UEFI Version	: X99M Extreme4 P3.50
Processor Type	: Intel(R) Core(TM) i7-6800K CPU @ 3.40GHz
Processor Speed	: 3400MHz
Cache Size	: 15MB
Total Memory	: 16GB, Dual-Channel Memory Mode
DDR4_A1	: Kingston 8GB (DDR4-2400)
DDR4_B1	: Kingston 8GB (DDR4-2400)
DDR4_C1	: None
DDR4_D1	: None

★ My Favorite

Description

Display your collection of BIOS items.

Press F5 to add/remove your favorite items.

Get details via QR code

Target CPU / Cache / BCLK Speed 3400 MHz / 2800 MHz / 100.0 MHz

Target Memory Speed 2400 MHz

Load Optimized CPU OC Setting [Disabled]

Multi Core Enhancement [Disabled]

CPU Configuration

DRAM Configuration

FIVR Configuration

Voltage Configuration

User Profile 1: [os x]
User Profile 2: Empty
User Profile 3: Empty
User Profile 4: Empty
User Profile 5: Empty

Save User Default

Description

Overclocking may cause damage to your CPU and motherboard. It should be done at your own risk and expense. Please use better CPU cooler for system stability.

Get details via QR code

OC Tweaker\CPU Configuration

Target CPU / Cache / BCLK Speed	3400 MHz / 2800 MHz / 100.0 MHz
Target Memory Speed	2400 MHz

CPU Configuration

CPU Ratio	Auto
CPU Cache Ratio	Auto
Minimum CPU Cache Ratio	Auto
BCLK Frequency	100.0
BCLK/PCIE Ratio	Auto
BCLK Spread Spectrum	Auto
SB Spread Spectrum	Auto
Intel SpeedStep Technology	Enabled
Intel Turbo Boost Technology	Enabled
Intel Turbo Boost Max Technology 3.0	Auto
Filter PLL Frequency	Auto

Description

The CPU speed is determined by the CPU Ratio multiplied with the BCLK. Increasing the CPU Ratio will increase the internal CPU clock speed without affecting the clock speed of other components.

Get details via QR code

BCLK Spread Spectrum	Auto
SB Spread Spectrum	Auto
Intel SpeedStep Technology	Enabled
Intel Turbo Boost Technology	Enabled
Intel Turbo Boost Max Technology 3.0	Auto
Filter PLL Frequency	Auto
Long Duration Power Limit	Auto
Long Duration Maintained	Auto
Short Duration Power Limit	Auto
Primary Plane Current Limit	Auto
CPU Tj Max	Auto
Adjust Pll	Disabled
AVX2 Negative Offset	Auto
Pll Trim Offset	Auto
Link Frequency Select	Auto

Description

Allows for selecting the QPI Link Frequency

Get details via QR code

ASRock UEFI
Main
OC Tweaker
Advanced
Tool
H/W Monitor
Security
Boot
Exit
My Favorite
OC Tweaker\DRAM Configuration
Target CPU / Cache / BCLK Speed
Target Memory Speed
DRAM Tweaker
DRAM Timing Configuration
XMP 2.0 Profile 1: DDR4-2400 15-15-15-35 1.
Load XMP Setting
BCLK Frequency
DRAM Voltage
DRAM Reference Clock
DRAM Frequency
DRAM Frequency OC Preset
Primary Timing
DRAM Tweaker
Slot A1
Memory Slot Selection
Module Size 8 GB
Max Bandwidth PC4-19200 (1200 MHz)
SPD Ext. XMP 2.0
JEDEC #1 JEDEC #2 JEDEC #3 XMP 1 XMP 2
Freq 2400 MHz 2133 MHz 1866 MHz 2400 MHz
Voltage 1.20 V 1.20 V 1.20 V 1.20 V
tCL 15 14 12 15
tRCD 15 14 12 15
tRP 15 14 12 15
tRAS 35 32 28 35
tRFC 313 278 243 313
tRRD 7 7 6 7
tRRD_L 7 7 6 7
tFAW 26 24 21 26
tCCD_L 5 5 4
Fine tune the DRAM settings by leaving ...
Ok
Description
Allows users to fine tune the DRAM settings by leaving marks in checkboxes.
Get details via QR code
English
Wed 03/21/2018, 16:17:08

