

# Spurious completions during NCQ with ahci/WDC WD1600BEVS-2

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This happens with all kernel from 2.6.21 up to today Linus's git.

From time to time, i am getting the following error in dmesg (more information follows):

```
ata1.00: exception Emask 0x2 SAct 0xffc SErr 0x0 action 0x2 frozen
ata1.00: spurious completions during NCQ issue=0x0 SAct=0xffc
FIS=004040a1:00040000
ata1.00: cmd 61/10:10:c8:c4:c8/00:00:11:00:00/40 tag 2 cdb 0x0 data 8192 out
res 40/00:5c:50:c7:80/00:00:12:00:00/40 Emask 0x2 (HSM violation)
ata1.00: cmd 61/08:18:e0:c4:c8/00:00:11:00:00/40 tag 3 cdb 0x0 data 4096 out
res 40/00:5c:50:c7:80/00:00:12:00:00/40 Emask 0x2 (HSM violation)
ata1.00: cmd 61/08:20:b0:8c:c9/00:00:11:00:00/40 tag 4 cdb 0x0 data 4096 out
res 40/00:5c:50:c7:80/00:00:12:00:00/40 Emask 0x2 (HSM violation)
ata1.00: cmd 61/08:28:d0:8c:c9/00:00:11:00:00/40 tag 5 cdb 0x0 data 4096 out
res 40/00:5c:50:c7:80/00:00:12:00:00/40 Emask 0x2 (HSM violation)
ata1.00: cmd 61/08:30:f8:fa:c9/00:00:11:00:00/40 tag 6 cdb 0x0 data 4096 out
res 40/00:5c:50:c7:80/00:00:12:00:00/40 Emask 0x2 (HSM violation)
ata1.00: cmd 61/08:38:90:c4:fc/00:00:11:00:00/40 tag 7 cdb 0x0 data 4096 out
res 40/00:5c:50:c7:80/00:00:12:00:00/40 Emask 0x2 (HSM violation)
ata1.00: cmd 61/08:40:e8:c4:fc/00:00:11:00:00/40 tag 8 cdb 0x0 data 4096 out
res 40/00:5c:50:c7:80/00:00:12:00:00/40 Emask 0x2 (HSM violation)
ata1.00: cmd 61/08:48:f8:c4:fc/00:00:11:00:00/40 tag 9 cdb 0x0 data 4096 out
res 40/00:5c:50:c7:80/00:00:12:00:00/40 Emask 0x2 (HSM violation)
ata1.00: cmd 61/10:50:f0:c6:80/00:00:12:00:00/40 tag 10 cdb 0x0 data 8192 out
res 40/00:5c:50:c7:80/00:00:12:00:00/40 Emask 0x2 (HSM violation)
ata1.00: cmd 61/08:58:50:c7:80/00:00:12:00:00/40 tag 11 cdb 0x0 data 4096 out
res 40/00:5c:50:c7:80/00:00:12:00:00/40 Emask 0x2 (HSM violation)
ata1: soft resetting port
ata1: SATA link up 1.5 Gbps (SStatus 113 SControl 300)
ata1.00: configured for UDMA/133
ata1: EH complete
sd 0:0:0:0: [sda] 312581808 512-byte hardware sectors (160042 MB)
sd 0:0:0:0: [sda] Write Protect is off
sd 0:0:0:0: [sda] Mode Sense: 00 3a 00 00
sd 0:0:0:0: [sda] Write cache: enabled, read cache: enabled, doesn't
support DPO or FUA
```

## Spurious completions during NCQ with ahci/WDC WD1600BEVS-2

```
$ sdparm -a -v /dev/sda:  
/dev/sda: ATA WDC WD1600BEVS-2 04.0  
Read write error recovery [0x1] mode page [PS=0]:  
AWRE 1  
ARRE 1  
TB 0  
RC 0  
EER 0  
PER 0  
DTE 0  
DCR 0  
RRC 0  
COR_S 0  
HOC 0  
DSOC 0  
WRC 0  
RTL 0
```

```
Disconnect-reconnect (SPC + transports) mode page [0x2] not supported  
Format (SBC) mode page [0x3] not supported  
Rigid disk (SBC) mode page [0x4] not supported  
Verify error recovery (SBC) mode page [0x7] not supported
```

```
Caching (SBC) [0x8] mode page [PS=0]:  
IC 0  
ABPF 0  
CAP 0  
DISC 0  
SIZE 0  
WCE 1  
MF 0  
RCD 0  
DRRP 0  
WRP 0  
DPTL 0  
MIPF 0  
MAPF 0  
MAPFC 0  
FSW 0  
LBCSS 0  
DRA 0  
NV_DIS 0  
NCS 0  
CSS 0  
Control [0xa] mode page [PS=0]:  
TST 0  
TMF_ONLY 0  
D_SENSE 0
```

