



OpenCore

Reference Manual (0.8.0.1)

[2022.04.25]

Note: In order for Aquantia cards to properly function, `DisableIoMapper` must be disabled, DMAR ACPI table must not be dropped, and VT-d must be enabled in BIOS.

Note 2: While this patch should enable ethernet support for all Aquantia AQtion series, it has only been tested on AQC-107s based 10GbE network cards.

Note 3: To address AppleVTD incompatibilities after applying this quirk, the Reserved Memory Region section of the corresponding device in the DMAR ACPI table might be removed. This table should be disassembled and edited, then recompiled to AML with tool iASL. For the patched DMAR table to be added, the original one should be deleted. More details can be found at comment on commit 2441455.

13. ForceSecureBootScheme

Type: plist boolean

Failsafe: false

Requirement: 11

Description: Force x86 scheme for IMG4 verification.

Note: This option is required on virtual machines when using `SecureBootModel` different from `x86legacy`.

14. IncreasePciBarSize

Type: plist boolean

Failsafe: false

Requirement: 10.10

Description: Allows IOPCIFamily to boot with 2 GB PCI BARs.

Normally macOS restricts PCI BARs to 1 GB. Enabling this option (still) does not let macOS actually use PCI devices with larger BARs.

Note: This option should be avoided whenever possible. A need for this option indicates misconfigured or defective firmware.

15. LapicKernelPanic

Type: plist boolean

Failsafe: false

Requirement: 10.6 (64-bit)

Description: Disables kernel panic on LAPIC interrupts.

16. LegacyCommpage

Type: plist boolean

Failsafe: false

Requirement: 10.4 - 10.6

Description: Replaces the default 64-bit commpage bcopy implementation with one that does not require SSSE3, useful for legacy platforms. This prevents a `commpage no match for last panic` due to no available 64-bit bcopy functions that do not require SSSE3.

17. PanicNoKextDump

Type: plist boolean

Failsafe: false

Requirement: 10.13 (not required for older)

Description: Prevent kernel from printing kext dump in the panic log preventing from observing panic details. Affects 10.13 and above.

18. PowerTimeoutKernelPanic

Type: plist boolean

Failsafe: false

Requirement: 10.15 (not required for older)

Description: Disables kernel panic on `setPowerState` timeout.

An additional security measure was added to macOS Catalina (10.15) causing kernel panic on power change timeout for Apple drivers. Sometimes it may cause issues on misconfigured hardware, notably digital audio, which sometimes fails to wake up. For debug kernels `setpowerstate_panic=0` boot argument should be used, which is otherwise equivalent to this quirk.

- (g) As the `Default` value will increase with time to support the latest major released operating system, it is not recommended to use the `ApECID` and the `Default` settings together.
- (h) Installing macOS with Apple Secure Boot enabled is not possible while using HFS+ target volumes. This may include HFS+ formatted drives when no spare APFS drive is available.

The installed operating system may have sometimes outdated Apple Secure Boot manifests on the `Preboot` partition, resulting in boot failures. This is likely to be the case when an “OCB: Apple Secure Boot prohibits this boot entry, enforcing!” message is logged.

When this happens, either reinstall the operating system or copy the manifests (files with `.im4m` extension, such as `boot.efi.j137.im4m`) from `/usr/standalone/i386` to `/Volumes/Preboot/<UUID>/System/Library/CoreServices`. Here, `<UUID>` is the system volume identifier. On HFS+ installations, the manifests should be copied to `/System/Library/CoreServices` on the system volume.

For more details on how to configure Apple Secure Boot with UEFI Secure Boot, refer to the UEFI Secure Boot section.

8.6 Serial Properties

1. Custom

Type: `plist dict`

Description: Update serial port properties in `BaseSerialPortLib16550`.

This section lists the PCD values that are used by the `BaseSerialPortLib16550`. When option `Override` is set to `false`, this dictionary is optional.

2. Init

Type: `plist boolean`

Failsafe: `false`

Description: Perform serial port initialisation.

This option will perform serial port initialisation within OpenCore prior to enabling (any) debug logging.

Refer to the `Debugging` section for details.

3. Override

Type: `plist boolean`

Failsafe: `false`

Description: Override serial port properties. When this option is set to `false`, no keys from `Custom` will be overridden.

This option will override serial port properties listed in the `Serial Custom Properties` section below.

8.6.1 Serial Custom Properties

1. BaudRate

Type: `plist integer`

Failsafe: `115200`

Description: Set the baud rate for serial port.

This option will override the value of `gEfiMdeModulePkgTokenSpaceGuid.PcdSerialBaudRate` defined in `MdeModulePkg.dec`.

2. ClockRate

Type: `plist integer`

Failsafe: `1843200`

Description: Set the clock rate for serial port.

This option will override the value of `gEfiMdeModulePkgTokenSpaceGuid.PcdSerialClockRate` [defined in MdeModulePkg.dec](#).

3. [DetectCable](#)

Type: `plist boolean`