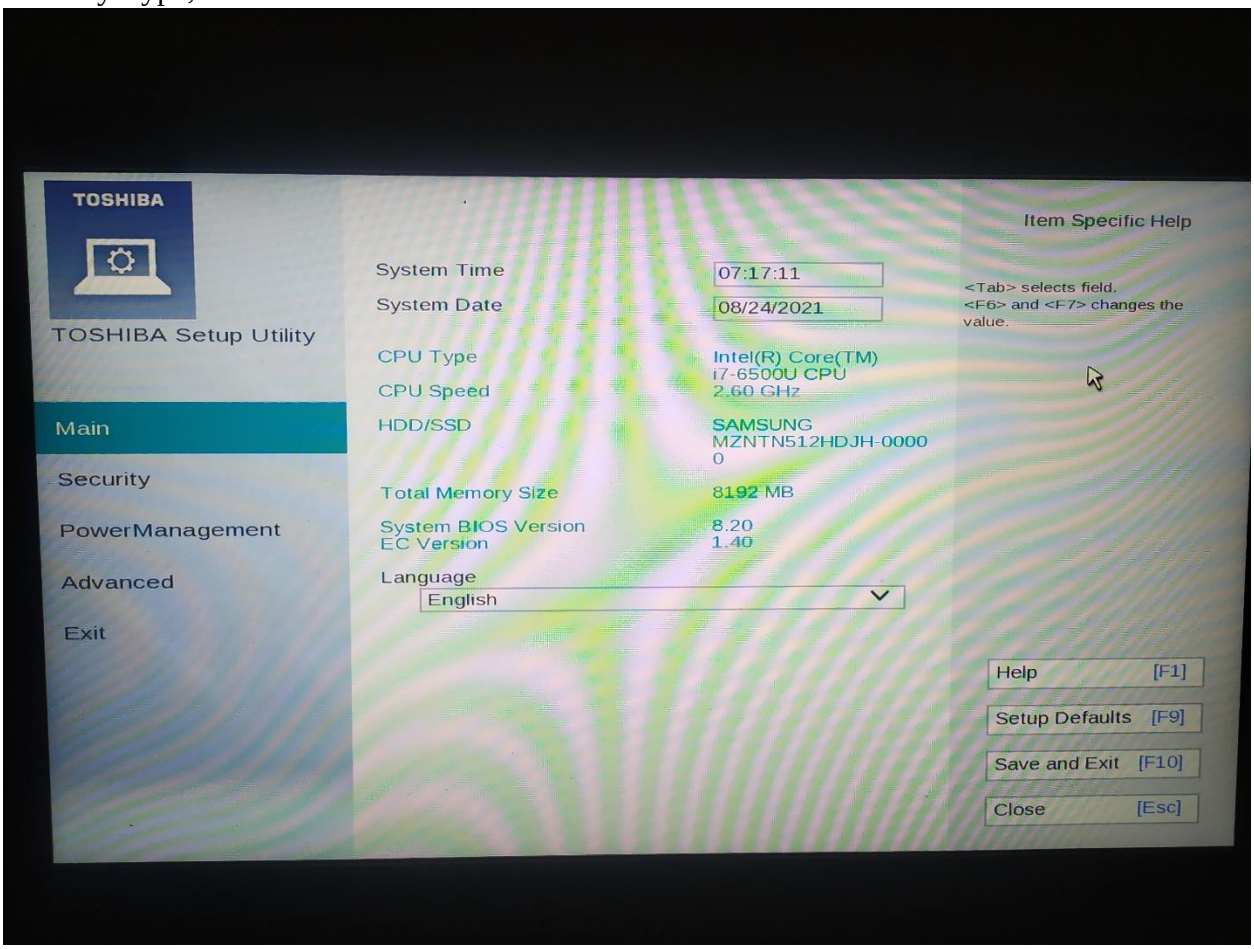
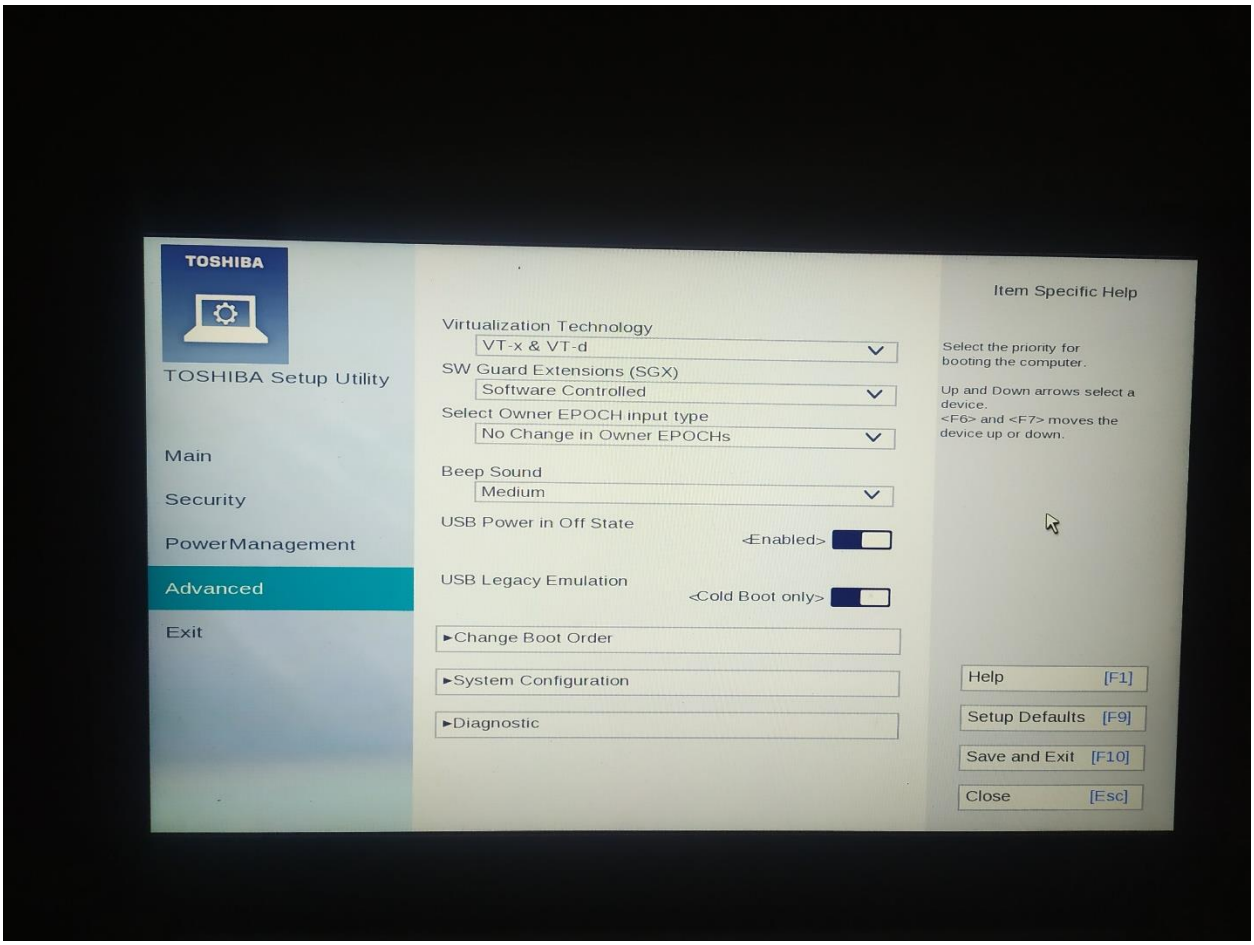
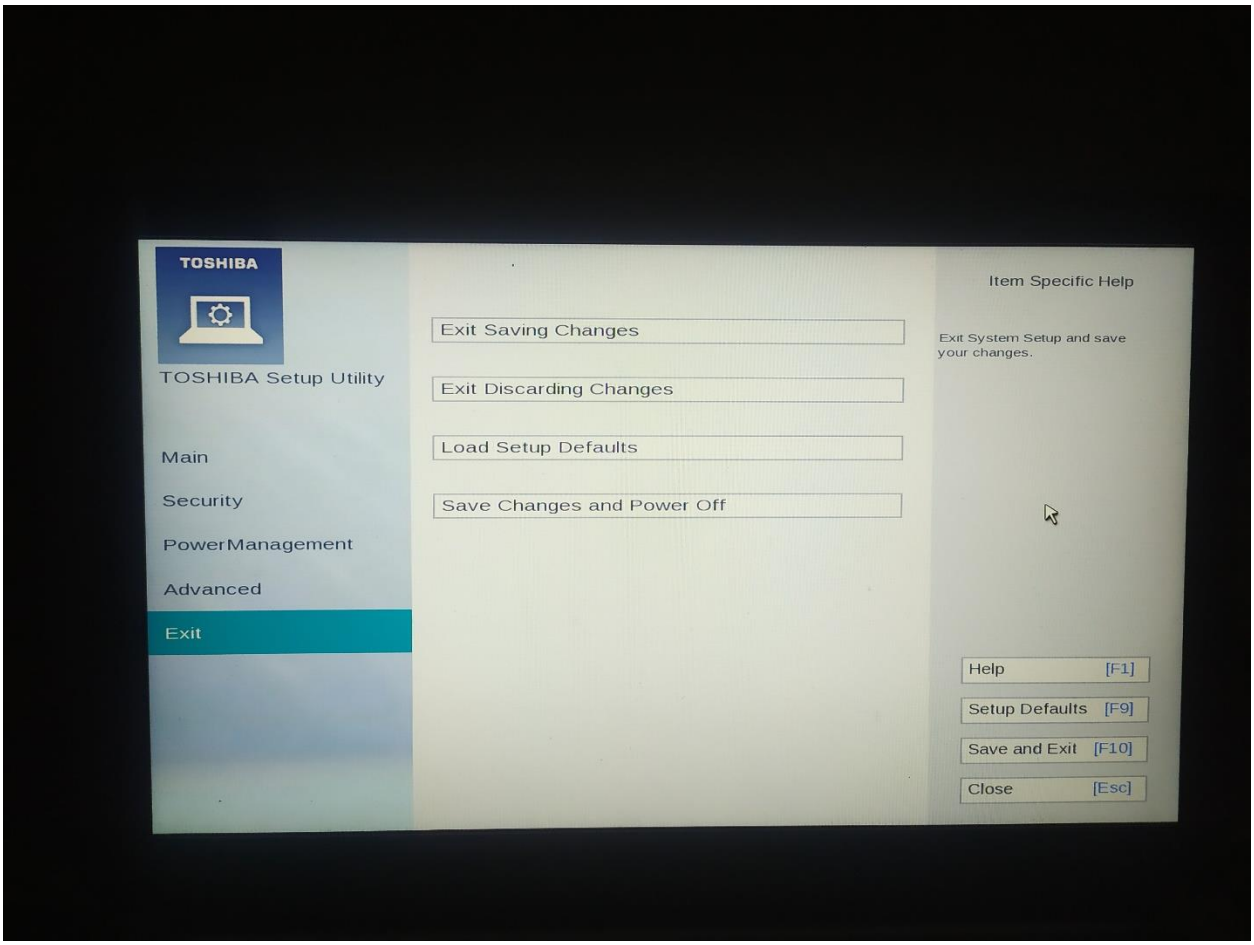
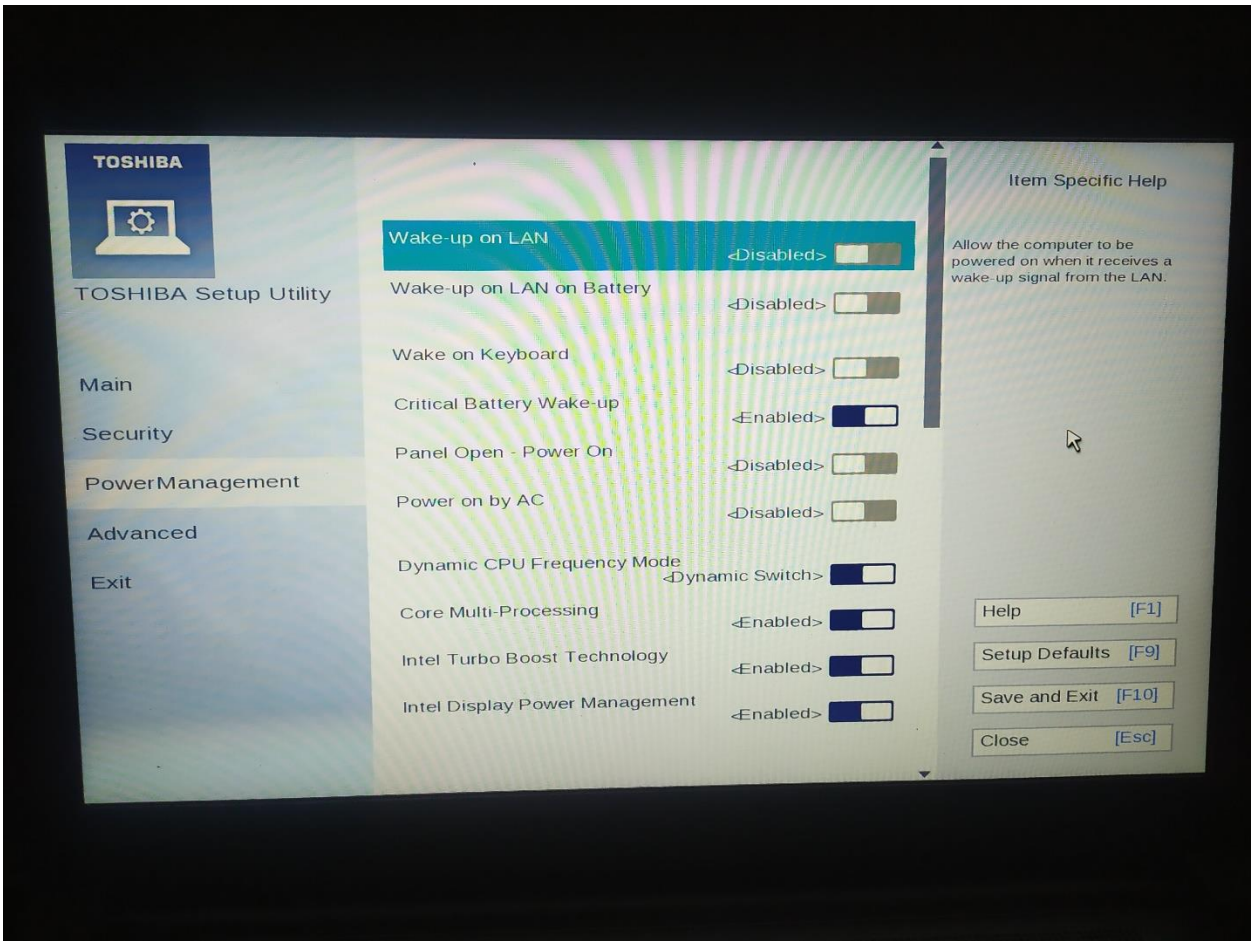
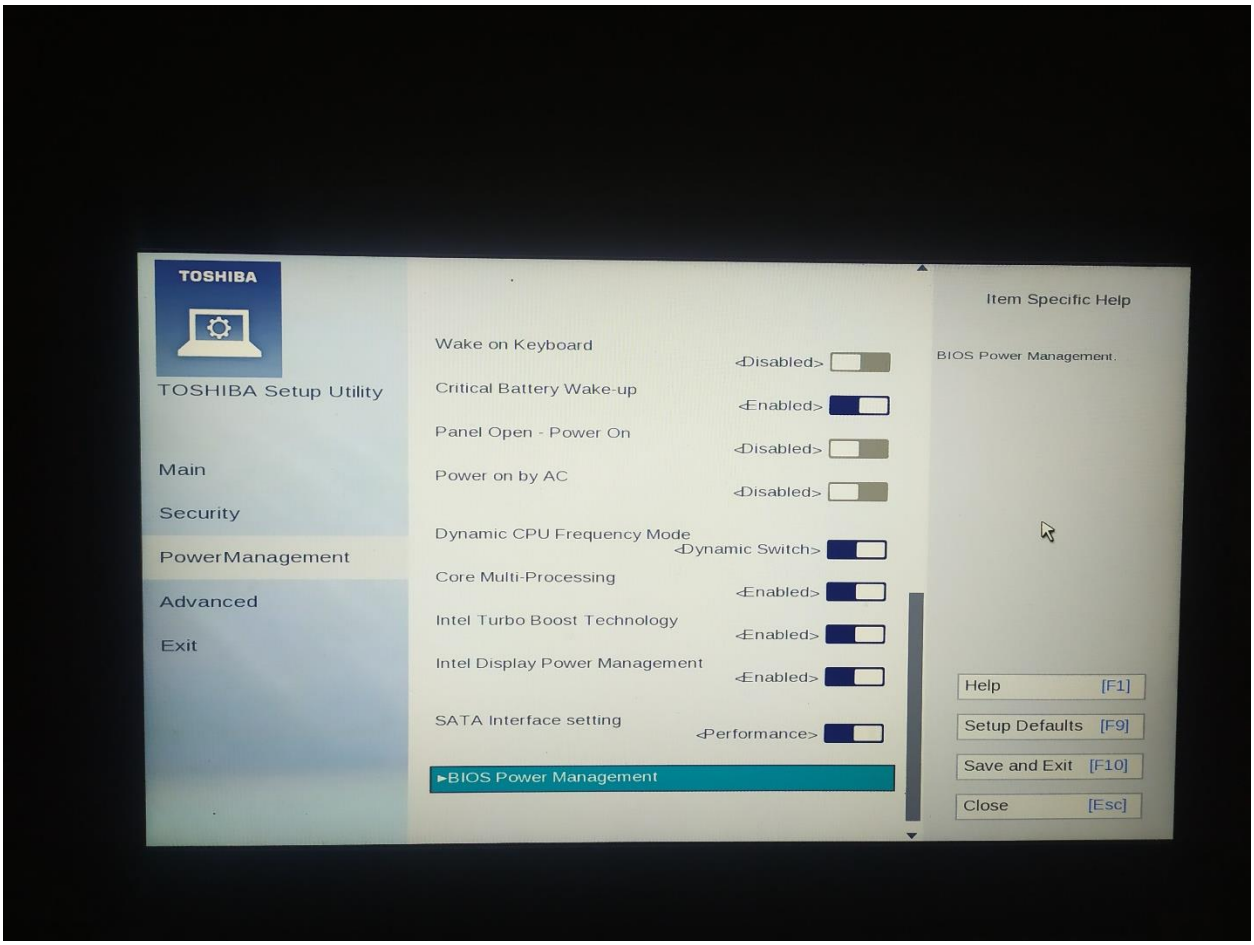
1. How much do you know about Computer Architecture
   I know that Computer Architecture is a field of study that that deals with the design and organization of computers.
2. Open your computer BIOS system, what kinds of information do you obtain from it?
   You can obtain so much information from BIOS, such as CPU Type, CPU Speed, Memory Type, and so much more.