## Spurious completions during NCQ with ahci/WDC WD1600BEVS-2

GLTSD 1  
RLEC 0  
QAM 0  
QERR 0  
RAC 0  
UA\_INTLCK 0  
SWP 0  
ATO 0  
TAS 0  
AUTOLOAD 0  
BTP -1  
ESTCT 30

Control extension mode subpage [0xa,0x1] not supported  
SAT pATA control mode subpage [0xa,0xf1] not supported  
Power condition - old version mode page [0xd] not supported  
XOR control (SBC) mode page [0x10] not supported  
Protocol specific logical unit mode page [0x18] not supported  
Protocol specific port mode page [0x19] not supported  
Power condition mode page [0x1a] not supported  
Informational exceptions control mode page [0x1c] not supported  
Background control (SBC) mode subpage [0x1c,0x1] not supported

\$ lspci -vv -nn:

00:00.0 Host bridge [0600]: Intel Corporation Mobile Memory Controller  
Hub [8086:2a00] (rev 03)  
Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]  
Control: I/O- Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR+ FastB2B-  
Status: Cap+ 66MHz- UDF- FastB2B+ ParErr- DEVSEL=fast >TAbort-  
<TAbort- <MAbort+ >SERR- <PERR-  
Latency: 0  
Capabilities: [e0] Vendor Specific Information

00:02.0 VGA compatible controller [0300]: Intel Corporation Mobile  
Integrated Graphics Controller [8086:2a02] (rev 03) (prog-if 00 [VGA])  
Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]  
Control: I/O+ Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR- FastB2B-  
Status: Cap+ 66MHz- UDF- FastB2B+ ParErr- DEVSEL=fast >TAbort-  
<TAbort- <MAbort- >SERR- <PERR-  
Latency: 0  
Interrupt: pin A routed to IRQ 16  
Region 0: Memory at fc000000 (64-bit, non-prefetchable) [size=1M]  
Region 2: Memory at d0000000 (64-bit, prefetchable) [size=256M]  
Region 4: I/O ports at 1800 [size=8]  
Capabilities: [90] Message Signalled Interrupts: Mask- 64bit-  
Queue=0/0 Enable-

## Spurious completions during NCQ with ahci/WDC WD1600BEVS-2

Address: 00000000 Data: 0000  
Capabilities: [d0] Power Management version 3  
Flags: PMEClk- DSI+ D1- D2- AuxCurrent=0mA  
PME(D0-,D1-,D2-,D3hot-,D3cold-)  
Status: D0 PME-Enable- DSel=0 DScale=0 PME-  
Bridge: PM- B3+

00:02.1 Display controller [0380]: Intel Corporation Mobile Integrated  
Graphics Controller [8086:2a03] (rev 03)  
Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]  
Control: I/O+ Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR- FastB2B-  
Status: Cap+ 66MHz- UDF- FastB2B+ ParErr- DEVSEL=fast >TAbort-  
<TAbort- <MAbort- >SERR- <PERR-  
Latency: 0  
Region 0: Memory at fc100000 (64-bit, non-prefetchable) [size=1M]  
Capabilities: [d0] Power Management version 3  
Flags: PMEClk- DSI+ D1- D2- AuxCurrent=0mA  
PME(D0-,D1-,D2-,D3hot-,D3cold-)  
Status: D0 PME-Enable- DSel=0 DScale=0 PME-  
Bridge: PM- B3+

00:1a.0 USB Controller [0c03]: Intel Corporation 82801H (ICH8 Family)  
USB UHCI Controller #4 [8086:2834] (rev 03) (prog-if 00 [UHCI])  
Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]  
Control: I/O+ Mem- BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR- FastB2B-  
Status: Cap- 66MHz- UDF- FastB2B+ ParErr- DEVSEL=medium  
  
TAbort- <TAbort- <MAbort- >SERR- <PERR-

Latency: 0  
Interrupt: pin A routed to IRQ 20  
Region 4: I/O ports at 1820 [size=32]

00:1a.1 USB Controller [0c03]: Intel Corporation 82801H (ICH8 Family)  
USB UHCI Controller #5 [8086:2835] (rev 03) (prog-if 00 [UHCI])  
Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]  
Control: I/O+ Mem- BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR- FastB2B-  
Status: Cap- 66MHz- UDF- FastB2B+ ParErr- DEVSEL=medium

