



CPU-Z

Binaries

CPU-Z version 2.13.0.x64

Processors

CPU Groups 1
 CPU Group 0 8 threads, mask=0xFF

Number of sockets 1
 Number of threads 8

APICs

Socket 0

- Node 0
 - CCD 0
 - CCX 0
 - Core 0 (ID 0)
 - Thread 0 0
 - Thread 1 1
 - Core 1 (ID 1)
 - Thread 2 2
 - Thread 3 3
 - Core 2 (ID 2)
 - Thread 4 4
 - Thread 5 5
 - Core 3 (ID 3)
 - Thread 6 6
 - Thread 7 7

Timers

ACPI timer 3.580 MHz
 Perf timer 10.000 MHz
 Sys timer 1.000 KHz

Processors Information

Socket 1 ID = 0

- Number of cores 4 (max 4)
- Number of threads 8 (max 8)
- Number of CCDs 1
- Manufacturer AuthenticAMD
- Name AMD Ryzen 3

Codename	Renoir
Specification	AMD Ryzen 3 4300GE with Radeon Graphics
Package	Socket AM4 (1331)
CPUID	F.0.1
Extended CPUID	17.60
Core Stepping	RN-A1
Technology	7 nm
Core Speed	4090.9 MHz
Multiplier x Bus Speed	41.0 x 99.8 MHz
Base frequency (cores)	99.8 MHz
Instructions sets	MMX (+), SSE, SSE2, SSE3, SSSE3, SSE4.1, SSE4.2, SSE4A, x86-64, AMD-V, AES, AVX, AVX2, FMA3, SHA
Microcode Revision	0x8600106
L1 Data cache	4 x 32 KB (8-way, 64-byte line)
L1 Instruction cache	4 x 32 KB (8-way, 64-byte line)
L2 cache	4 x 512 KB (8-way, 64-byte line)
L3 cache	4 MB (16-way, 64-byte line)
Max CPUID level	00000010h
Max CPUID ext. level	80000020h
FID/VID Control	yes
# of P-States	3
P-State	FID 0x88C - VID 0x35 (35.00x - 1.219 V)
P-State	FID 0xC66 - VID 0x60 (17.00x - 0.950 V)
P-State	FID 0xE62 - VID 0x66 (14.00x - 0.912 V)
PStateReg	0x80000000-0x48CD488C
PStateReg	0x80000000-0x44580C66
PStateReg	0x80000000-0x43998E62
PStateReg	0x00000000-0x00000000
PStateReg	0x00000000-0x00000000
PStateReg	0x00000000-0x00000000
PStateReg	0x00000000-0x00000000
PStateReg	0x00000000-0x00000000
Package Type	0x2
Model	00
String 1	0x0
String 2	0x0
Page	0x0
Power Unit	0.0
SMU Version	55.78.00
TDP/TJMAX	0x0
TCTL Offset	0x0
PMTV	00370005
VID Limit	1.3465 Volts
PBO Scalar	1
Package Power Tracking (PPT)	42.0 W (current)
Thermal Design Current (TDC)	39.0 A (current)

Thermal Design Current SoC (TDC SoC)	40.0 A (current)
Electrical Design Current (EDC)	55.0 A (current)
Electrical Design Current SoC (EDC SoC)	60.0 A (current)
Temperature 0	51 degC (123 degF) (Package)
Temperature 1	46 degC (114 degF) (Cores (Max))
Temperature 2	44 degC (111 degF) (Core #0)
Temperature 3	46 degC (114 degF) (Core #1)
Temperature 4	44 degC (111 degF) (Core #2)
Temperature 5	46 degC (114 degF) (Core #3)
Temperature 6	43 degC (110 degF) (L3 Cache #0)
Temperature 7	40 degC (103 degF) (L3 Cache #1)
Voltage 0	1.19 Volts (VID)
Voltage 1	1.19 Volts (CPU VDD)
Voltage 2	1.09 Volts (SoC VDD)
Power 00	23.27 W (Package)
Power 01	16.68 W (Cores)
Power 02	3.74 W (Core #0)
Power 03	3.99 W (Core #1)
Power 04	4.32 W (Core #2)
Power 05	4.89 W (Core #3)
Power 06	42.00 W (PPT Limit)
Clock Speed 0	4090.90 MHz (Core #0)
Clock Speed 1	4090.90 MHz (Core #1)
Clock Speed 2	4090.90 MHz (Core #2)
Clock Speed 3	3272.72 MHz (Core #3)
Clock Speed 4	99.78 MHz (CPU BCLK)
Clock Speed 5	n.a. (SOC BCLK)
Core 0 max ratio	(effective) 41.00
Core 1 max ratio	(effective) 41.00
Core 2 max ratio	(effective) 41.00
Core 3 max ratio	(effective) 41.00

Chipset

Northbridge	AMD Ryzen SOC rev. 00
Southbridge	AMD B450 rev. 51
Bus Specification	PCI-Express 3.0 (8.0 GT/s)
Graphic Interface	PCI-Express 4.0
PCI-E Link Width	x16 (max 16x)
PCI-E Link Speed	8.0 GT/s (max 16.0 GT/s)
Memory Type	DDR4
Memory Size	16 GBytes
Channels	2 x 64-bit
Memory Frequency	1596.4 MHz (1:16)
CAS# latency (CL)	16.0

RAS# to CAS# delay (tRCD)	18
RAS# Precharge (tRP)	18
Cycle Time (tRAS)	36
Bank Cycle Time (tRC)	74
Command Rate (CR)	1T
Uncore Frequency	1596.4 MHz