Target CPU / Cache / BCLK Speed 3400 MHz / 2800 MHz / 100.0 MHz

Target Memory Speed 2400 MHz

DRAM Tweaker

DRAM Timing Configuration

XMP 2.0 Profile 1: DDR4-2400 15-15-15-35 1.20V

Load XMP Setting		XMP 2.0 Profile 1
BCLK Frequency		100.0
DRAM Voltage	1.250V	1.250
DRAM Reference Clock		Auto
DRAM Frequency	DDR4-2400 (1:9)	DDR4-2400
DRAM Frequency OC Preset		Default

Primary Timing

Description

Allows users to fine tune the DRAM settings by leaving marks in checkboxes.

Get details via QR code

Primary Timing

CAS# Latency (tCL)	15	15
RAS# to CAS# Delay (tRCD)	15	15
Row Precharge Time (tRP)	15	15
RAS# Active Time (tRAS)	35	35
Command Rate (CR)	2N	Auto

Secondary Timing

Write Recovery Time (tWR)	19	Auto
Refresh Cycle Time (tRFC)	313	313
RAS to RAS Delay (tRRD)	7	7
RAS to RAS Delay (tRRD_L)	7	7
Write to Read Delay (tWTR)	3	Auto
Write to Read Delay (tWTR_L)	9	Auto
Read to Precharge (tRTP)	10	Auto

Description

The number of clocks that are inserted between a read command to a row pre-charge command to the same rank.

Min: 4
Max: 15

Get details via QR code

OC Tweaker\DRAM Configuration

Read to Precharge (tRTP)	10	Auto
Four Activate Window (tFAW)	26	26
CAS Write Latency (tCWL)	14	Auto

Third Timing

tREFI	9360	Auto
tCKE	6	Auto
tCCD	4	Auto
tCCD_L	6	Auto
tCCD_WR_L	6	Auto
tRWSR	5	Auto
tRWDD	6	Auto
tRWDR	6	Auto
tWRDD	2	Auto
tWRDR	1	Auto

Description

Write to Read different rank dead cycle
Back to back READ to WRITE from
different rank separation parameter.

Min: 1
Max: 31

Get details via QR code

tWRDR	1	Auto
tWWDD	3	Auto
tWWDR	3	Auto
tRRDD	1	Auto
tRRDR	1	Auto
RTL (CH A)	D0: 55	Auto
RTL (CH B)	D0: 55	Auto
RTL (CH C)	N/A	Auto
RTL (CH D)	N/A	Auto
RTL offset (CH A)		Auto
RTL offset (CH B)		Auto
RTL offset (CH C)		Auto
RTL offset (CH D)		Auto
IO-L (CH A)	D0: 6	Auto
IO-L (CH B)	D0: 8	Auto

Description

Configure IO latency for channel B.

Get details via QR code

IO-L (CH B)	DO: 8	Auto
IO-L (CH C)	N/A	Auto
IO-L (CH D)	N/A	Auto

Advanced Setting

ODT WR (CH A)	Auto
ODT PARK (CH A)	Auto
ODT NOM (CH A)	Auto
ODT WR (CH B)	Auto
ODT PARK (CH B)	Auto
ODT NOM (CH B)	Auto
ODT WR (CH C)	Auto
ODT PARK (CH C)	Auto
ODT NOM (CH C)	Auto
ODT WR (CH D)	Auto

Description

Configure the memory on die termination resistors' WR for channel D.

Get details via QR code

OC Tweaker\DRAM Configuration

ODT WR (CH B)	Auto
ODT PARK (CH B)	Auto
ODT NOM (CH B)	Auto
ODT WR (CH C)	Auto
ODT PARK (CH C)	Auto
ODT NOM (CH C)	Auto
ODT WR (CH D)	Auto
ODT PARK (CH D)	Auto
ODT NOM (CH D)	Auto
MRC Fast Boot	Enabled
Memory Test	Disabled
Memory Test On Fast Boot	Disabled
Memory Power Savings Mode	Auto
Maximum Aggregate Memory Performance	Auto
Command/Address Parity	Auto

Description

Enable/Disable memory Command/Address Parity trainning.