TAbort- <TAbort- <MAbort- >SERR- <PERR-

Latency: 0  
Interrupt: pin B routed to IRQ 21  
Region 4: I/O ports at 1840 [size=32]

00:1a.7 USB Controller [0c03]: Intel Corporation 82801H (ICH8 Family)  
USB2 EHCI Controller #2 [8086:283a] (rev 03) (prog-if 20 [EHCI])  
Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]

Spurious completions during NCQ with ahci/WDC WD1600BEVS-2

## Spurious completions during NCQ with ahci/WDC WD1600BEVS-2

Control: I/O- Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR+ FastB2B-  
Status: Cap+ 66MHz- UDF- FastB2B+ ParErr- DEVSEL=medium

TAbsort- <TAbsort- <MAbsort- >SERR- <PERR-

Latency: 0

Interrupt: pin C routed to IRQ 20

Region 0: Memory at fc504800 (32-bit, non-prefetchable) [size=1K]

Capabilities: [50] Power Management version 2

Flags: PMEClk- DSI- D1- D2- AuxCurrent=375mA

PME(D0+,D1-,D2-,D3hot+,D3cold+)

Status: D0 PME-Enable- DSel=0 DScale=0 PME-

Capabilities: [58] Debug port

00:1b.0 Audio device [0403]: Intel Corporation 82801H (ICH8 Family) HD  
Audio Controller [8086:284b] (rev 03)

Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]

Control: I/O- Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR+ FastB2B-

Status: Cap+ 66MHz- UDF- FastB2B- ParErr- DEVSEL=fast >TAbsort-  
<TAbsort- <MAbsort- >SERR- <PERR-

Latency: 0, Cache Line Size: 64 bytes

Interrupt: pin A routed to IRQ 22

Region 0: Memory at fc300000 (64-bit, non-prefetchable) [size=16K]

Capabilities: [50] Power Management version 2

Flags: PMEClk- DSI- D1- D2- AuxCurrent=55mA

PME(D0+,D1-,D2-,D3hot+,D3cold+)

Status: D0 PME-Enable- DSel=0 DScale=0 PME-

Capabilities: [60] Message Signalled Interrupts: Mask- 64bit+  
Queue=0/0 Enable-

Address: 0000000000000000 Data: 0000

Capabilities: [70] Express Unknown type IRQ 0

Device: Supported: MaxPayload 128 bytes, PhantFunc 0, ExtTag-

Device: Latency L0s <64ns, L1 <1us

Device: Errors: Correctable- Non-Fatal- Fatal- Unsupported-

Device: RlxdOrd- ExtTag- PhantFunc- AuxPwr- NoSnoop+

Device: MaxPayload 128 bytes, MaxReadReq 128 bytes

Link: Supported Speed unknown, Width x0, ASPM unknown, Port 0

Link: Latency L0s <64ns, L1 <1us

Link: ASPM Disabled CommClk- ExtSynch-

Link: Speed unknown, Width x0

Capabilities: [100] Virtual Channel

Capabilities: [130] Unknown (5)

00:1c.0 PCI bridge [0604]: Intel Corporation 82801H (ICH8 Family) PCI  
Express Port 1 [8086:283f] (rev 03) (prog-if 00 [Normal decode])

Control: I/O+ Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR- FastB2B-

Status: Cap+ 66MHz- UDF- FastB2B- ParErr- DEVSEL=fast >TAbsort-  
<TAbsort- <MAbsort- >SERR- <PERR-