Memory SPD

DIMM #	1
SMBus address	0x50
Memory type	DDR4
Module format	UDIMM
Module Manufacturer(ID)	Kingston (7F980000000000000000000000000000)
SDRAM Manufacturer (ID)	Samsung (CE000000000000000000000000000000)
Size	8192 MBytes
Max bandwidth	DDR4-3200 (1600 MHz)
Max JEDEC	DDR4-2400 (1200 MHz)
Part number	KF3200C16D4/8GX
Serial number	795A6950
Manufacturing date	Week 45/Year 21
Nominal Voltage	1.20 Volts
EPP	no
XMP	yes, rev. 2.0
AMP	no
EXPO	no
JEDEC timings table	CL-tRCD-tRP-tRAS-tRC @ frequency
JEDEC #1	10.0-11-11-24-34 @ 733 MHz
JEDEC #2	11.0-11-11-26-37 @ 800 MHz
JEDEC #3	12.0-12-12-28-40 @ 866 MHz
JEDEC #4	13.0-13-13-30-43 @ 933 MHz
JEDEC #5	14.0-15-15-34-48 @ 1033 MHz
JEDEC #6	15.0-16-16-36-51 @ 1100 MHz
JEDEC #7	16.0-17-17-38-54 @ 1166 MHz
JEDEC #8	17.0-17-17-39-55 @ 1200 MHz
JEDEC #9	18.0-17-17-39-55 @ 1200 MHz
XMP profile	XMP-3200
Specification	DDR4-3200
VDD Voltage	1.350 Volts
Min Cycle time	0.625 ns (1600 MHz)
Max CL	16.0
Min tRP	11.25 ns
Min tRCD	11.25 ns
Min tRAS	22.50 ns
Min tRC	45.75 ns
Min tRRD	4.38 ns
XMP timings table	CL-tRCD-tRP-tRAS-tRC-CR @ frequency (voltage)
XMP #1	9.0-11-11-21-42-n.a @ 899 MHz (1.350 Volts)

XMP #2	10.0-12-12-23-46-n.a @ 1000 MHz (1.350 Volts)
XMP #3	11.0-13-13-25-51-n.a @ 1100 MHz (1.350 Volts)
XMP #4	12.0-14-14-27-55-n.a @ 1200 MHz (1.350 Volts)
XMP #5	13.0-15-15-30-60-n.a @ 1300 MHz (1.350 Volts)
XMP #6	14.0-16-16-32-65-n.a @ 1400 MHz (1.350 Volts)
XMP #7	15.0-17-17-34-69-n.a @ 1500 MHz (1.350 Volts)
XMP #8	16.0-18-18-36-74-n.a @ 1600 MHz (1.350 Volts)
XMP #9	17.0-18-18-36-74-n.a @ 1600 MHz (1.350 Volts)
XMP #10	18.0-18-18-36-74-n.a @ 1600 MHz (1.350 Volts)
XMP profile	XMP-3002
Specification	DDR4-3002
VDD Voltage	1.350 Volts
Min Cycle time	0.666 ns (1501 MHz)
Max CL	15.0
Min tRP	11.32 ns
Min tRCD	11.32 ns
Min tRAS	23.88 ns
Min tRC	45.75 ns
Min tRRD	4.66 ns
XMP timings table	CL-tRCD-tRP-tRAS-tRC-CR @ frequency (voltage)
XMP #1	9.0-11-11-22-42-n.a @ 900 MHz (1.350 Volts)
XMP #2	10.0-12-12-24-46-n.a @ 1001 MHz (1.350 Volts)
XMP #3	11.0-13-13-27-51-n.a @ 1101 MHz (1.350 Volts)
XMP #4	12.0-14-14-29-55-n.a @ 1201 MHz (1.350 Volts)
XMP #5	13.0-15-15-32-60-n.a @ 1301 MHz (1.350 Volts)
XMP #6	14.0-16-16-34-65-n.a @ 1401 MHz (1.350 Volts)
XMP #7	15.0-17-17-36-69-n.a @ 1501 MHz (1.350 Volts)
XMP #8	16.0-17-17-36-69-n.a @ 1501 MHz (1.350 Volts)
XMP #9	17.0-17-17-36-69-n.a @ 1501 MHz (1.350 Volts)
XMP #10	18.0-17-17-36-69-n.a @ 1501 MHz (1.350 Volts)
DIMM #	2
SMBus address	0x51
Memory type	DDR4
Module format	UDIMM
Module Manufacturer(ID)	Kingston (7F980000000000000000000000000000)
SDRAM Manufacturer (ID)	Samsung (CE00000000000000000000000000000000)
Size	8192 MBytes
Max bandwidth	DDR4-3200 (1600 MHz)
Max JEDEC	DDR4-2400 (1200 MHz)
Part number	KF3200C16D4/8GX
Serial number	BDDA29E3
Manufacturing date	Week 45/Year 21
Nominal Voltage	1.20 Volts
EPP	no
XMP	yes, rev. 2.0
AMP	no

