

Benchmarks



Benchmark Programmes

- CPUID – CPU-Z
 - CrystalDiskMark
 - Cinebench
- 
- A series of three parallel white diagonal lines extending from the bottom right towards the top right of the slide.

CPU-Z

CPU | Caches | Mainboard | Memory | SPD | Graphics | Bench | About

Motherboard

Manufacturer

ASUSTeK COMPUTER INC.

Model

PRIME Z370-A

Rev X.0x

Chipset

Intel

Coffee Lake

Rev.

07

Southbridge

Intel

Z370

Rev.

00

LPCIO

Nuvoton

NCT6793/NCT5563

BIOS

Brand

American Megatrends Inc.

Version

0605

Date

12/01/2017

Graphic Interface

Version

PCI-Express

Link Width

x8

Max. Supported

x16

Side Band Addressing

CPU-Z

Ver. 1.84.0.x64

Tools

Validate

Close

CPU-Z

CPU | Caches | Mainboard | Memory | SPD | Graphics | Bench | About

Processor

Name	Intel Core i7 8700K		
Code Name	Coffee Lake	Max TDP	95.0 W
Package	Socket 1151 LGA		
Technology	14 nm	Core Voltage	1.232 V
Specification	Intel® Core™ i7-8700K CPU @ 3.70GHz		
Family	6	Model	E
Ext. Family	6	Ext. Model	9E
Instructions	MMX, SSE, SSE2, SSE3, SSSE3, SSE4.1, SSE4.2, EM64T, VT-x, AES, AVX, AVX2, FMA3, TSX		

Clocks (Core #0)

Core Speed	4512.10 MHz
Multiplier	x 45.0 (8 - 47)
Bus Speed	100.29 MHz
Rated FSB	

Cache

L1 Data	6 x 32 KBytes	8-way
L1 Inst.	6 x 32 KBytes	8-way
Level 2	6 x 256 KBytes	4-way
Level 3	12 MBytes	16-way

Selection: Socket #1

Cores: 6 Threads: 12

CPU-Z Ver. 1.84.0.x64 Tools Validate Close



TDP (Thermal Design Power)

 CPU-Z

CPU | Caches | Mainboard | Memory | SPD | **Graphics** | Bench | About

Display Device Selection

NVIDIA GeForce GTX 1060 6GB

Perf Level

Perf Level 0

GPU

Name	NVIDIA GeForce GTX 1060 6GB		
Board Manuf.	NVIDIA Corporation		
Code Name	GP 106	Revision	A1
Technology	16 nm		



Clocks

Core	139 MHz
Shader	
Memory	405 MHz

Memory

Size	6144 MBytes
Type	GDDR5
Bus Width	

CPU-Z

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Tools

Validate

Close

CPU-Z

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CPU

Caches

Mainboard

Memory

SPD

Graphics

Bench

About

Motherboard

Manufacturer

ASUSTeK COMPUTER INC.

Model

PRIME Z270-AR

Rev 1.xx

Chipset

Intel

Kaby Lake

Rev.

05

Southbridge

Intel

Z270

Rev.

00

LPCIO

Nuvoton

NCT6793/NCT5563

BIOS

Brand

American Megatrends Inc.

Version

0701

Date

12/27/2016

Graphic Interface

Version

PCI-Express

Link Width

Max. Supported

Side Band Addressing

CPU-Z

Ver. 1.84.0.x64

Tools

▼

Validate

Close

CPU | Caches | Mainboard | Memory | SPD | Graphics | Bench | About

Processor

Name	Intel Core i7 7700K				
Code Name	Kaby Lake	Max TDP	91.0 W		
Package	Socket 1151 LGA				
Technology	14 nm	Core Voltage	0.736 V		
Specification	Intel® Core™ i7-7700K CPU @ 4.20GHz				
Family	6	Model	E	Stepping	9
Ext. Family	6	Ext. Model	9E	Revision	B0
Instructions	MMX, SSE, SSE2, SSE3, SSSE3, SSE4.1, SSE4.2, EM64T, VT-x, AES, AVX, AVX2, FMA3, TSX				

Clocks (Core #0)

Core Speed	802.15 MHz
Multiplier	x 8.0 (8 - 45)
Bus Speed	100.32 MHz
Rated FSB	

Cache

L1 Data	4 x 32 KBytes	8-way
L1 Inst.	4 x 32 KBytes	8-way
Level 2	4 x 256 KBytes	4-way
Level 3	8 MBytes	16-way

Selection Socket #1 ▾Cores 4 Threads 8

CPU | Caches | Mainboard | Memory | SPD | **Graphics** | Bench | About

Display Device Selection

Intel(R) HD Graphics 630

Perf Level Perf Level 0

GPU

Name Intel® HD Graphics 630

Board Manuf. ASUSTeK Computer Inc.