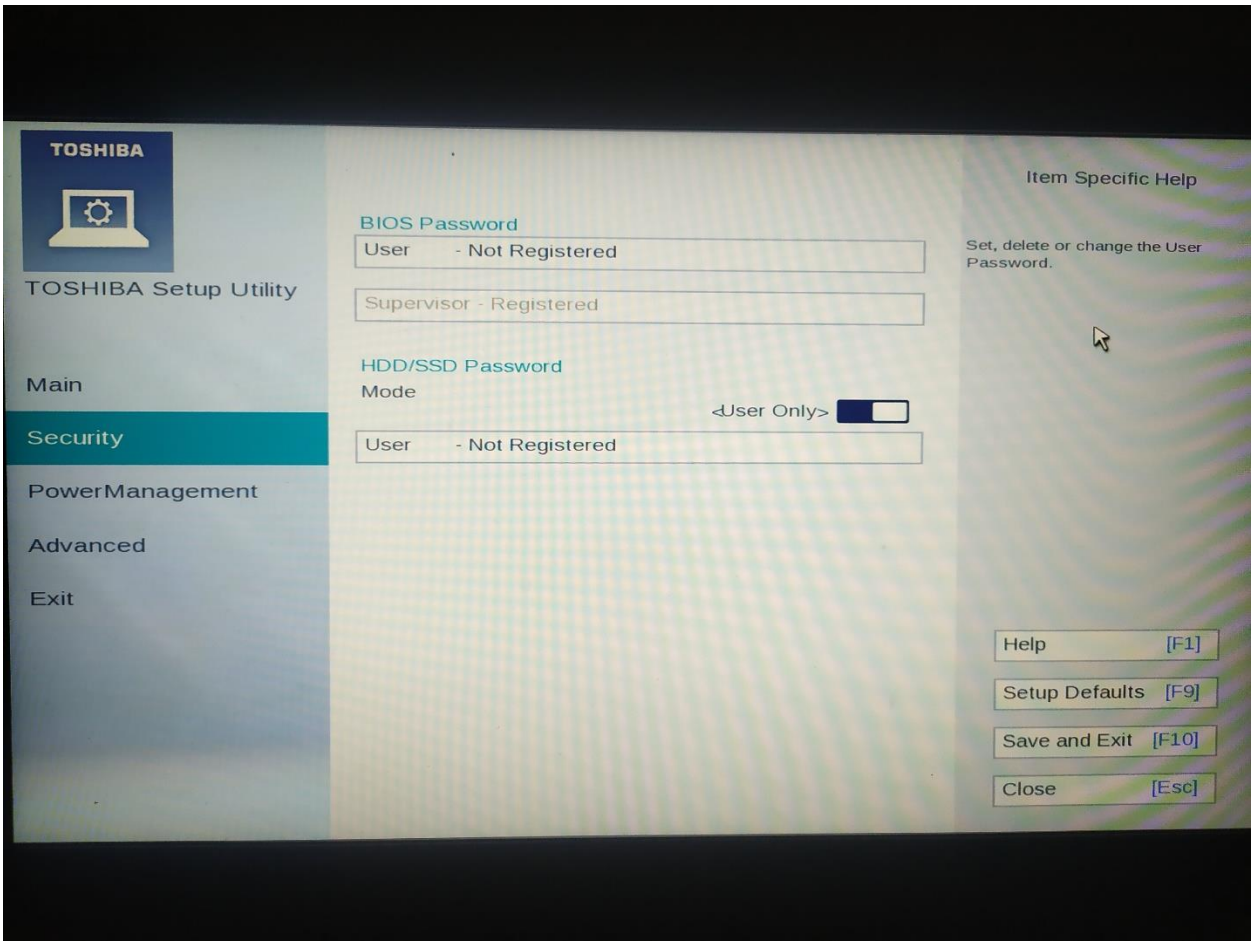



TOSHIBA
TOSHIBA Setup Utility
Main
Security
PowerManagement
Advanced
Exit
Virtualization Technology
VT-x & VT-d
SW Guard Extensions (SGX)
Software Controlled
Select Owner EPOCH input type
No Change in Owner EPOCHs
Beep Sound
Medium
USB Power in Off State
<Enabled>
USB Legacy Emulation
<Cold Boot only>
►Change Boot Order
►System Configuration
►Diagnostic
Item Specific Help
Select the priority for booting the computer.
Up and Down arrows select a device.
<F6> and <F7> moves the device up or down.
Help [F1]
Setup Defaults [F9]
Save and Exit [F10]
Close [Esc]