EXPO	no
JEDEC timings table	CL-tRCD-tRP-tRAS-tRC @ frequency
JEDEC #1	10.0-11-11-24-34 @ 733 MHz
JEDEC #2	11.0-11-11-26-37 @ 800 MHz
JEDEC #3	12.0-12-12-28-40 @ 866 MHz
JEDEC #4	13.0-13-13-30-43 @ 933 MHz
JEDEC #5	14.0-15-15-34-48 @ 1033 MHz
JEDEC #6	15.0-16-16-36-51 @ 1100 MHz
JEDEC #7	16.0-17-17-38-54 @ 1166 MHz
JEDEC #8	17.0-17-17-39-55 @ 1200 MHz
JEDEC #9	18.0-17-17-39-55 @ 1200 MHz
XMP profile	XMP-3200
Specification	DDR4-3200
VDD Voltage	1.350 Volts
Min Cycle time	0.625 ns (1600 MHz)
Max CL	16.0
Min tRP	11.25 ns
Min tRCD	11.25 ns
Min tRAS	22.50 ns
Min tRC	45.75 ns
Min tRRD	4.38 ns
XMP timings table	CL-tRCD-tRP-tRAS-tRC-CR @ frequency (voltage)
XMP #1	9.0-11-11-21-42-n.a @ 899 MHz (1.350 Volts)
XMP #2	10.0-12-12-23-46-n.a @ 1000 MHz (1.350 Volts)
XMP #3	11.0-13-13-25-51-n.a @ 1100 MHz (1.350 Volts)
XMP #4	12.0-14-14-27-55-n.a @ 1200 MHz (1.350 Volts)
XMP #5	13.0-15-15-30-60-n.a @ 1300 MHz (1.350 Volts)
XMP #6	14.0-16-16-32-65-n.a @ 1400 MHz (1.350 Volts)
XMP #7	15.0-17-17-34-69-n.a @ 1500 MHz (1.350 Volts)
XMP #8	16.0-18-18-36-74-n.a @ 1600 MHz (1.350 Volts)
XMP #9	17.0-18-18-36-74-n.a @ 1600 MHz (1.350 Volts)
XMP #10	18.0-18-18-36-74-n.a @ 1600 MHz (1.350 Volts)
XMP profile	XMP-3002
Specification	DDR4-3002
VDD Voltage	1.350 Volts
Min Cycle time	0.666 ns (1501 MHz)
Max CL	15.0
Min tRP	11.32 ns
Min tRCD	11.32 ns
Min tRAS	23.88 ns
Min tRC	45.75 ns
Min tRRD	4.66 ns
XMP timings table	CL-tRCD-tRP-tRAS-tRC-CR @ frequency (voltage)
XMP #1	9.0-11-11-22-42-n.a @ 900 MHz (1.350 Volts)
XMP #2	10.0-12-12-24-46-n.a @ 1001 MHz (1.350 Volts)
XMP #3	11.0-13-13-27-51-n.a @ 1101 MHz (1.350 Volts)
XMP #4	12.0-14-14-29-55-n.a @ 1201 MHz (1.350 Volts)

XMP #5	13.0-15-15-32-60-n.a @ 1301 MHz (1.350 Volts)
XMP #6	14.0-16-16-34-65-n.a @ 1401 MHz (1.350 Volts)
XMP #7	15.0-17-17-36-69-n.a @ 1501 MHz (1.350 Volts)
XMP #8	16.0-17-17-36-69-n.a @ 1501 MHz (1.350 Volts)
XMP #9	17.0-17-17-36-69-n.a @ 1501 MHz (1.350 Volts)
XMP #10	18.0-17-17-36-69-n.a @ 1501 MHz (1.350 Volts)

Monitoring

Mainboard Model B450M-A PRO MAX (MS-7C52) (0x000005CC - 0xAD226069)

LPCIO

LPCIO Vendor Nuvoton
 LPCIO Model NCT6795
 LPCIO Vendor ID 0x5CA3
 LPCIO Chip ID 0xD3
 LPCIO Revision ID 0x52

Hardware Monitors

Hardware monitor Nuvoton NCT5565

Voltage 0	1.22 Volts [0x98] (CPU VCORE)
Voltage 1	1.00 Volts [0x7D] (VIN1)
Voltage 2	3.41 Volts [0xD5] (AVCC)
Voltage 3	3.41 Volts [0xD5] (3VCC)
Voltage 4	1.03 Volts [0x81] (VIN4)
Voltage 5	0.15 Volts [0x13] (VIN5)
Voltage 6	0.22 Volts [0x1C] (VIN6)
Voltage 7	0.18 Volts [0x17] (VIN7)
Voltage 8	1.22 Volts [0x98] (VIN8)
Voltage 9	0.15 Volts [0x13] (VIN9)
Voltage 10	1.03 Volts [0x81] (VIN10)
Voltage 11	1.00 Volts [0x7D] (VIN11)
Voltage 12	0.22 Volts [0x1C] (VIN12)
Voltage 13	1.10 Volts [0x8A] (VIN13)
Voltage 14	0.13 Volts [0x10] (VIN14)
Voltage 15	1.70 Volts [0xD5] (VIN15)
Voltage 16	1.50 Volts [0xBC] (VIN16)
Voltage 18	0.15 Volts [0x13] (VIN18)
Temperature 1	35 degC (94 degF) [0x45] (CPUTIN)
Temperature 3	40 degC (104 degF) [0x28] (TMPIN3)
Temperature 5	39 degC (102 degF) [0x27] (TMPIN5)
Temperature 6	127 degC (260 degF) [0x7F] (TMPIN6)
Temperature 7	50 degC (122 degF) [0x32] (TMPIN7)
Temperature 8	118 degC (244 degF) [0x76] (TMPIN8)
Fan 1	1888 RPM [0x760] (CPUFANIN)

Hardware monitor AMD Ryzen Power Management

Power 00	42.00 W [0x2A] (PPT Limit)
Temperature 0	44 degC (111 degF) [0x2C] (Core #0)
Temperature 0	46 degC (114 degF) [0x2D] (Core #1)
Temperature 0	44 degC (111 degF) [0x2C] (Core #2)
Temperature 0	46 degC (114 degF) [0x2D] (Core #3)
Temperature 0	43 degC (110 degF) [0x2B] (L3 Cache #0)
Temperature 0	40 degC (103 degF) [0x27] (L3 Cache #1)

PCI Devices

Description	Host Bridge
Location	bus 0 (0x00), device 0 (0x00), function 0 (0x00)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x1630
Revision ID	0x00
PCI header	
Subvendor ID	0x1462 (MSI)
Subsystem ID	0x7C52
Int. Line	0x00
Int. Pin	0x00