Code Name

Revision

4

Technology



Clocks

Core

Shader

Memory

Memory

Size

Type

Bus Width

CPU-Z - ID : 5fjp5x

CPU

Caches

Mainboard

Memory

SPD

Graphics

Bench

About

CPU Single Thread

This Processor

530.1

☐ Reference

360

CPU Multi Thread

This Processor

2574.0

☐ Reference

3518

☐ Threads

8

Multi Thread Ratio

4.86

This Processor

Intel® Core™ i7-7700K CPU @ 4.20GHz

Reference

Intel(R) Core(TM) i7-5960X CPU @ 3.00GHz (8C/16T)

Bench CPU

Stress CPU

Submit and Compare

CPUID Benchmark Version 17.01.64

CPU-Z

Ver. 1.84.0.x64

Tools

Validate

Close



CPU-Z



CPU | Caches | **Mainboard** | Memory | SPD | Graphics | Bench | About

Motherboard

Manufacturer	ASUSTeK COMPUTER INC.		
Model	X99-DELUXE	Rev 1.xx	
Chipset	Intel	Haswell-E	Rev. 02
Southbridge	Intel	X99	Rev. 05
LPCIO	Nuvoton	NCT6791	

BIOS

Brand	American Megatrends Inc.
Version	1601
Date	03/17/2015

Graphic Interface

Version	PCI-Express		
Link Width	x16	Max. Supported	x16
Side Band Addressing			

CPU-Z

Ver. 1.84.0.x64

Tools



Validate

Close



CPU

Caches

Mainboard

Memory

SPD

Graphics

Bench

About

Processor

Name

Intel Core i7 5930K

Code Name

Haswell-E/EP

Max TDP

140.0 W

Package

Socket 2011 LGA

Technology

22 nm

Core Voltage

1.094 V



Specification

Intel® Core™ i7-5930K CPU @ 3.50GHz

Family

6

Model

F

Stepping

2

Ext. Family

6

Ext. Model

3F

Revision

R2

Instructions

MMX, SSE, SSE2, SSE3, SSSE3, SSE4.1, SSE4.2, EM64T, VT-x, AES, AVX, AVX2, FMA3

Clocks (Core #0)

Core Speed

1199.29 MHz

Multiplier

x 12.0 (12 - 37)

Bus Speed

99.91 MHz

Rated FSB

Cache

L1 Data

6 x 32 KBytes

8-way

L1 Inst.

6 x 32 KBytes

8-way

Level 2

6 x 256 KBytes

8-way

Level 3

15 MBytes

20-way

Selection

Socket #1

Cores

6

Threads

12



CPU-Z

CPU | Caches | Mainboard | Memory | SPD | **Graphics** | Bench | About

Display Device Selection

NVIDIA GeForce GTX 970

Perf Level

Perf Level 0

GPU

Name

NVIDIA GeForce GTX 970

Board Manuf.

GIGABYTE Technology

Code Name

GM204

Revision

A1

Technology

28 nm



Clocks

Core

135 MHz

Shader

Memory

324 MHz

Memory

Size

4096 MBytes

Type

GDDR5

Bus Width

CPU-Z

Ver. 1.84.0.x64

Tools



Validate

Close

CPU | Caches | Mainboard | Memory | SPD | Graphics | **Bench** | About

CPU Single Thread



CPU Multi Thread



☒ Threads Multi Thread Ratio

This Processor
Reference

Bench CPU

Stress CPU

Submit and Compare

CPUID Benchmark Version 17.01.64

CrystalDiskmark

The screenshot shows the CrystalDiskmark application window. At the top, there are three callout boxes: 'Number of Test Runs' pointing to the '3' dropdown, 'Test Size' pointing to the '1GiB' dropdown, and 'Test Drive' pointing to the 'C: 4% (40/1118GiB)' dropdown. The main area displays a table of benchmark results. A blue box highlights the left column of test types, and a callout box labeled 'Start Benchmark' points to the 'All' button. The table shows results for 'All', 'Seq Q32T1', '4K Q32T1', 'Seq', and '4K' tests. At the bottom, a callout box points to the 'Intel SSD 750 (Intel NVMe Driver 1.1.0.1004)' text.