Get details via QR code

OC Tweaker\FIVR Configuration

Target CPU / Cache / BCLK Speed 3400 MHz / 2800 MHz / 100.0 MHz

Target Memory Speed 2400 MHz

FIVR Configuration

CPU Vcore Voltage Mode	Auto
Vcore Voltage Additional Offset	Auto
CPU Cache Voltage Mode	Auto
CPU Cache Voltage Offset	Auto
System Agent Voltage Offset	Auto
CPU Integrated VR Faults	Auto
CPU Integrated VR Efficiency Mode	Auto
Dynamic SVID Control	Auto
VCCU Voltage Offset	Auto

Description

Configure the amount of voltage fed to the cores of the processor. Increase the voltage when increasing CPU Core Frequency.

Auto: For optimized settings.
Adaptive: Add voltage to the CPU when the system is under heavy loading.
Override: The voltage is fixed.

Get details via QR code

OC Tweaker\Voltage Configuration

Target CPU / Cache / BCLK Speed 3400 MHz / 2800 MHz / 100.0 MHz

Target Memory Speed 2400 MHz

Voltage Configuration

CPU Input Voltage		Auto
CPU Load-Line Calibration		Auto
DRAM Voltage	1.250V	1.250
DRAM Activating Power Supply	2.500V	Auto
PCH PLL Voltage	1.500V	Auto
CPU I/O Voltage	1.050V	Auto
ME Voltage	1.050V	Auto
PCH Voltage	1.050V	Auto

Description

Input voltage for the processor by the external voltage regulator. The CPU Input Voltage needs to be higher than the CPU Vcore voltage, at least 0.4V or the system will be unstable. 1.8V~1.9V is recommended if you are overlocking the CPU frequency.

Get details via QR code

Intel(R) Core(TM) i7-6800K CPU @ 3.40GHz

Microcode Revision	406F1 B00002A
Max CPU Speed	3400 MHz
Min CPU Speed	1200 MHz
Processor Cores	6

Intel Hyper Threading Technology	Enabled
Processor Cores Active Management	
No-Execute Memory Protection	Enabled
Hardware Prefetcher	Enabled
Adjacent Cache Line Prefetch	Enabled
Intel Virtualization Technology	Enabled
CPU Thermal Throttling	Enabled
CPU C States Support	Enabled

Description

Intel Hyper Threading Technology allows multiple threads to run on each core, so that the overall performance on threaded software is improved.

Get details via QR code

Processor Cores	6
Intel Hyper Threading Technology	Enabled
Processor Cores Active Management	
No-Execute Memory Protection	Enabled
Hardware Prefetcher	Enabled
Adjacent Cache Line Prefetch	Enabled
Intel Virtualization Technology	Enabled
CPU Thermal Throttling	Enabled
CPU C States Support	Enabled
Package C State Support	C0/C1 state
CPU C3 State Support	Enabled
CPU C6 State Support	Enabled
Enhanced Halt State(C1E)	Auto

Description

Enable Enhanced Halt State (C1E) for lower power consumption.

Get details via QR code

Intel(R) Thunderbolt	
VT-d	Enabled
Above 4G Decoding	Enabled
Above 4G Decoding Patch	Disabled
SR-IOV Support	Enabled
Primary Display	PCIE1
PCIE1 Link Speed	Auto
PCIE2 Link Speed	Auto
PCIE3 Link Speed	Auto
PCI-E ASPM Support	Enabled
PCH PCI-E ASPM Support	Enabled
PCH DMI ASPM Support	Enabled

Description

Intel(R) Thunderbolt Configuration

Get details via QR code

Advanced\Chipset Configuration

PCIE3 Link Speed	Auto
PCI-E ASPM Support	Enabled
PCH PCI-E ASPM Support	Enabled
PCH DMI ASPM Support	Enabled
Intel(R) Ethernet Connection I218-V	Enabled
Atheros PCIE Ethernet Controller	Enabled
Onboard HD Audio	Auto
Front Panel	HD
Deep Sleep	Disabled
Restore on AC/Power Loss	Power Off
Good Night LED	Auto
Onboard Debug Port LED	Auto

Description

Enable/disable the onboard Dr. Debug LED.