Description	Host Bridge
Location	bus 0 (0x00), device 1 (0x01), function 0 (0x00)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x1632
Revision ID	0x00
PCI header	
Subvendor ID	0x0000
Subsystem ID	0x0000
Int. Line	0x00
Int. Pin	0x00

Description	Host Bridge
Location	bus 0 (0x00), device 2 (0x02), function 0 (0x00)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x1632
Revision ID	0x00
PCI header	
Subvendor ID	0x0000
Subsystem ID	0x0000
Int. Line	0x00
Int. Pin	0x00

Description	PCI to PCI Bridge
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Location	bus 0 (0x00), device 2 (0x02), function 1 (0x01)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x1634
Revision ID	0x00
PCI header	
Primary bus	0x00
Secondary bus	0x16
Int. Line	0xFF
Int. Pin	0x00
PCI capability	
Caps class	Power Management
Caps offset	0x50
Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x58
Device type	Root Port of PCI-E Root Complex
Port	2
Caps version	2.0
Physical slot	#0
Presence detect	yes
Link width	4x (max 4x)
Link speed	8.0 GT/s (max 8.0 GT/s)
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0xA0
PCI capability	
Caps class	Subsystem Vendor
Caps offset	0xC0
SubVendor ID	0x1022 (AMD)
SubSystem ID	0x1453
PCI capability	
Caps class	HyperTransport
Caps offset	0xC8
Interface type	MSI Mapping
Description	PCI to PCI Bridge
Location	bus 0 (0x00), device 2 (0x02), function 2 (0x02)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x1634
Revision ID	0x00
PCI header	
Primary bus	0x00
Secondary bus	0x29
Int. Line	0xFF

Int. Pin	0x00
PCI capability	
Caps class	Power Management
Caps offset	0x50
Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x58
Device type	Root Port of PCI-E Root Complex
Port	1
Caps version	2.0
Physical slot	#0
Presence detect	yes
Link width	4x (max 4x)
Link speed	8.0 GT/s (max 8.0 GT/s)
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0xA0
PCI capability	
Caps class	Subsystem Vendor
Caps offset	0xC0
SubVendor ID	0x1022 (AMD)
SubSystem ID	0x1453
PCI capability	
Caps class	HyperTransport
Caps offset	0xC8
Interface type	MSI Mapping
Description	Host Bridge
Location	bus 0 (0x00), device 8 (0x08), function 0 (0x00)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x1632
Revision ID	0x00
PCI header	
Subvendor ID	0x0000
Subsystem ID	0x0000
Int. Line	0x00
Int. Pin	0x00
Description	PCI to PCI Bridge
Location	bus 0 (0x00), device 8 (0x08), function 1 (0x01)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x1635
Revision ID	0x00
PCI header	

Primary bus	0x00
Secondary bus	0x30
Int. Line	0xFF
Int. Pin	0x01
PCI capability	
Caps class	Power Management
Caps offset	0x50
Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x58
Device type	Root Port of PCI-E Root Complex
Port	0
Caps version	2.0
Physical slot	Integrated device
Link width	16x (max 16x)
Link speed	8.0 GT/s (max 16.0 GT/s)
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0xA0
PCI capability	
Caps class	Subsystem Vendor
Caps offset	0xC0
SubVendor ID	0x1022 (AMD)
SubSystem ID	0x1635
Description	PCI to PCI Bridge
Location	bus 0 (0x00), device 8 (0x08), function 2 (0x02)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x1635
Revision ID	0x00
PCI header	
Primary bus	0x00
Secondary bus	0x31
Int. Line	0xFF
Int. Pin	0x01
PCI capability	
Caps class	Power Management
Caps offset	0x50
Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x58
Device type	Root Port of PCI-E Root Complex
Port	0
Caps version	2.0

Physical slot	Integrated device
Link width	16x (max 16x)
Link speed	8.0 GT/s (max 16.0 GT/s)
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0xA0
PCI capability	
Caps class	Subsystem Vendor
Caps offset	0xC0
SubVendor ID	0x1022 (AMD)
SubSystem ID	0x1635
Description	SMBus Controller
Location	bus 0 (0x00), device 20 (0x14), function 0 (0x00)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x790B
Revision ID	0x51
PCI header	
Subvendor ID	0x1462 (MSI)
Subsystem ID	0x7C52
Int. Line	0x00
Int. Pin	0x00
Description	PCI to ISA Bridge
Location	bus 0 (0x00), device 20 (0x14), function 3 (0x03)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x790E
Revision ID	0x51
PCI header	
Subvendor ID	0x1462 (MSI)
Subsystem ID	0x7C52
Int. Line	0x00
Int. Pin	0x00
Description	Host Bridge
Location	bus 0 (0x00), device 24 (0x18), function 0 (0x00)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x1448
Revision ID	0x00
PCI header	
Subvendor ID	0x0000
Subsystem ID	0x0000
Int. Line	0x00
Int. Pin	0x00

Description Host Bridge
Location bus 0 (0x00), device 24 (0x18), function 1 (0x01)
Common header
 Vendor ID 0x1022 (AMD)
 Model ID 0x1449
 Revision ID 0x00
PCI header
 Subvendor ID 0x0000
 Subsystem ID 0x0000
 Int. Line 0x00
 Int. Pin 0x00

Description Host Bridge
Location bus 0 (0x00), device 24 (0x18), function 2 (0x02)
Common header
 Vendor ID 0x1022 (AMD)
 Model ID 0x144A
 Revision ID 0x00
PCI header
 Subvendor ID 0x0000
 Subsystem ID 0x0000
 Int. Line 0x00
 Int. Pin 0x00

Description Host Bridge
Location bus 0 (0x00), device 24 (0x18), function 3 (0x03)
Common header
 Vendor ID 0x1022 (AMD)
 Model ID 0x144B
 Revision ID 0x00
PCI header
 Subvendor ID 0x0000
 Subsystem ID 0x0000
 Int. Line 0x00
 Int. Pin 0x00