	Read [MB/s]	Write [MB/s]
All	2663	1318
Seq Q32T1	2663	1318
4K Q32T1	857.3	857.3
Seq	1161	1254
4K	38.11	357.0

Intel SSD 750 (Intel NVMe Driver 1.1.0.1004)

Comment (Disk Name, OS Name, etc...)

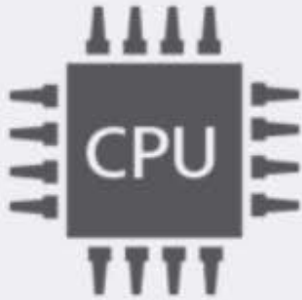
All	5 ▾	1GiB ▾	C: 9% (42/465GiB) ▾
	Read [MB/s]		Write [MB/s]
Seq Q32T1	1718.1	1498.8	
4KiB Q8T8	1021.2	1276.4	
4KiB Q32T1	244.1	149.8	
4KiB Q1T1	23.25	50.67	
z370 c			

All	2 ▾ 1GiB ▾ C: 9% (42/465GiB) ▾	
	Read [MB/s]	Write [MB/s]
Seq Q32T1	2397.4	1806.2
4KiB Q8T8	773.0	1259.4
4KiB Q16T8	774.0	1268.1
4KiB Q16T12	773.1	1171.0

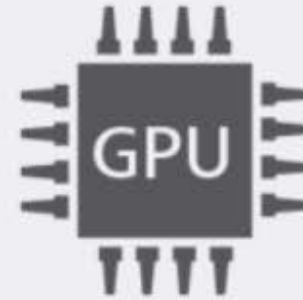
x370 with x4 in bios

All	5 ▾	1GiB ▾	E: 0% (0/1029GiB) ▾
	Read [MB/s]		Write [MB/s]
Seq Q32T1	147.6	140.6	
4KiB Q8T8	1.501	1.315	
4KiB Q32T1	1.408	1.258	
4KiB Q1T1	0.579	1.251	
z370 e drive ×			

HOW DOES CINEBENCH WORK?



Main Processor Performance



Graphics Card Performance

The test scenario uses all of your system's processing power to render a photorealistic 3D scene (from the viral "No Keyframes" animation by AixSponza).

This scene makes use of various algorithms to stress all available processor cores. In fact, CINEBENCH can measure systems with up to 256 processor threads.

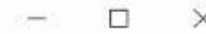
This test scene contains approximately 2,000 objects which in turn contain more than 300,000 polygons in total, and uses sharp and blurred reflections, area lights, shadows, procedural shaders, antialiasing, and much more. The result is displayed in points (pts). The higher the number, the faster your processor.

This procedure uses a complex 3D scene depicting a car chase (created by renderbaron) which measures the performance of your graphics card in OpenGL mode.

The performance depends on various factors, such as the GPU processor on your hardware, on the drivers used. The graphics card has to display a huge amount of geometry (nearly 1 million polygons) and textures, as well as a variety of effects, such as environments, bump maps, transparency, lighting and more to evaluate the performance across different disciplines and give a good average overview of the capabilities of your graphics hardware. The result is measured in frames per second (fps). The higher the number, the faster your graphics card is.