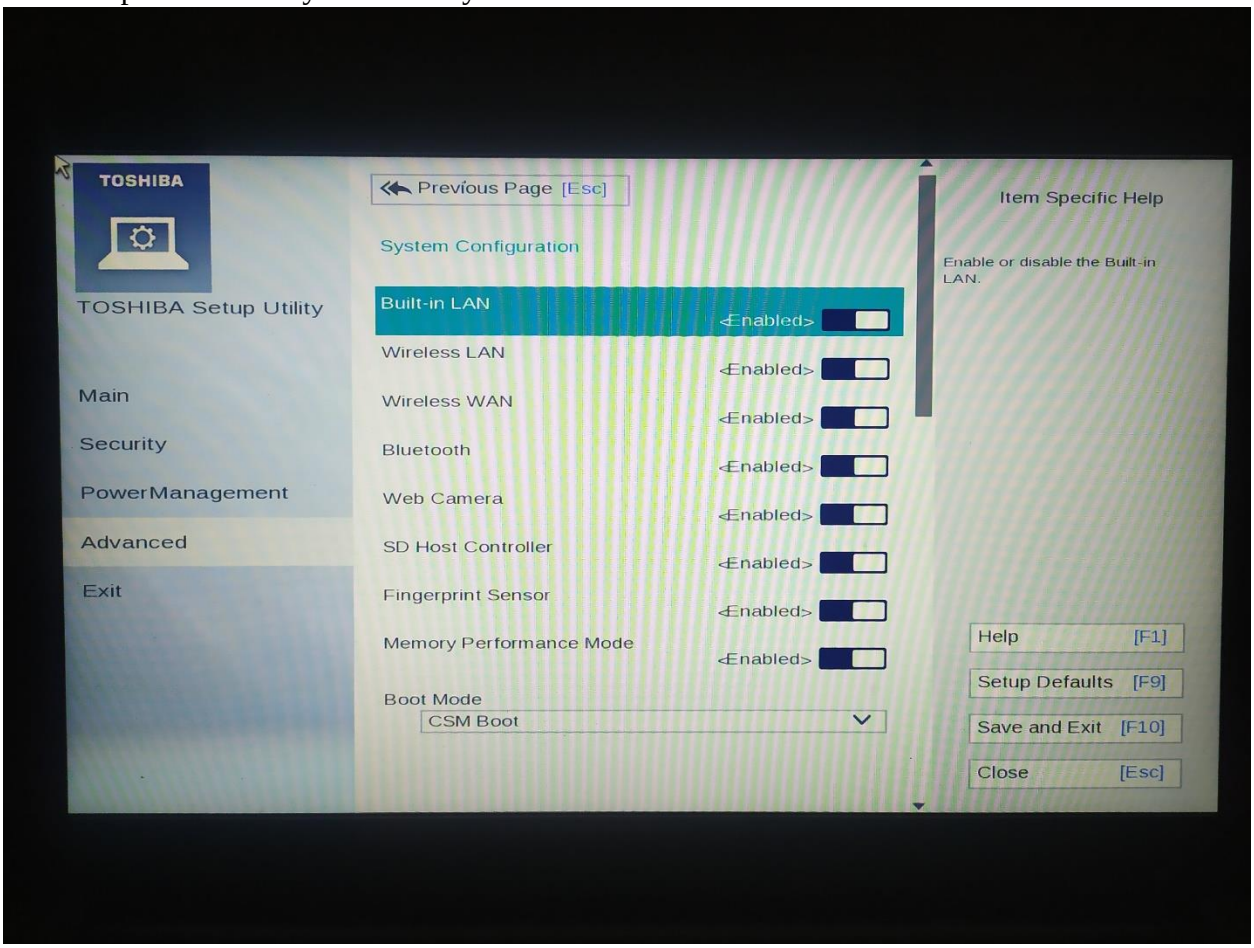

TOSHIBA
TOSHIBA Setup Utility
Main
Security
PowerManagement
Advanced
Exit
Exit Saving Changes
Exit Discarding Changes
Load Setup Defaults
Save Changes and Power Off
Item Specific Help
Exit System Setup and save your changes.
Help [F1]
Setup Defaults [F9]
Save and Exit [F10]
Close [Esc]


TOSHIBA
TOSHIBA Setup Utility
Main
Security
PowerManagement
Advanced
Exit
Wake-up on LAN <Disabled>
Wake-up on LAN on Battery <Disabled>
Wake on Keyboard <Disabled>
Critical Battery Wake-up <Enabled>
Panel Open - Power On <Disabled>
Power on by AC <Disabled>
Dynamic CPU Frequency Mode <Dynamic Switch>
Core Multi-Processing <Enabled>
Intel Turbo Boost Technology <Enabled>
Intel Display Power Management <Enabled>
Item Specific Help
Allow the computer to be powered on when it receives a wake-up signal from the LAN.
Help [F1]
Setup Defaults [F9]
Save and Exit [F10]
Close [Esc]