Description Host Bridge
Location bus 0 (0x00), device 24 (0x18), function 4 (0x04)
Common header
 Vendor ID 0x1022 (AMD)
 Model ID 0x144C
 Revision ID 0x00
PCI header
 Subvendor ID 0x0000
 Subsystem ID 0x0000
 Int. Line 0x00

Int. Pin	0x00
Description	Host Bridge
Location	bus 0 (0x00), device 24 (0x18), function 5 (0x05)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x144D
Revision ID	0x00
PCI header	
Subvendor ID	0x0000
Subsystem ID	0x0000
Int. Line	0x00
Int. Pin	0x00
Description	Host Bridge
Location	bus 0 (0x00), device 24 (0x18), function 6 (0x06)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x144E
Revision ID	0x00
PCI header	
Subvendor ID	0x0000
Subsystem ID	0x0000
Int. Line	0x00
Int. Pin	0x00
Description	Host Bridge
Location	bus 0 (0x00), device 24 (0x18), function 7 (0x07)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x144F
Revision ID	0x00
PCI header	
Subvendor ID	0x0000
Subsystem ID	0x0000
Int. Line	0x00
Int. Pin	0x00
Description	USB Controller (xHCI)
Location	bus 22 (0x16), device 0 (0x00), function 0 (0x00)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x43D5
Revision ID	0x01
PCI header	
Address 0 (memory)	0x00000000FCDA0004
Subvendor ID	0x1B21 (ASMedia)

Subsystem ID	0x1142
Int. Line	0x00
Int. Pin	0x01
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0x50
PCI capability	
Caps class	MSI-X
Caps offset	0x68
PCI capability	
Caps class	Power Management
Caps offset	0x78
Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x80
Device type	Legacy PCI-E Endpoint Device
Port	0
Caps version	2.0
Link width	4x (max 4x)
Link speed	8.0 GT/s (max 8.0 GT/s)
Description	Serial ATA Controller - AHCI
Location	bus 22 (0x16), device 0 (0x00), function 1 (0x01)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x43C8
Revision ID	0x01
PCI header	
Address 5 (memory)	0xFC D80000
Subvendor ID	0x1B21 (ASMedia)
Subsystem ID	0x1062
Int. Line	0x00
Int. Pin	0x02
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0x50
PCI capability	
Caps class	Power Management
Caps offset	0x78
Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x80
Device type	Legacy PCI-E Endpoint Device
Port	0
Caps version	2.0

Link width	4x (max 4x)
Link speed	8.0 GT/s (max 8.0 GT/s)
Description	PCI to PCI Bridge
Location	bus 22 (0x16), device 0 (0x00), function 2 (0x02)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x43C6
Revision ID	0x01
PCI header	
Primary bus	0x16
Secondary bus	0x20
Int. Line	0xFF
Int. Pin	0x03
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0x50
PCI capability	
Caps class	Power Management
Caps offset	0x78
Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x80
Device type	Upstream Port of PCI-E Switch
Port	0
Caps version	2.0
Link width	4x (max 4x)
Link speed	8.0 GT/s (max 8.0 GT/s)
PCI capability	
Caps class	Subsystem Vendor
Caps offset	0xC0
SubVendor ID	0x1B21 (ASMedia)
SubSystem ID	0x0201
Description	PCI to PCI Bridge
Location	bus 32 (0x20), device 0 (0x00), function 0 (0x00)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x43C7
Revision ID	0x01
PCI header	
Primary bus	0x20
Secondary bus	0x21
Int. Line	0xFF
Int. Pin	0x01
PCI capability	

Caps class	Message Signalled Interrupts
Caps offset	0x50
PCI capability	
Caps class	Power Management
Caps offset	0x78
Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x80
Device type	Downstream Port of PCI-E Switch
Port	0
Caps version	2.0
Physical slot	#0
Presence detect	no
Link width	0x (max 1x)
Link speed	2.5 GT/s (max 5.0 GT/s)
PCI capability	
Caps class	Subsystem Vendor
Caps offset	0xC0
SubVendor ID	0x1B21 (ASMedia)
SubSystem ID	0x3306
Description	PCI to PCI Bridge
Location	bus 32 (0x20), device 1 (0x01), function 0 (0x00)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x43C7
Revision ID	0x01
PCI header	
Primary bus	0x20
Secondary bus	0x22
Int. Line	0xFF
Int. Pin	0x01
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0x50
PCI capability	
Caps class	Power Management
Caps offset	0x78
Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x80
Device type	Downstream Port of PCI-E Switch
Port	1
Caps version	2.0
Physical slot	#0

Presence detect	no
Link width	1x (max 1x)
Link speed	2.5 GT/s (max 5.0 GT/s)
PCI capability	
Caps class	Subsystem Vendor
Caps offset	0xC0
SubVendor ID	0x1B21 (ASMedia)
SubSystem ID	0x3306
Description	PCI to PCI Bridge
Location	bus 32 (0x20), device 4 (0x04), function 0 (0x00)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x43C7
Revision ID	0x01
PCI header	
Primary bus	0x20
Secondary bus	0x25
Int. Line	0xFF
Int. Pin	0x01
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0x50
PCI capability	
Caps class	Power Management
Caps offset	0x78
Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x80
Device type	Downstream Port of PCI-E Switch
Port	4
Caps version	2.0
Physical slot	#0
Presence detect	yes
Link width	1x (max 1x)
Link speed	2.5 GT/s (max 5.0 GT/s)
PCI capability	
Caps class	Subsystem Vendor
Caps offset	0xC0
SubVendor ID	0x1B21 (ASMedia)
SubSystem ID	0x3306
Description	PCI to PCI Bridge
Location	bus 32 (0x20), device 5 (0x05), function 0 (0x00)
Common header	
Vendor ID	0x1022 (AMD)