## Spurious completions during NCQ with ahci/WDC WD1600BEVS-2

Latency: 0, Cache Line Size: 64 bytes  
Bus: primary=00, secondary=02, subordinate=03, sec-latency=0  
I/O behind bridge: 00002000-00002fff  
Memory behind bridge: f6000000-f7ffffff  
Prefetchable memory behind bridge: 00000000f0000000-00000000f1ffffff  
Secondary status: 66MHz- FastB2B- ParErr- DEVSEL=fast >TAbort-  
<TAbort- <MAbort- <SERR- <PERR-  
BridgeCtl: Parity- SERR- NoISA+ VGA- MAbort- >Reset- FastB2B-  
Capabilities: [40] Express Root Port (Slot+) IRQ 0  
Device: Supported: MaxPayload 128 bytes, PhantFunc 0, ExtTag-  
Device: Latency L0s unlimited, L1 unlimited  
Device: Errors: Correctable+ Non-Fatal+ Fatal+ Unsupported+  
Device: RlxdOrd- ExtTag- PhantFunc- AuxPwr- NoSnoop-  
Device: MaxPayload 128 bytes, MaxReadReq 128 bytes  
Link: Supported Speed 2.5Gb/s, Width x1, ASPM L0s L1, Port 1  
Link: Latency L0s <256ns, L1 <4us  
Link: ASPM L0s L1 Enabled RCB 64 bytes CommClk+ ExtSynch-  
Link: Speed 2.5Gb/s, Width x1  
Slot: AtnBtn- PwrCtrl- MRL- AtnInd- PwrInd- HotPlug+ Surprise+  
Slot: Number 2, PowerLimit 6.500000  
Slot: Enabled AtnBtn- PwrFlt- MRL- PresDet+ CmdCplt- HPIrq-  
Slot: AttnInd Unknown, PwrInd Unknown, Power-  
Root: Correctable- Non-Fatal- Fatal- PME-  
Capabilities: [80] Message Signalled Interrupts: Mask- 64bit-  
Queue=0/0 Enable+  
Address: fee0300c Data: 4169  
Capabilities: [90] Subsystem: Acer Incorporated [ALI] Unknown  
device [1025:011f]  
Capabilities: [a0] Power Management version 2  
Flags: PMEClk- DSI- D1- D2- AuxCurrent=0mA  
PME(D0+,D1-,D2-,D3hot+,D3cold+)  
Status: D0 PME-Enable- DSel=0 DScale=0 PME-  
Capabilities: [100] Virtual Channel  
Capabilities: [180] Unknown (5)

00:1c.1 PCI bridge [0604]: Intel Corporation 82801H (ICH8 Family) PCI  
Express Port 2 [8086:2841] (rev 03) (prog-if 00 [Normal decode])  
Control: I/O+ Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR+ FastB2B-  
Status: Cap+ 66MHz- UDF- FastB2B- ParErr- DEVSEL=fast >TAbort-  
<TAbort- <MAbort- >SERR- <PERR-  
Latency: 0, Cache Line Size: 64 bytes  
Bus: primary=00, secondary=04, subordinate=05, sec-latency=0  
I/O behind bridge: 00003000-00003fff  
Memory behind bridge: f8000000-f9ffffff  
Prefetchable memory behind bridge: 00000000f2000000-00000000f3ffffff  
Secondary status: 66MHz- FastB2B- ParErr- DEVSEL=fast >TAbort-  
<TAbort- <MAbort- <SERR- <PERR-  
BridgeCtl: Parity- SERR- NoISA+ VGA- MAbort- >Reset- FastB2B-  
Capabilities: [40] Express Root Port (Slot+) IRQ 0  
Device: Supported: MaxPayload 128 bytes, PhantFunc 0, ExtTag-

## Spurious completions during NCQ with ahci/WDC WD1600BEVS-2

Device: Latency L0s unlimited, L1 unlimited  
Device: Errors: Correctable+ Non-Fatal+ Fatal+ Unsupported+  
Device: RlxdOrd- ExtTag- PhantFunc- AuxPwr- NoSnoop-  
Device: MaxPayload 128 bytes, MaxReadReq 128 bytes  
Link: Supported Speed 2.5Gb/s, Width x1, ASPM L0s L1, Port 2  
Link: Latency L0s <256ns, L1 <4us  
Link: ASPM L1 Enabled RCB 64 bytes CommClk+ ExtSynch-  
Link: Speed 2.5Gb/s, Width x1  
Slot: AtnBtn- PwrCtrl- MRL- AtnInd- PwrInd- HotPlug+ Surprise+  
Slot: Number 3, PowerLimit 6.500000  
Slot: Enabled AtnBtn- PwrFlt- MRL- PresDet+ CmdCplt- HPIrq-  
Slot: AttnInd Unknown, PwrInd Unknown, Power-  
Root: Correctable- Non-Fatal- Fatal- PME-  
Capabilities: [80] Message Signalled Interrupts: Mask- 64bit-  
Queue=0/0 Enable+  
Address: fee0300c Data: 4171  
Capabilities: [90] Subsystem: Acer Incorporated [ALI] Unknown  
device [1025:011f]  
Capabilities: [a0] Power Management version 2  
Flags: PMEClk- DSI- D1- D2- AuxCurrent=0mA  
PME(D0+,D1-,D2-,D3hot+,D3cold+)  
Status: D0 PME-Enable- DSel=0 DScale=0 PME-  
Capabilities: [100] Virtual Channel  
Capabilities: [180] Unknown (5)