Get details via QR code

Hard Disk S.M.A.R.T	Enabled

SATA3 Storage Configuration

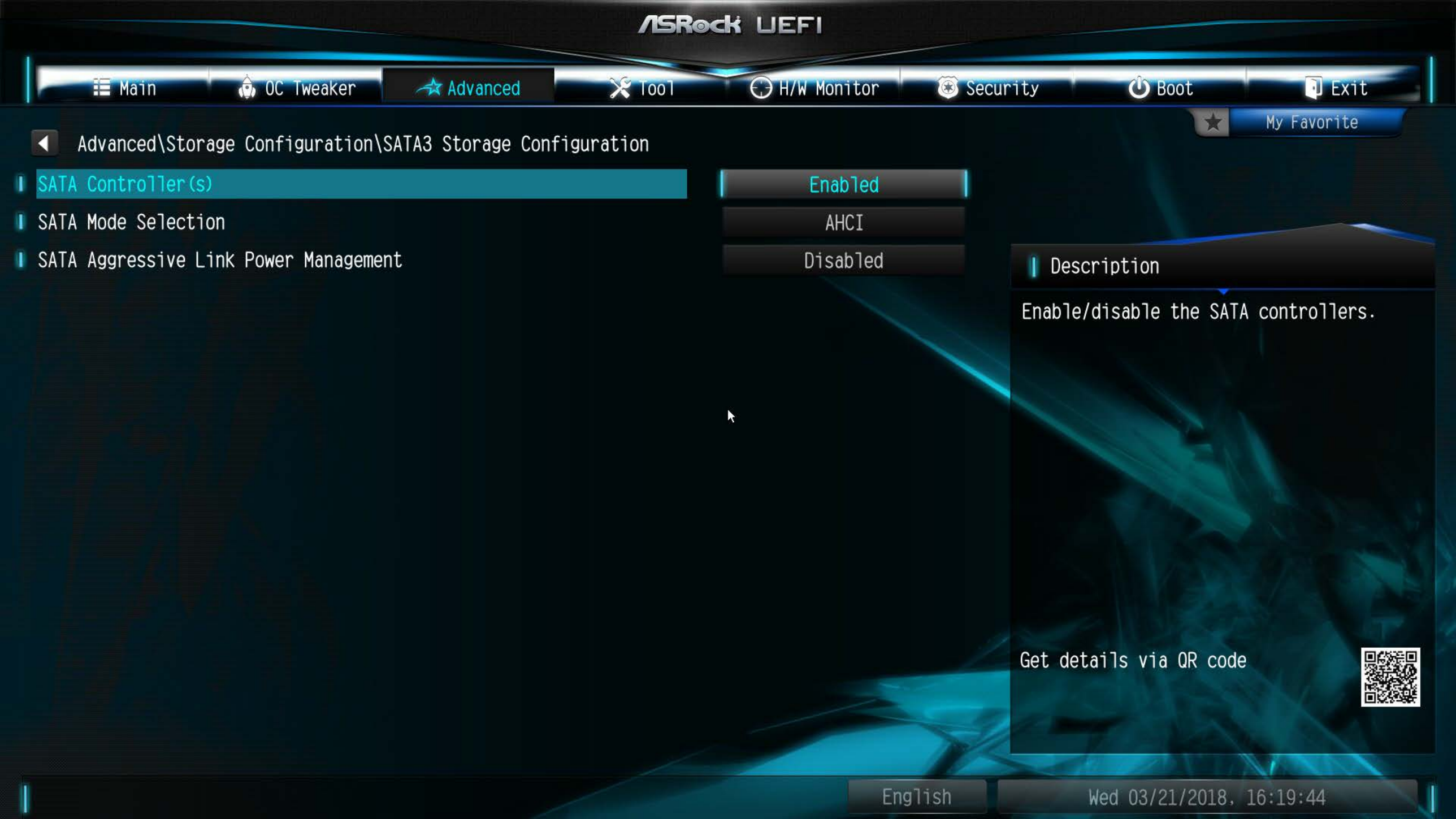
SATA3_0	: WDC WD10EARS-00Y5B1
SATA3_1	: ST31000524AS
SATA3_2	: TS32GSSD370S
SATA3_3	: Not Detected
SATA3_4	: Not Detected
SATA3_5	: Not Detected