Model ID	0x43C7
Revision ID	0x01
PCI header	
Primary bus	0x20
Secondary bus	0x26
Int. Line	0xFF
Int. Pin	0x01
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0x50
PCI capability	
Caps class	Power Management
Caps offset	0x78
Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x80
Device type	Downstream Port of PCI-E Switch
Port	5
Caps version	2.0
Physical slot	#0
Presence detect	no
Link width	1x (max 1x)
Link speed	2.5 GT/s (max 5.0 GT/s)
PCI capability	
Caps class	Subsystem Vendor
Caps offset	0xC0
SubVendor ID	0x1B21 (ASMedia)
SubSystem ID	0x3306
Description	PCI to PCI Bridge
Location	bus 32 (0x20), device 6 (0x06), function 0 (0x00)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x43C7
Revision ID	0x01
PCI header	
Primary bus	0x20
Secondary bus	0x27
Int. Line	0xFF
Int. Pin	0x01
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0x50
PCI capability	
Caps class	Power Management
Caps offset	0x78

Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x80
Device type	Downstream Port of PCI-E Switch
Port	6
Caps version	2.0
Physical slot	#0
Presence detect	no
Link width	1x (max 1x)
Link speed	2.5 GT/s (max 5.0 GT/s)
PCI capability	
Caps class	Subsystem Vendor
Caps offset	0xC0
SubVendor ID	0x1B21 (ASMedia)
SubSystem ID	0x3306
Description	PCI to PCI Bridge
Location	bus 32 (0x20), device 7 (0x07), function 0 (0x00)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x43C7
Revision ID	0x01
PCI header	
Primary bus	0x20
Secondary bus	0x28
Int. Line	0xFF
Int. Pin	0x01
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0x50
PCI capability	
Caps class	Power Management
Caps offset	0x78
Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x80
Device type	Downstream Port of PCI-E Switch
Port	7
Caps version	2.0
Physical slot	#0
Presence detect	no
Link width	1x (max 1x)
Link speed	2.5 GT/s (max 5.0 GT/s)
PCI capability	
Caps class	Subsystem Vendor

Caps offset	0xC0
SubVendor ID	0x1B21 (ASMedia)
SubSystem ID	0x3306
Description	Ethernet Controller
Location	bus 37 (0x25), device 0 (0x00), function 0 (0x00)
Common header	
Vendor ID	0x10EC (Realtek)
Model ID	0x8168
Revision ID	0x15
PCI header	
Address 2 (memory)	0x00000000FCC04004
Address 4 (memory)	0x00000000FCC00004
Subvendor ID	0x1462 (MSI)
Subsystem ID	0x7C52
Int. Line	0x00
Int. Pin	0x01
PCI capability	
Caps class	Power Management
Caps offset	0x40
Caps version	1.2
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0x50
PCI capability	
Caps class	PCI Express
Caps offset	0x70
Device type	PCI-E Endpoint Device
Port	0
Caps version	2.0
Link width	1x (max 1x)
Link speed	2.5 GT/s (max 2.5 GT/s)
PCI capability	
Caps class	MSI-X
Caps offset	0xB0
Description	NVM Express (NVMe) Controller
Location	bus 41 (0x29), device 0 (0x00), function 0 (0x00)
Common header	
Vendor ID	0x2646 (Kingston)
Model ID	0x500F
Revision ID	0x03
PCI header	
Address 0 (memory)	0x00000000FCF00004
Subvendor ID	0x2646 (Kingston)
Subsystem ID	0x500F
Int. Line	0x00

Int. Pin	0x01
PCI capability	
Caps class	Power Management
Caps offset	0x40
Caps version	1.2
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0x50
PCI capability	
Caps class	PCI Express
Caps offset	0x70
Device type	PCI-E Endpoint Device
Port	0
Caps version	2.0
Link width	4x (max 4x)
Link speed	8.0 GT/s (max 8.0 GT/s)
PCI capability	
Caps class	MSI-X
Caps offset	0xB0
Description	VGA Controller
Location	bus 48 (0x30), device 0 (0x00), function 0 (0x00)
Common header	
Vendor ID	0x1002 (AMD)
Model ID	0x1636
Revision ID	0xCD
PCI header	
Address 0 (memory)	0x00000000D000000C
Address 2 (memory)	0x00000000E000000C
Address 4 (port)	0x0000EF00
Address 5 (memory)	0xFCB00000
Subvendor ID	0x1002 (AMD)
Subsystem ID	0x1636
Int. Line	0x00
Int. Pin	0x01
PCI capability	
Caps class	Vendor Dependant
Caps offset	0x48
PCI capability	
Caps class	Power Management
Caps offset	0x50
Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x64
Device type	Legacy PCI-E Endpoint Device
Port	0

Caps version	2.0
Link width	16x (max 16x)
Link speed	8.0 GT/s (max 16.0 GT/s)
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0xA0
PCI capability	
Caps class	MSI-X
Caps offset	0xC0
Description	High Definition Audio (HDA)
Location	bus 48 (0x30), device 0 (0x00), function 1 (0x01)
Common header	
Vendor ID	0x1002 (AMD)
Model ID	0x1637
Revision ID	0x00
PCI header	
Address 0 (memory)	0xFCBF8000
Subvendor ID	0x1462 (MSI)
Subsystem ID	0x9C52
Int. Line	0x27
Int. Pin	0x02
PCI capability	
Caps class	Vendor Dependant
Caps offset	0x48
PCI capability	
Caps class	Power Management
Caps offset	0x50
Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x64
Device type	Legacy PCI-E Endpoint Device
Port	0
Caps version	2.0
Link width	16x (max 16x)
Link speed	8.0 GT/s (max 16.0 GT/s)
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0xA0
Description	Encryption Device
Location	bus 48 (0x30), device 0 (0x00), function 2 (0x02)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x15DF
Revision ID	0x00