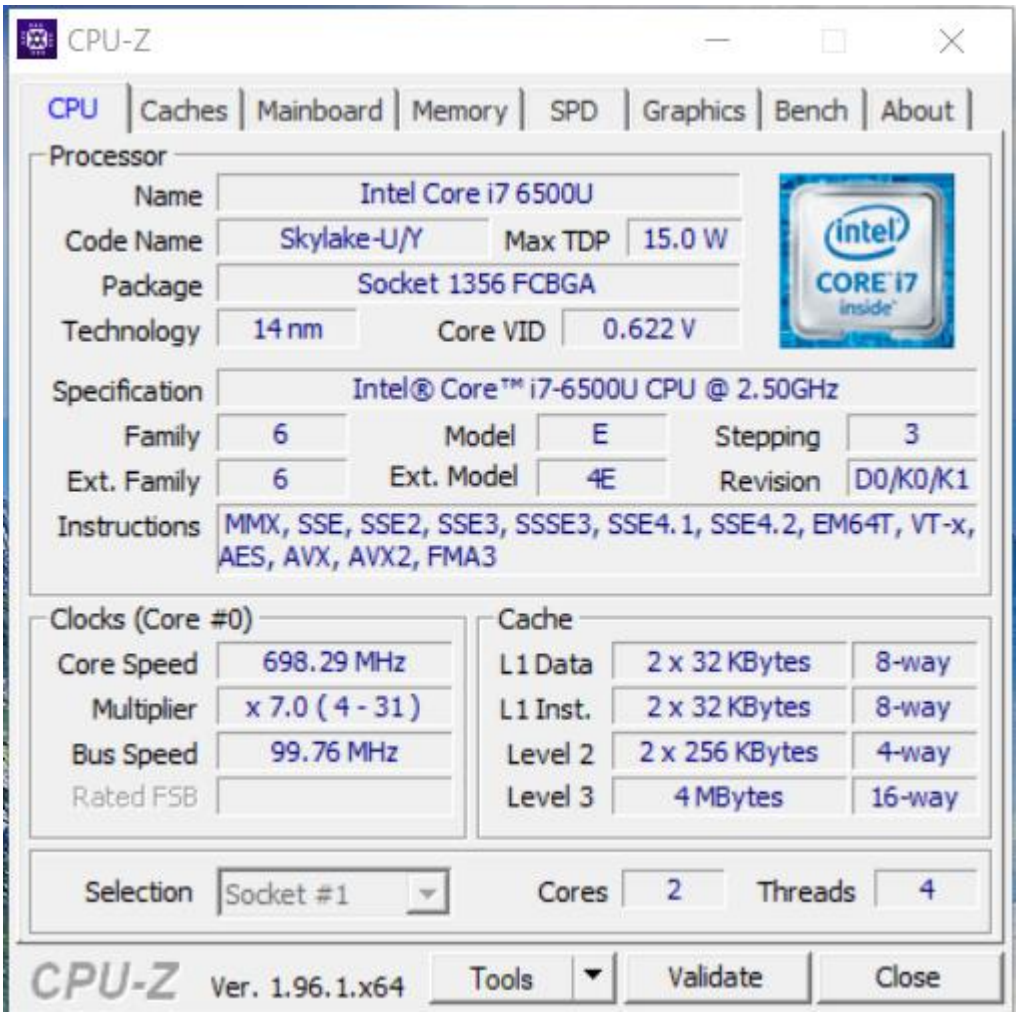

TOSHIBA
TOSHIBA Setup Utility
Main
Security
PowerManagement
Advanced
Exit
Wake on Keyboard
<Disabled>
Critical Battery Wake-up
<Enabled>
Panel Open - Power On
<Disabled>
Power on by AC
<Disabled>
Dynamic CPU Frequency Mode
<Dynamic Switch>
Core Multi-Processing
<Enabled>
Intel Turbo Boost Technology
<Enabled>
Intel Display Power Management
<Enabled>
SATA Interface setting
<Performance>
►BIOS Power Management
Item Specific Help
BIOS Power Management.
Help [F1]
Setup Defaults [F9]
Save and Exit [F10]
Close [Esc]

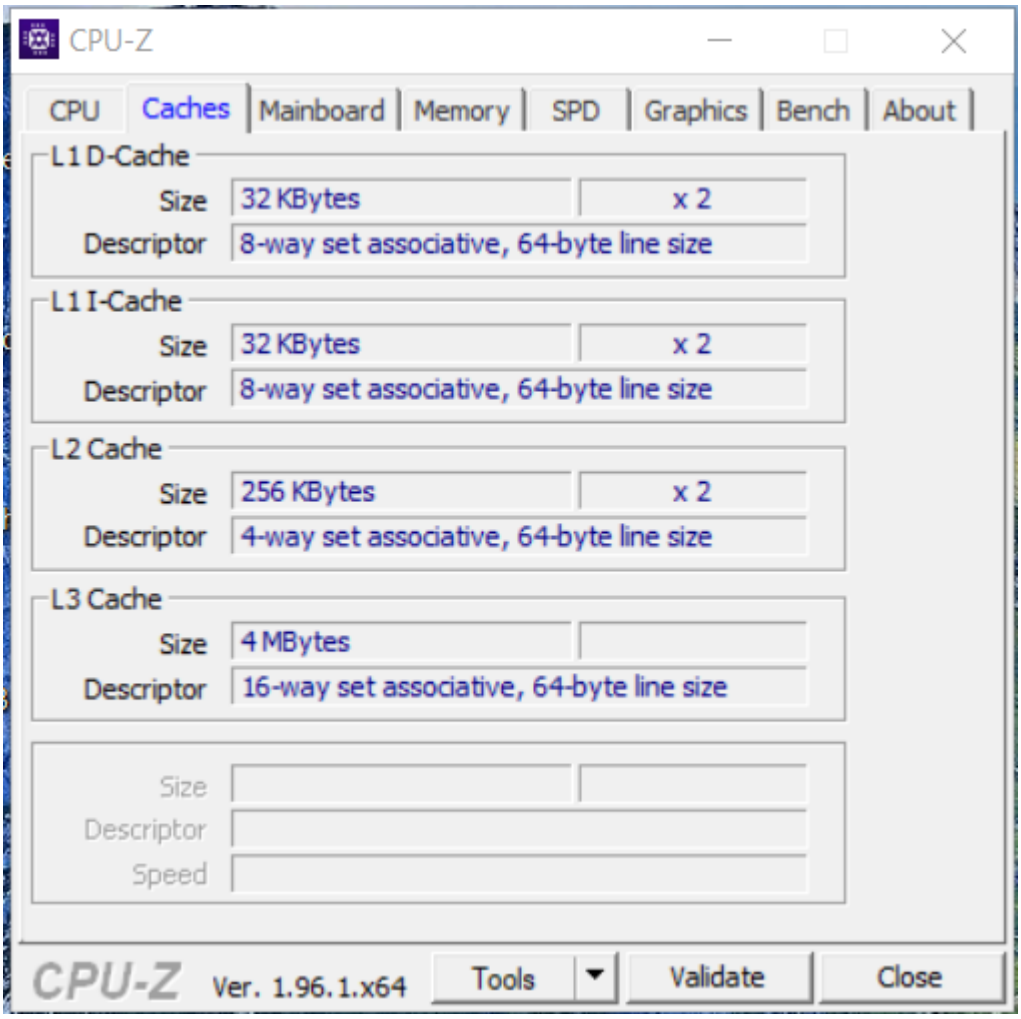

TOSHIBA
TOSHIBA Setup Utility
Main
Security
PowerManagement
Advanced
Exit
BIOS Password
User - Not Registered
Supervisor - Registered
HDD/SSD Password
Mode
<User Only>
User - Not Registered
Item Specific Help
Set, delete or change the User Password.
Help [F1]
Setup Defaults [F9]
Save and Exit [F10]
Close [Esc]