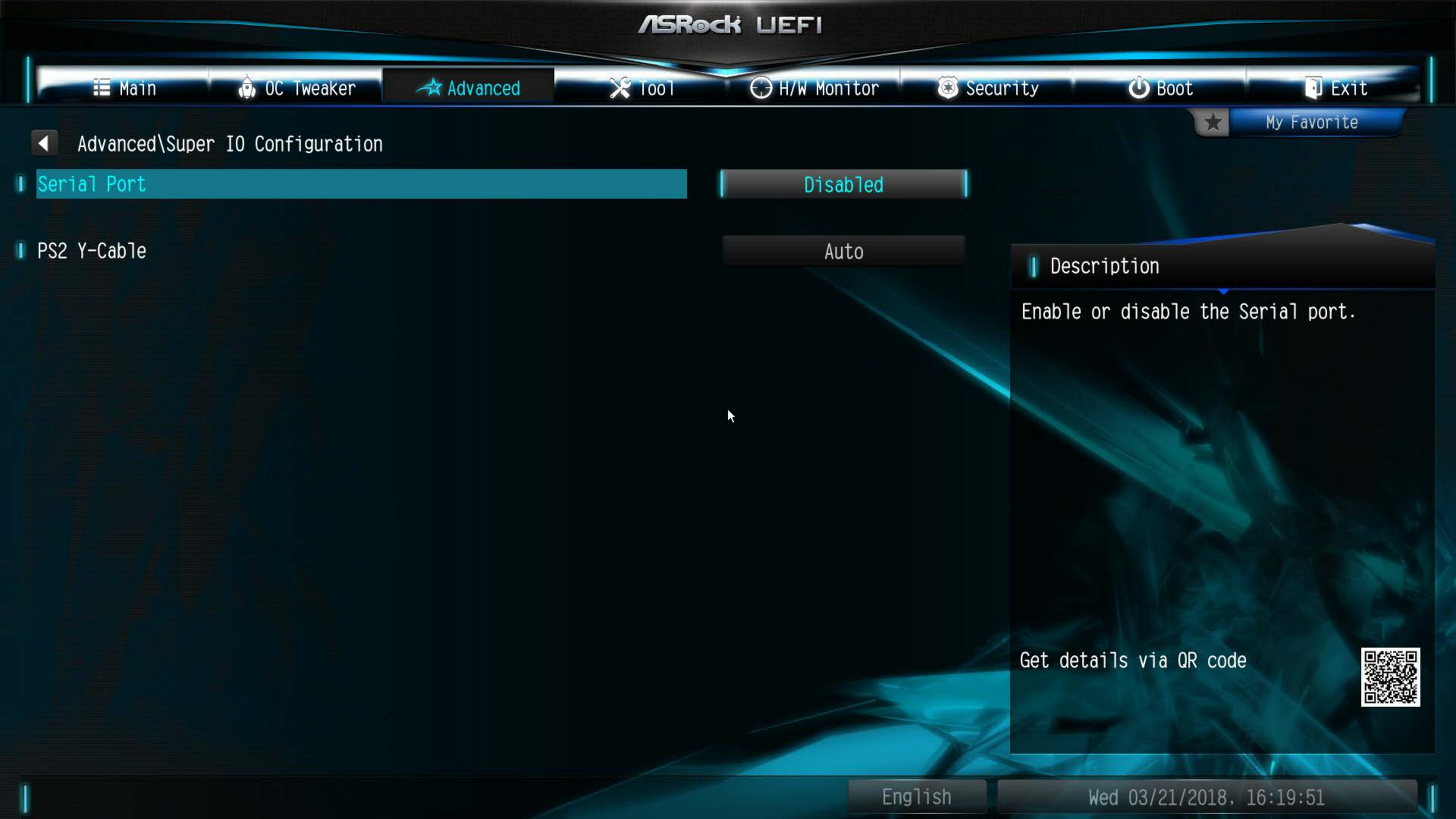
S_SATA3 Storage Configuration

Description

S.M.A.R.T stands for Self-Monitoring, Analysis, and Reporting Technology. It is a monitoring system for computer hard disk drives to detect and report on various indicators of reliability.