00:1c.2 PCI bridge [0604]: Intel Corporation 82801H (ICH8 Family) PCI  
Express Port 3 [8086:2843] (rev 03) (prog-if 00 [Normal decode])  
Control: I/O+ Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR+ FastB2B-  
Status: Cap+ 66MHz- UDF- FastB2B- ParErr- DEVSEL=fast >TAbort-  
<TAbort- <MAbort- >SERR- <PERR-  
Latency: 0, Cache Line Size: 64 bytes  
Bus: primary=00, secondary=06, subordinate=07, sec-latency=0  
I/O behind bridge: 00004000-00004fff  
Memory behind bridge: fa000000-fbffffff  
Prefetchable memory behind bridge: 00000000f4000000-00000000f5ffffff  
Secondary status: 66MHz- FastB2B- ParErr- DEVSEL=fast >TAbort-  
<TAbort- <MAbort- <SERR- <PERR-  
BridgeCtl: Parity- SERR- NoISA+ VGA- MAbort- >Reset- FastB2B-  
Capabilities: [40] Express Root Port (Slot+) IRQ 0  
Device: Supported: MaxPayload 128 bytes, PhantFunc 0, ExtTag-  
Device: Latency L0s unlimited, L1 unlimited  
Device: Errors: Correctable+ Non-Fatal+ Fatal+ Unsupported+  
Device: RlxdOrd- ExtTag- PhantFunc- AuxPwr- NoSnoop-  
Device: MaxPayload 128 bytes, MaxReadReq 128 bytes  
Link: Supported Speed 2.5Gb/s, Width x1, ASPM L0s L1, Port 3  
Link: Latency L0s <1us, L1 <4us  
Link: ASPM Disabled RCB 64 bytes CommClk- ExtSynch-  
Link: Speed 2.5Gb/s, Width x0  
Slot: AtnBtn- PwrCtrl- MRL- AtnInd- PwrInd- HotPlug+ Surprise+  
Slot: Number 4, PowerLimit 6.500000

## Spurious completions during NCQ with ahci/WDC WD1600BEVS-2

Slot: Enabled AtnBtn- PwrFlt- MRL- PresDet+ CmdCplt- HPIrq-  
Slot: AttnInd Unknown, PwrInd Unknown, Power-  
Root: Correctable- Non-Fatal- Fatal- PME-  
Capabilities: [80] Message Signalled Interrupts: Mask- 64bit-  
Queue=0/0 Enable+  
Address: fee0300c Data: 4179  
Capabilities: [90] Subsystem: Acer Incorporated [ALI] Unknown  
device [1025:011f]  
Capabilities: [a0] Power Management version 2  
Flags: PMEClk- DSI- D1- D2- AuxCurrent=0mA  
PME(D0+,D1-,D2-,D3hot+,D3cold+)  
Status: D0 PME-Enable- DSel=0 DScale=0 PME-  
Capabilities: [100] Virtual Channel  
Capabilities: [180] Unknown (5)

00:1d.0 USB Controller [0c03]: Intel Corporation 82801H (ICH8 Family)  
USB UHCI Controller #1 [8086:2830] (rev 03) (prog-if 00 [UHCI])  
Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]  
Control: I/O+ Mem- BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR- FastB2B-  
Status: Cap- 66MHz- UDF- FastB2B+ ParErr- DEVSEL=medium

TAbsort- <TAbsort- <MAbsort- >SERR- <PERR-

Latency: 0  
Interrupt: pin A routed to IRQ 23  
Region 4: I/O ports at 1860 [size=32]

00:1d.1 USB Controller [0c03]: Intel Corporation 82801H (ICH8 Family)  
USB UHCI Controller #2 [8086:2831] (rev 03) (prog-if 00 [UHCI])  
Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]  
Control: I/O+ Mem- BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR- FastB2B-  
Status: Cap- 66MHz- UDF- FastB2B+ ParErr- DEVSEL=medium

TAbsort- <TAbsort- <MAbsort- >SERR- <PERR-

Latency: 0  
Interrupt: pin B routed to IRQ 17  
Region 4: I/O ports at 1880 [size=32]

00:1d.2 USB Controller [0c03]: Intel Corporation 82801H (ICH8 Family)  
USB UHCI Controller #3 [8086:2832] (rev 03) (prog-if 00 [UHCI])  
Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]  
Control: I/O+ Mem- BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR- FastB2B-  
Status: Cap- 66MHz- UDF- FastB2B+ ParErr- DEVSEL=medium