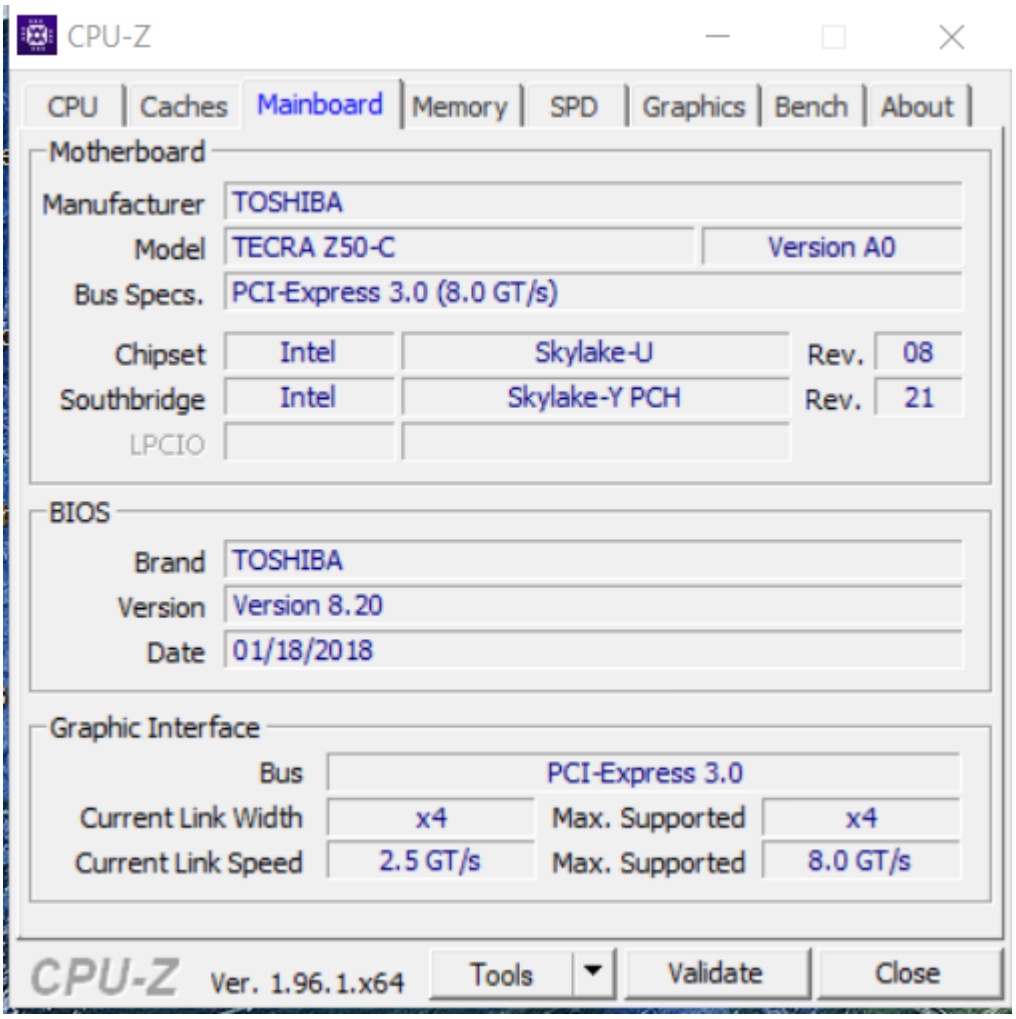
3. Find I/O port access in your BIOS system !