Get details via QR code


ASRock UEFI
Main
OC Tweaker
Advanced
Tool
H/W Monitor
Security
Boot
Exit
My Favorite
Advanced\Storage Configuration\SATA3 Storage Configuration
SATA Controller(s)
Enabled
SATA Mode Selection
AHCI
SATA Aggressive Link Power Management
Disabled
Description
Enable/disable the SATA controllers.
Get details via QR code
English
Wed 03/21/2018, 16:19:44


ASRock UEFI
Main
OC Tweaker
Advanced
Tool
H/W Monitor
Security
Boot
Exit
My Favorite
Advanced\Super IO Configuration
Serial Port
Disabled
PS2 Y-Cable
Auto
Description
Enable or disable the Serial port.
Get details via QR code
English
Wed 03/21/2018, 16:19:51

ASRock UEFI
Main
OC Tweaker
Advanced
Tool
H/W Monitor
Security
Boot
Exit
My Favorite
Advanced\ACPI Configuration
Suspend to RAM
Auto
PS/2 Keyboard Power On
Disabled
Ring-In Power On
Disabled
RTC Alarm Power On
By OS
USB Keyboard/Remote Power On
Disabled
USB Mouse Power On
Disabled
PCIE Devices Power On
Disabled
Description
It is recommended to select auto for ACPI S3 power saving.
Get details via QR code
English
Wed 03/21/2018, 16:19:56

Advanced\USB Configuration

USB Controller	Enabled
Intel USB 3.0 Mode	Auto
Legacy USB Support	Enabled
Legacy USB 3 Support	Enabled
USB Compatibility Patch	Disabled

Description

Enable or disable all the USB ports.