TAbsort- <TAbsort- <MAbsort- >SERR- <PERR-

Spurious completions during NCQ with ahci/WDC WD1600BEVS-2

Latency: 0  
Interrupt: pin C routed to IRQ 18  
Region 4: I/O ports at 18a0 [size=32]

00:1d.7 USB Controller [0c03]: Intel Corporation 82801H (ICH8 Family)  
USB2 EHCI Controller #1 [8086:2836] (rev 03) (prog-if 20 [EHCI])  
Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]  
Control: I/O- Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR+ FastB2B-  
Status: Cap+ 66MHz- UDF- FastB2B+ ParErr- DEVSEL=medium

TAbort- <TAbort- <MAbort- >SERR- <PERR-

Latency: 0  
Interrupt: pin A routed to IRQ 23  
Region 0: Memory at fc504c00 (32-bit, non-prefetchable) [size=1K]  
Capabilities: [50] Power Management version 2  
Flags: PMEClk- DSI- D1- D2- AuxCurrent=375mA  
PME(D0+,D1-,D2-,D3hot+,D3cold+)  
Status: D0 PME-Enable- DSel=0 DScale=0 PME-  
Capabilities: [58] Debug port

00:1e.0 PCI bridge [0604]: Intel Corporation 82801 Mobile PCI Bridge  
[8086:2448] (rev f3) (prog-if 01 [Subtractive decode])  
Control: I/O+ Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR+ FastB2B-  
Status: Cap+ 66MHz- UDF- FastB2B- ParErr- DEVSEL=fast >TAbort-  
<TAbort- <MAbort- >SERR- <PERR-

Latency: 0  
Bus: primary=00, secondary=0f, subordinate=13, sec-latency=56  
I/O behind bridge: 00005000-00005fff  
Memory behind bridge: fc200000-fc2fffff  
Prefetchable memory behind bridge: 0000000050000000-0000000053fffff  
Secondary status: 66MHz- FastB2B+ ParErr- DEVSEL=medium

TAbort- <TAbort- <MAbort+ <SERR- <PERR-

BridgeCtl: Parity- SERR- NoISA+ VGA- MAbort- >Reset- FastB2B-  
Capabilities: [50] Subsystem: Gammagraphx, Inc. Unknown device  
[0000:0000]

00:1f.0 ISA bridge [0601]: Intel Corporation Mobile LPC Interface  
Controller [8086:2815] (rev 03)  
Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]  
Control: I/O+ Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR+ FastB2B-  
Status: Cap+ 66MHz- UDF- FastB2B- ParErr- DEVSEL=medium

TAbort- <TAbort- <MAbort- >SERR- <PERR-

## Spurious completions during NCQ with ahci/WDC WD1600BEVS-2

Latency: 0

Capabilities: [e0] Vendor Specific Information

00:1f.1 IDE interface [0101]: Intel Corporation Mobile IDE Controller

[8086:2850] (rev 03) (prog-if 8a [Master SecP PriP])

Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]

Control: I/O+ Mem- BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR- FastB2B-

Status: Cap- 66MHz- UDF- FastB2B+ ParErr- DEVSEL=medium

TAbsort- <TAbsort- <MAbsort- >SERR- <PERR-

Latency: 0

Interrupt: pin A routed to IRQ 19

Region 0: I/O ports at 01f0 [size=8]

Region 1: I/O ports at 03f4 [size=1]

Region 2: I/O ports at 0170 [size=8]

Region 3: I/O ports at 0374 [size=1]

Region 4: I/O ports at 1810 [size=16]

00:1f.2 SATA controller [0106]: Intel Corporation Mobile SATA AHCI

Controller [8086:2829] (rev 03) (prog-if 01 [AHCI 1.0])

Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]

Control: I/O+ Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR- FastB2B-

Status: Cap+ 66MHz+ UDF- FastB2B+ ParErr- DEVSEL=medium

TAbsort- <TAbsort- <MAbsort- >SERR- <PERR-

Latency: 0

Interrupt: pin B routed to IRQ 2300

Region 0: I/O ports at 1c00 [size=8]

Region 1: I/O ports at 18d4 [size=4]

Region 2: I/O ports at 18d8 [size=8]

Region 3: I/O ports at 18d0 [size=4]

Region 4: I/O ports at 18e0 [size=32]

Region 5: Memory at fc504000 (32-bit, non-prefetchable) [size=2K]