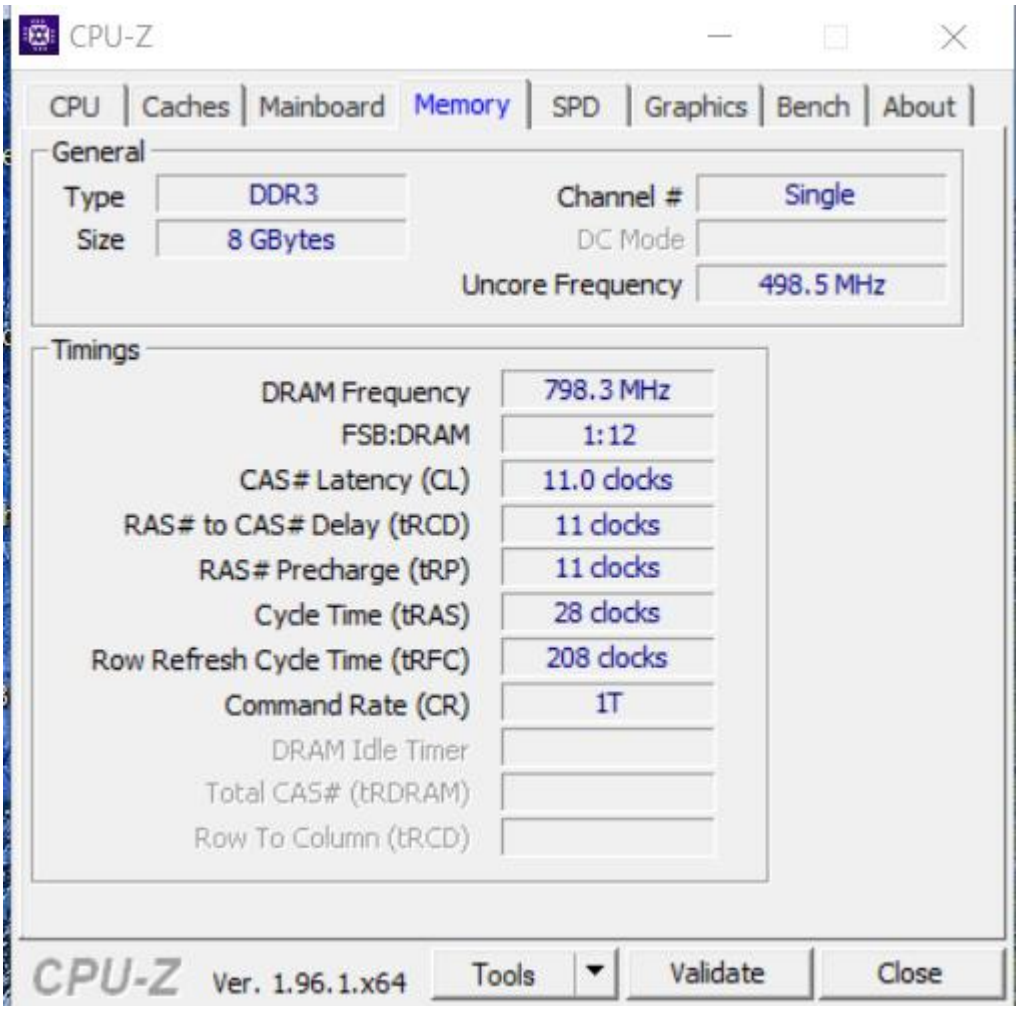


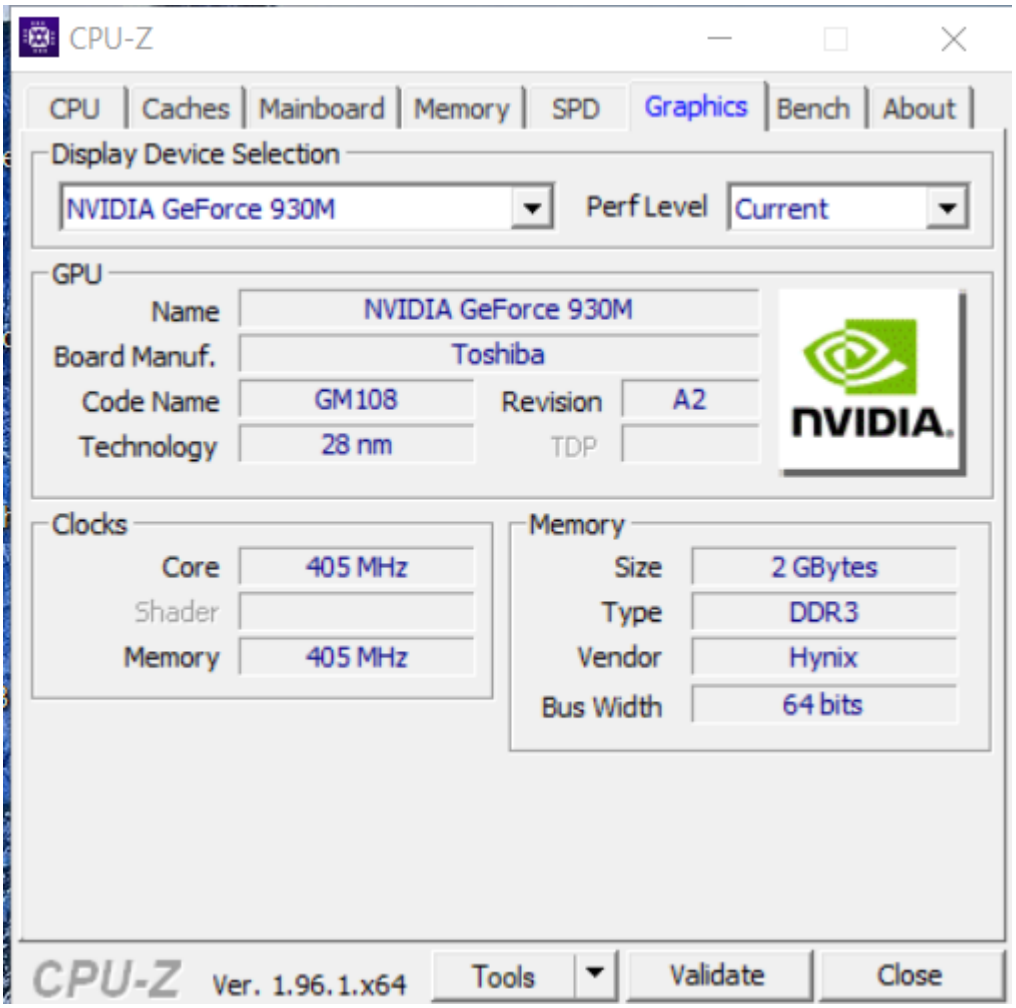
4. Install CPU Z on your computer, then find your processor, and caches, mainboard, memory, and graphics specification used in your computer !


CPU-Z
CPU
Caches
Mainboard
Memory
SPD
Graphics
Bench
About
Processor
Name
Intel Core i7 6500U
Code Name
Skylake-U/Y
Max TDP
15.0 W
Package
Socket 1356 FCBGA
Technology
14 nm
Core VID
0.622 V
intel
CORE i7
inside
Specification
Intel® Core™ i7-6500U CPU @ 2.50GHz
Family
6
Model
E
Stepping
3
Ext. Family
6
Ext. Model
4E
Revision
D0/K0/K1
Instructions
MMX, SSE, SSE2, SSE3, SSSE3, SSE4.1, SSE4.2, EM64T, VT-x, AES, AVX, AVX2, FMA3
Clocks (Core #0)
Core Speed
698.29 MHz
Multiplier
x 7.0 (4 - 31)
Bus Speed
99.76 MHz
Rated FSB
Cache
L1 Data
2 x 32 KBytes
8-way
L1 Inst.
2 x 32 KBytes
8-way
Level 2
2 x 256 KBytes
4-way
Level 3
4 MBytes
16-way
Selection
Socket #1
Cores
2
Threads
4
CPU-Z
Ver. 1.96.1.x64
Tools
Validate
Close


CPU-Z
CPU
Caches
Mainboard
Memory
SPD
Graphics
Bench
About
L1 D-Cache
Size
32 KBytes
x 2
Descriptor
8-way set associative, 64-byte line size
L1 I-Cache
Size
32 KBytes
x 2
Descriptor
8-way set associative, 64-byte line size
L2 Cache
Size
256 KBytes
x 2
Descriptor
4-way set associative, 64-byte line size
L3 Cache
Size
4 MBytes
Descriptor
16-way set associative, 64-byte line size
Size
Descriptor
Speed
CPU-Z
Ver. 1.96.1.x64
Tools
Validate
Close


CPU-Z
CPU
Caches
Mainboard
Memory
SPD
Graphics
Bench
About
Motherboard
Manufacturer
TOSHIBA
Model
TECRA Z50-C
Version A0
Bus Specs.
PCI-Express 3.0 (8.0 GT/s)
Chipset
Intel
Skylake-U
Rev.
08
Southbridge
Intel
Skylake-Y PCH
Rev.
21
LPCIO
BIOS
Brand
TOSHIBA
Version
Version 8.20
Date
01/18/2018
Graphic Interface
Bus
PCI-Express 3.0
Current Link Width
x4
Max. Supported
x4
Current Link Speed
2.5 GT/s
Max. Supported
8.0 GT/s
CPU-Z
Ver. 1.96.1.x64
Tools
Validate
Close


CPU-Z
CPU
Caches
Mainboard
Memory
SPD
Graphics
Bench
About
General
Type
DDR3
Size
8 GBytes
Channel #
Single
DC Mode
Uncore Frequency
498.5 MHz
Timings
DRAM Frequency
798.3 MHz
FSB:DRAM
1:12
CAS# Latency (CL)
11.0 clocks
RAS# to CAS# Delay (tRCD)
11 clocks
RAS# Precharge (tRP)
11 clocks
Cycle Time (tRAS)
28 clocks
Row Refresh Cycle Time (tRFC)
208 clocks
Command Rate (CR)
1T
DRAM Idle Timer
Total CAS# (tRDRAM)
Row To Column (tRCD)
CPU-Z
Ver. 1.96.1.x64
Tools
Validate
Close


CPU-Z
CPU
Caches
Mainboard
Memory
SPD
Graphics
Bench
About
Display Device Selection
NVIDIA GeForce 930M
Perf Level
Current
GPU
Name
NVIDIA GeForce 930M
Board Manuf.
Toshiba
Code Name
GM108
Revision
A2
Technology
28 nm
TDP
NVIDIA
Clocks
Core
405 MHz
Shader
Memory
405 MHz
Memory
Size
2 GBytes
Type
DDR3
Vendor
Hynix
Bus Width
64 bits
CPU-Z
Ver. 1.96.1.x64
Tools
Validate
Close