Get details via QR code

Tool\HDD Saver

HDD Saver Technology	Enabled
Onboard SATA Power Switch (SATA_PWR_1)	Power On

Re-detect SATA Power Connection

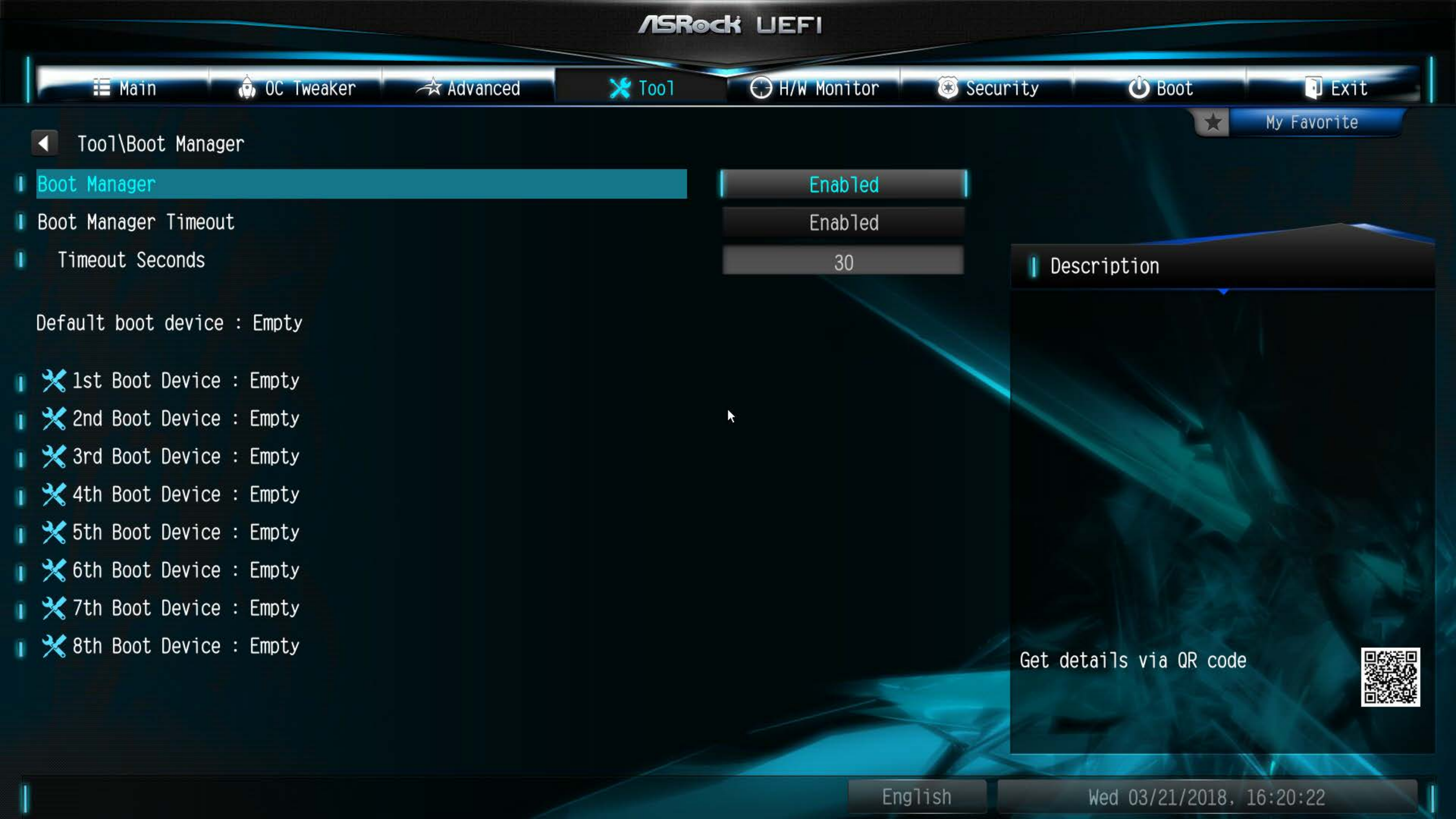
SATA_PWR_1

SATA3_0	: WDC WD10EARS-00Y5B1
SATA3_1	: ST31000524AS

Description

Set [Enabled] to switch on the HDD Saver. Set [Disabled] to switch off the HDD Saver. It is recommended to enable the AHCI Mode for fully supporting the HDD Saver. You can also enable/disable the HDD Saver via the HDD Saver application under your OS.

Get details via QR code


ASRock UEFI
Main
OC Tweaker
Advanced
Tool
H/W Monitor
Security
Boot
Exit
My Favorite
Tool\Boot Manager
Boot Manager
Enabled
Boot Manager Timeout
Enabled
Timeout Seconds
30
Default boot device : Empty
1st Boot Device : Empty
2nd Boot Device : Empty
3rd Boot Device : Empty
4th Boot Device : Empty
5th Boot Device : Empty
6th Boot Device : Empty
7th Boot Device : Empty
8th Boot Device : Empty
Description
Get details via QR code
English
Wed 03/21/2018, 16:20:22

ASRock UEFI

Main | OC Tweaker | Advanced | Tool | H/W Monitor | Security | Boot | Exit

My Favorite

Boot Option Priorities

Boot Option #1	os x (: INTEL SSDPEKK...
Boot Option #2	Disabled
Boot Option #3	Disabled
Boot Option #4	Disabled
Fast Boot	Disabled
Boot From Onboard LAN	Disabled
Setup Prompt Timeout	1
Bootup Num-Lock	On
Boot Beep	Disabled
Full Screen Logo	Enabled
AddOn ROM Display	Enabled