Capabilities: [80] Message Signalled Interrupts: Mask- 64bit-

Queue=0/2 Enable+

Address: fee0100c Data: 00a1

Capabilities: [70] Power Management version 3

Flags: PMEClk- DSI- D1- D2- AuxCurrent=0mA

PME(D0-,D1-,D2-,D3hot+,D3cold-)

Status: D0 PME-Enable- DSel=0 DScale=0 PME-

Capabilities: [a8] #12 [0010]

00:1f.3 SMBus [0c05]: Intel Corporation 82801H (ICH8 Family) SMBus

Controller [8086:283e] (rev 03)

Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]

Control: I/O+ Mem+ BusMaster- SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR+ FastB2B-

## Spurious completions during NCQ with ahci/WDC WD1600BEVS-2

Status: Cap- 66MHz- UDF- FastB2B+ ParErr- DEVSEL=medium

TAbort- <TAbort- <MAbort- >SERR- <PERR-

Interrupt: pin C routed to IRQ 19

Region 0: Memory at 54000000 (32-bit, non-prefetchable) [size=256]

Region 4: I/O ports at 1c20 [size=32]

02:00.0 Ethernet controller [0200]: Broadcom Corporation NetLink

BCM5787M Gigabit Ethernet PCI Express [14e4:1693] (rev 02)

Subsystem: Acer Incorporated [ALI] Unknown device [1025:011c]

Control: I/O- Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR+ FastB2B-

Status: Cap+ 66MHz- UDF- FastB2B- ParErr- DEVSEL=fast >TAbort-  
<TAbort- <MAbort- >SERR- <PERR-

Latency: 0, Cache Line Size: 64 bytes

Interrupt: pin A routed to IRQ 16

Region 0: Memory at f6000000 (64-bit, non-prefetchable) [size=64K]

Expansion ROM at <ignored> [disabled]

Capabilities: [48] Power Management version 3

Flags: PMEClk- DSI- D1- D2- AuxCurrent=0mA

PME(D0-,D1-,D2-,D3hot+,D3cold+)

Status: D3 PME-Enable+ DSel=0 DScale=1 PME-

Capabilities: [50] Vital Product Data

Capabilities: [58] Vendor Specific Information

Capabilities: [e8] Message Signalled Interrupts: Mask- 64bit+  
Queue=0/0 Enable-

Address: 00000000fee0200c Data: 41a9

Capabilities: [d0] Express Endpoint IRQ 0

Device: Supported: MaxPayload 128 bytes, PhantFunc 0, ExtTag+

Device: Latency L0s <4us, L1 unlimited

Device: AtnBtn- AtnInd- PwrInd-

Device: Errors: Correctable- Non-Fatal- Fatal- Unsupported-

Device: RlxdOrd- ExtTag- PhantFunc- AuxPwr- NoSnoop-

Device: MaxPayload 128 bytes, MaxReadReq 4096 bytes

Link: Supported Speed 2.5Gb/s, Width x1, ASPM L0s L1, Port 0

Link: Latency L0s <4us, L1 <64us

Link: ASPM L0s L1 Enabled RCB 64 bytes CommClk+ ExtSynch-

Link: Speed 2.5Gb/s, Width x1

Capabilities: [100] Advanced Error Reporting

Capabilities: [13c] Virtual Channel

Capabilities: [160] Device Serial Number 94-0b-57-fe-ff-d3-16-00

04:00.0 Network controller [0280]: Intel Corporation PRO/Wireless

3945ABG Network Connection [8086:4222] (rev 02)

Subsystem: Intel Corporation Unknown device [8086:1001]

Control: I/O- Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR+ FastB2B-

Status: Cap+ 66MHz- UDF- FastB2B- ParErr- DEVSEL=fast >TAbort-  
<TAbort- <MAbort- >SERR- <PERR-