CINEBENCH R15.0



File Help



OpenGL 112.75 fps ✓
Ref. Match 99.6 %
CPU 1156 cb ✓
CPU (Single Core) Run ✓
MP Ratio ---

Your System

Processor Intel Core i7-8700K CPU
Cores x GHz 6 Cores, 12 Threads @ 3.70 GHz
OS Windows 8, 64 Bit, Professional Edition (b
CB Version 64 Bit
GFX Board GeForce GTX 1060 6GB/PCIe/SSE2
Info

Ranking

OpenGL Details
1. 6C/12T @ 3.70 GHz, GeForce GTX 1060 6G 112.75
2. 4C/8T @ 2.79 GHz, Quadro K4000M/PCIe/S! 67.71
3. 4C/8T @ 4.40 GHz, Quadro 4000/PCIe/SSE2 65.33
4. 6C/12T @ 3.30 GHz, GeForce GTX 460/PCIe/ 59.86
5. 12C/24T @ 2.66 GHz, ATI Radeon HD 5770 57.08

Your Score Identical System



CINEBENCH R15

by MAXON

OpenGL

Run

Run

CPU

1156 cb

Run

Your System

Processor Intel Core i7-8700K CPU

Cores x GHz 6 Cores, 12 Threads @ 3.70 GHz

OS Windows 8, 64 Bit, Professional Edition

CB Version 64 Bit

GFX Board GeForce GTX 1060 6GB/PCIe/SSE2

Info

Ranking

CPU

Details

1. 12C/24T @ 2.66 GHz, Intel Xeon CPU X5650	1279
2. 6C/12T @ 3.70 GHz, Intel Core i7-8700K CPU	1156
3. 6C/12T @ 3.30 GHz, Intel Core i7-3930K CP	1096
4. 4C/8T @ 4.40 GHz, Intel Core i7-4770K CPU	822
5. 4C/8T @ 3.40 GHz, Intel Core i7-3770 CPU	662
6. 4C/8T @ 2.60 GHz, Intel Core i7-3720QM CPU	590
7. 4C/8T @ 2.79 GHz, Intel Core i7-3840QM CP	505
8. 2C/4T @ 1.70 GHz, Intel Core i5-3317U CPU	214

Your Score Identical System





OpenGL 125.23 fps [Run](#)
CPU 1156 cb [Run](#)

Your System

Processor Intel Core i7-8700K CPU
Cores x GHz 6 Cores, 12 Threads @ 3.70 GHz
OS Windows 8, 64 Bit, Professional Edition
CB Version 64 Bit
GFX Board GeForce GTX 1060 6GB/PCIe/SSE2
Info

Ranking

CPU

Details

1. 12C/24T @ 2.66 GHz, Intel Xeon CPU X5650	1279
2. 6C/12T @ 3.70 GHz, Intel Core i7-8700K CPU	1156
3. 6C/12T @ 3.30 GHz, Intel Core i7-3930K CPU	1096
4. 4C/8T @ 4.40 GHz, Intel Core i7-4770K CPU	822
5. 4C/8T @ 3.40 GHz, Intel Core i7-3770 CPU	662
6. 4C/8T @ 2.60 GHz, Intel Core i7-3720QM CPU	590
7. 4C/8T @ 2.79 GHz, Intel Core i7-3840QM CPU	505
8. 2C/4T @ 1.70 GHz, Intel Core i5-3317U CPU	214

Your Score Identical System

MAXON

3D FOR THE REAL WORLD



AIXSPONZA®

Click on one of the 'Run' buttons to start a test.



OpenGL **112.75 fps**

CPU **1156 cb**

Your System

Processor Intel Core i7-8700K CPU

Cores x GHz 6 Cores, 12 Threads @ 3.70 GHz

OS Windows 8, 64 Bit, Professional Edition

CB Version 64 Bit

GFX Board GeForce GTX 1060 6GB/PCIe/SSE2

Info

Ranking

OpenGL

1. 6C/12T @ 3.70 GHz, GeForce GTX 1060 6G	112.75
2. 4C/8T @ 2.79 GHz, Quadro K4000M/PCIe/S	67.71
3. 4C/8T @ 4.40 GHz, Quadro 4000/PCIe/SSE2	65.33
4. 6C/12T @ 3.30 GHz, GeForce GTX 460/PCIe	59.86
5. 12C/24T @ 2.66 GHz, ATI Radeon HD 5770	57.08
6. 4C/8T @ 2.60 GHz, NVIDIA GeForce GT 650	52.75
7. 4C/8T @ 3.40 GHz, GeForce GT 620/PCIe/S	19.04
8. 2C/4T @ 1.70 GHz, Intel(R) HD Graphics 400	9.00

☐ Your Score ☐ Identical System

CINEBENCH R15

The MAXON CINEMA4D Benchmark



3D FOR THE REAL WORLD

Click on one of the 'Run' buttons to start a test.