PCI header

Address 2 (memory)	0xFCA00000
Address 5 (memory)	0xFCBFE000
Subvendor ID	0x1022 (AMD)
Subsystem ID	0x15DF
Int. Line	0x00
Int. Pin	0x03

PCI capability

Caps class	Vendor Dependant
Caps offset	0x48

PCI capability

Caps class	Power Management
Caps offset	0x50
Caps version	1.2

PCI capability

Caps class	PCI Express
Caps offset	0x64
Device type	PCI-E Endpoint Device
Port	0
Caps version	2.0
Link width	16x (max 16x)
Link speed	8.0 GT/s (max 16.0 GT/s)

PCI capability

Caps class	Message Signalled Interrupts
Caps offset	0xA0

PCI capability

Caps class	MSI-X
Caps offset	0xC0

Description

USB Controller (xHCI)

Location

bus 48 (0x30), device 0 (0x00), function 3 (0x03)

Common header

Vendor ID	0x1022 (AMD)
Model ID	0x1639
Revision ID	0x00

PCI header

Address 0 (memory)	0x00000000FC900004
Subvendor ID	0x1462 (MSI)
Subsystem ID	0x7C52
Int. Line	0x00
Int. Pin	0x04

PCI capability

Caps class	Vendor Dependant
Caps offset	0x48

PCI capability

Caps class	Power Management
Caps offset	0x50

Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x64
Device type	PCI-E Endpoint Device
Port	0
Caps version	2.0
Link width	16x (max 16x)
Link speed	8.0 GT/s (max 16.0 GT/s)
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0xA0
PCI capability	
Caps class	MSI-X
Caps offset	0xC0
Description	USB Controller (xHCI)
Location	bus 48 (0x30), device 0 (0x00), function 4 (0x04)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x1639
Revision ID	0x00
PCI header	
Address 0 (memory)	0x00000000FC800004
Subvendor ID	0x1462 (MSI)
Subsystem ID	0x7C52
Int. Line	0x00
Int. Pin	0x01
PCI capability	
Caps class	Vendor Dependant
Caps offset	0x48
PCI capability	
Caps class	Power Management
Caps offset	0x50
Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x64
Device type	PCI-E Endpoint Device
Port	0
Caps version	2.0
Link width	16x (max 16x)
Link speed	8.0 GT/s (max 16.0 GT/s)
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0xA0
PCI capability	

Caps class	MSI-X
Caps offset	0xC0
Description	High Definition Audio (HDA)
Location	bus 48 (0x30), device 0 (0x00), function 6 (0x06)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x15E3
Revision ID	0x00
PCI header	
Address 0 (memory)	0xFCBF0000
Subvendor ID	0x1462 (MSI)
Subsystem ID	0x9C52
Int. Line	0x24
Int. Pin	0x03
PCI capability	
Caps class	Vendor Dependant
Caps offset	0x48
PCI capability	
Caps class	Power Management
Caps offset	0x50
Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x64
Device type	PCI-E Endpoint Device
Port	0
Caps version	2.0
Link width	16x (max 16x)
Link speed	8.0 GT/s (max 16.0 GT/s)
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0xA0
Description	Serial ATA Controller - AHCI
Location	bus 49 (0x31), device 0 (0x00), function 0 (0x00)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x7901
Revision ID	0x81
PCI header	
Address 5 (memory)	0xFCE01000
Subvendor ID	0x1462 (MSI)
Subsystem ID	0x7C52
Int. Line	0x00
Int. Pin	0x01
PCI capability	

Caps class	Vendor Dependant
Caps offset	0x48
PCI capability	
Caps class	Power Management
Caps offset	0x50
Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x64
Device type	PCI-E Endpoint Device
Port	0
Caps version	2.0
Link width	16x (max 16x)
Link speed	8.0 GT/s (max 16.0 GT/s)
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0xA0
PCI capability	
Caps class	Serial ATA Configuration
Caps offset	0xD0
Description	Serial ATA Controller - AHCI
Location	bus 49 (0x31), device 0 (0x00), function 1 (0x01)
Common header	
Vendor ID	0x1022 (AMD)
Model ID	0x7901
Revision ID	0x81
PCI header	
Address 5 (memory)	0xFCE00000
Subvendor ID	0x1462 (MSI)
Subsystem ID	0x7C52
Int. Line	0x00
Int. Pin	0x02
PCI capability	
Caps class	Vendor Dependant
Caps offset	0x48
PCI capability	
Caps class	Power Management
Caps offset	0x50
Caps version	1.2
PCI capability	
Caps class	PCI Express
Caps offset	0x64
Device type	PCI-E Endpoint Device
Port	0
Caps version	2.0
Link width	16x (max 16x)

Link speed	8.0 GT/s (max 16.0 GT/s)
PCI capability	
Caps class	Message Signalled Interrupts
Caps offset	0xA0
PCI capability	
Caps class	Serial ATA Configuration
Caps offset	0xD0

DMI

SMBIOS Version	2.8
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DMI BIOS

vendor	American Megatrends International LLC.
version	3.B0
date	02/03/2021
ROM size	16384 KB

DMI System Information

manufacturer	CSL-Computer GmbH & Co. KG
product	5721
version	1.0
serial	PCCSL2022001555
UUID	{0359AB80-7F8C-11EC-9DAB-ECBE4C7D8000}
SKU	81484
family	Sprint

DMI Baseboard

vendor	Micro-Star International Co. Ltd.
model	B450M-A PRO MAX (MS-7C52)
revision	1.0
serial	07C5211_L21B075999

DMI System Enclosure

manufacturer	Micro-Star International Co. Ltd.
chassis type	Desktop
chassis serial	To be filled by O.E.M.