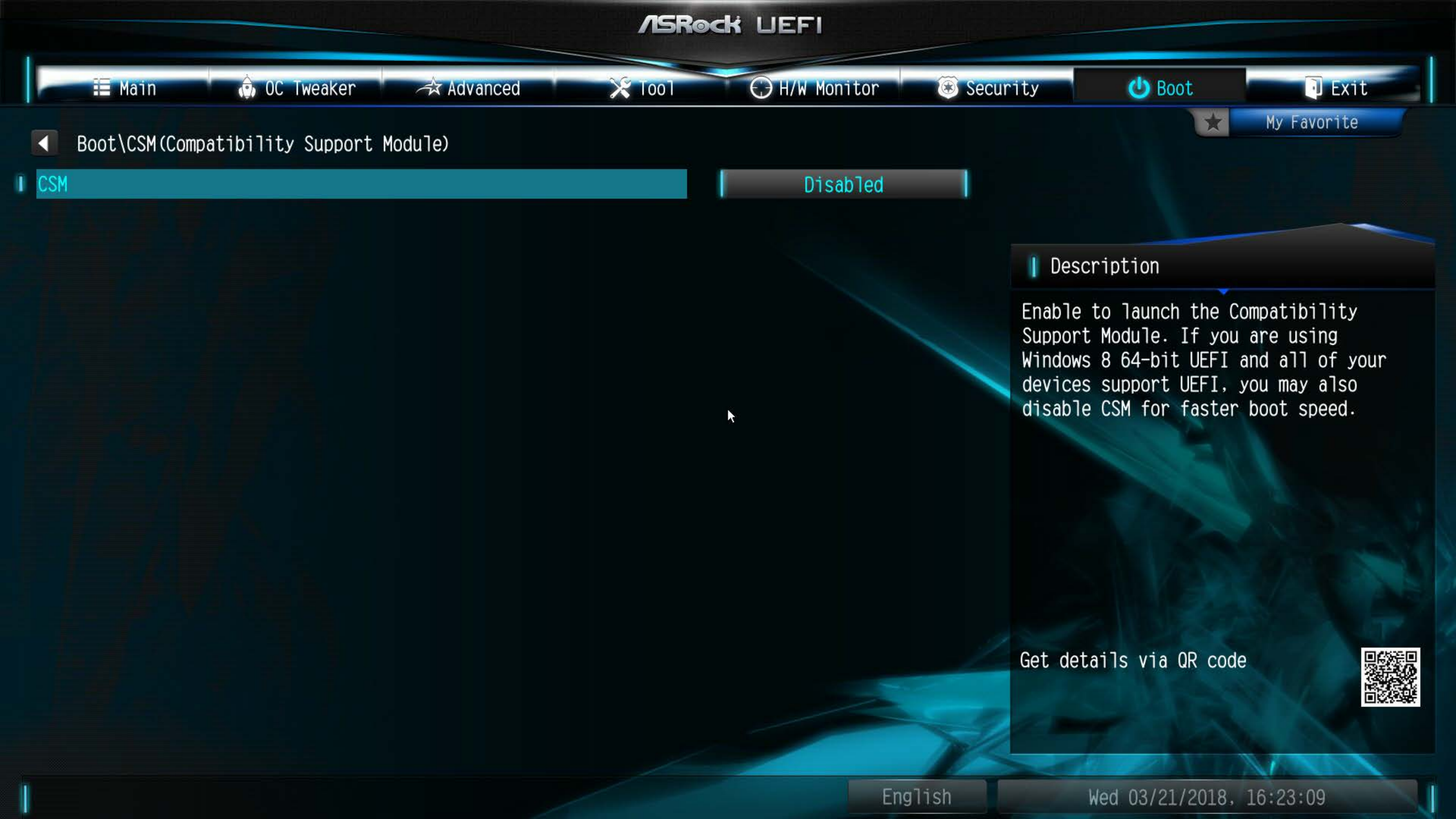
Description

Sets the system boot order

Get details via QR code

English

Wed 03/21/2018, 16:22:54


ASRock UEFI
Main
OC Tweaker
Advanced
Tool
H/W Monitor
Security
Boot
Exit
My Favorite
Boot\CSM(Compatibility Support Module)
CSM
Disabled
Description
Enable to launch the Compatibility Support Module. If you are using Windows 8 64-bit UEFI and all of your devices support UEFI, you may also disable CSM for faster boot speed.
Get details via QR code
English
Wed 03/21/2018, 16:23:09