DMI Extension Slot

designation	J6B2
type	PCI Express
populated	yes

DMI Extension Slot

designation	J6B1
type	PCI Express
populated	yes

DMI Extension Slot

designation J6D1
type PCI Express
populated yes

DMI Extension Slot

designation J7B1
type PCI Express
populated yes

DMI Extension Slot

designation J8B4
type PCI Express
populated yes

DMI Extension Slot

designation J8D1
type PCI Express
populated yes

DMI Extension Slot

designation J8B3
type PCI
width 32 bits
populated yes

DMI OEM Strings

string[0] To be filled by O.E.M.

DMI Physical Memory Array

location Motherboard
usage System Memory
correction None
max capacity 128 GB
max# of devices 2

DMI Processor

manufacturer Advanced Micro Devices Inc.
model AMD Ryzen 3 4300GE with Radeon Graphics
clock speed 3500.0 MHz
FSB speed 100.0 MHz
multiplier 35.0x
max clock speed 4100.0 MHz

DMI Memory Device

designation DIMM 0

format	DIMM
type	DDR4
total width	64 bits
data width	64 bits
size	8 GB
speed	3200 MHz
manufacturer	Kingston
part number	KF3200C16D4/8GX
serial number	795A6950
voltage	1.200000

DMI Memory Device

designation	DIMM 0
format	DIMM
type	DDR4
total width	64 bits
data width	64 bits
size	8 GB
speed	3200 MHz
manufacturer	Kingston
part number	KF3200C16D4/8GX
serial number	BDDA29E3
voltage	1.200000

DMI Port Connector

designation	J1500 (internal)
designation	USB 3.0 (external)
port type	USB
connector	Access Bus (USB)

DMI Port Connector

designation	J1501 (internal)
designation	USB 3.0 (external)
port type	USB
connector	Access Bus (USB)

DMI Port Connector

designation	J1502 (internal)
designation	USB-C (external)
port type	USB
connector	Access Bus (USB)

DMI Port Connector

designation	J1503 (internal)
designation	USB 3.0 (external)
port type	USB
connector	Access Bus (USB)

DMI Port Connector

designation J1504 (internal)
 designation USB 3.1 (external)
 port type USB
 connector Access Bus (USB)

DMI Port Connector

designation J1503 (internal)
 designation Network (external)
 port type Network Port
 connector RJ-45

DMI Port Connector

designation J1704 (internal)
 designation SATA Express (external)

DMI Port Connector

designation J1705 (internal)
 designation SATA Express (external)

DMI Port Connector

designation J1701 (internal)
 designation iSATA (external)

DMI Port Connector

designation J1702 (internal)
 designation iSATA (external)

DMI Port Connector

designation J1703 (internal)
 designation iSATA (external)

DMI Port Connector

designation J1706 (internal)
 designation iSATA (external)

DMI Port Connector

designation J1100 (internal)
 designation HDMI (external)
 port type Video Port

DMI Port Connector

designation J1101 (internal)
 designation HDMI (external)
 port type Video Port

DMI Port Connector

designation J1102 (internal)
designation DP (external)
port type Video Port

DMI Port Connector

designation J2100 (internal)
designation Front Audio (external)
port type Audio Port
connector Mini Jack (headphones)

DMI Port Connector

designation J2101 (internal)
designation Audio Jack (external)
port type Audio Port
connector Mini Jack (headphones)

DMI Port Connector

designation J1700 (internal)
designation Sata Express (external)

DMI Extension Slot

designation J10
type PCI Express
populated no

DMI Extension Slot

designation J3600 Pcie x8 slot
type PCI Express

DMI Extension Slot

designation J3707 Pcie x4 slot
type PCI Express

DMI Extension Slot

designation J3700 PCIE x4 slot from Promontory
type PCI Express
populated no

DMI Extension Slot

designation J3702 PCIE x1 slot from Promontory
type PCI Express
populated no

DMI Extension Slot

designation J3703 PCIE x1 slot from Promontory
type PCI Express

populated no

DMI Extension Slot

designation J3701 M.2 WLAN/BT slot
type PCI Express
populated no

Graphics

Number of adapters 1

Graphic APIs

API D3D
API PDH
API ATI I/O
API ADL SDK

Display Adapters

Display adapter 0 (primary)

ID 0x2150100
Name AMD Radeon(TM) Graphics
Board Manufacturer Advanced Micro Devices Inc. (AMD)
Codename Vega
Power Limit 15.0 W (default)
Technology 7 nm
Current Link Width x16
Current Link Speed 8.0 GT/s
PCI device bus 48 (0x30), device 0 (0x0), function 0 (0x0)
Vendor ID 0x1002 (0x1002)
Model ID 0x1636 (0x1636)
Revision ID 0xCD
Root device bus 0 (0x0), device 8 (0x8), function 1 (0x1)
Driver version 31.0.12027.9001
WDDM Model 3.1

Win32_VideoController AdapterRAM = 0x80000000 (2147483648)

Win32_VideoController DriverVersion = 31.0.12027.9001

Win32_VideoController DriverDate = 03/30/2023

Monitor 0

Model S22B300 (Samsung)
ID SAM08AC
Serial H4MD208172
Manufacturing Date Week 9, Year 2013
Size 21.7 inches
Max Resolution 1920 x 1080 @ 60 Hz
Horizontal Freq. Range 30-81 kHz

Vertical Freq. Range	56-75 Hz
Max Pixel Clock	170 MHz
Gamma Factor	2.2
Video Input	0x80

Software

Windows Version	Microsoft Windows 11 Professional (x64) Build 22631.4037
Windows Installation Date	1/29/2022
DirectX Version	12.0