Latency: 0, Cache Line Size: 64 bytes

Spurious completions during NCQ with ahci/WDC WD1600BEVS-2

## Spurious completions during NCQ with ahci/WDC WD1600BEVS-2

Interrupt: pin A routed to IRQ 2299  
Region 0: Memory at f8000000 (32-bit, non-prefetchable) [size=4K]  
Capabilities: [c8] Power Management version 2  
Flags: PMEClk- DSI+ D1- D2- AuxCurrent=0mA  
PME(D0+,D1-,D2-,D3hot+,D3cold+)  
Status: D0 PME-Enable- DSel=0 DScale=0 PME-  
Capabilities: [d0] Message Signalled Interrupts: Mask- 64bit+  
Queue=0/0 Enable+  
Address: 00000000fee0300c Data: 41b1  
Capabilities: [e0] Express Legacy Endpoint IRQ 0  
Device: Supported: MaxPayload 128 bytes, PhantFunc 0, ExtTag-  
Device: Latency L0s <512ns, L1 unlimited  
Device: AtnBtn- AtnInd- PwrInd-  
Device: Errors: Correctable- Non-Fatal- Fatal- Unsupported-  
Device: RlxdOrd+ ExtTag- PhantFunc- AuxPwr- NoSnoop+  
Device: MaxPayload 128 bytes, MaxReadReq 128 bytes  
Link: Supported Speed 2.5Gb/s, Width x1, ASPM L0s L1, Port 0  
Link: Latency L0s <128ns, L1 <64us  
Link: ASPM L1 Enabled RCB 64 bytes CommClk+ ExtSynch-  
Link: Speed 2.5Gb/s, Width x1  
Capabilities: [100] Advanced Error Reporting  
Capabilities: [140] Device Serial Number 7a-2e-33-ff-ff-d2-19-00

0f:06.0 CardBus bridge [0607]: Texas Instruments PCIxx12 Cardbus  
Controller [104c:8039]  
Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]  
Control: I/O+ Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR- FastB2B-  
Status: Cap+ 66MHz- UDF- FastB2B- ParErr- DEVSEL=medium

TAabort- <TAabort- <MAabort- >SERR- <PERR-

Latency: 168, Cache Line Size: 64 bytes  
Interrupt: pin A routed to IRQ 22  
Region 0: Memory at fc204000 (32-bit, non-prefetchable) [size=4K]  
Bus: primary=0f, secondary=10, subordinate=13, sec-latency=176  
Memory window 0: 50000000-53fff000 (prefetchable)  
Memory window 1: 58000000-5bfff000  
I/O window 0: 00005000-000050ff  
I/O window 1: 00005400-000054ff  
BridgeCtl: Parity- SERR- ISA- VGA- MAabort- >Reset+ 16bInt+ PostWrite+  
16-bit legacy interface ports at 0001

0f:06.1 FireWire (IEEE 1394) [0c00]: Texas Instruments PCIxx12 OHCI  
Compliant IEEE 1394 Host Controller [104c:803a] (prog-if 10 [OHCI])  
Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]  
Control: I/O- Mem+ BusMaster+ SpecCycle- MemWINV+ VGASnoop-  
ParErr- Stepping- SERR+ FastB2B-  
Status: Cap+ 66MHz- UDF- FastB2B- ParErr- DEVSEL=medium

TAabort- <TAabort- <MAabort- >SERR- <PERR-

## Spurious completions during NCQ with ahci/WDC WD1600BEVS-2

Latency: 32 (500ns min, 1000ns max), Cache Line Size: 64 bytes  
Interrupt: pin A routed to IRQ 22  
Region 0: Memory at fc206000 (32-bit, non-prefetchable) [size=2K]  
Region 1: Memory at fc200000 (32-bit, non-prefetchable) [size=16K]  
Capabilities: [44] Power Management version 2  
Flags: PMEClk- DSI- D1+ D2+ AuxCurrent=0mA  
PME(D0+,D1+,D2+,D3hot+,D3cold-)  
Status: D0 PME-Enable- DSel=0 DScale=0 PME+

0f:06.2 Mass storage controller [0180]: Texas Instruments 5-in-1  
Multimedia Card Reader (SD/MMC/MS/MS PRO/xD) [104c:803b]  
Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]  
Control: I/O- Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR+ FastB2B-  
Status: Cap+ 66MHz- UDF- FastB2B- ParErr- DEVSEL=medium

TAbsort- <TAbsort- <MAbsort- >SERR- <PERR-

Latency: 57 (1750ns min, 1000ns max), Cache Line Size: 64 bytes  
Interrupt: pin A routed to IRQ 11  
Region 0: Memory at fc205000 (32-bit, non-prefetchable) [size=4K]  
Capabilities: [44] Power Management version 2  
Flags: PMEClk- DSI- D1+ D2+ AuxCurrent=0mA  
PME(D0+,D1+,D2+,D3hot+,D3cold-)  
Status: D0 PME-Enable- DSel=0 DScale=0 PME-

0f:06.3 Generic system peripheral [0805]: Texas Instruments PCIxx12  
SDA Standard Compliant SD Host Controller [104c:803c]  
Subsystem: Acer Incorporated [ALI] Unknown device [1025:011f]  
Control: I/O- Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop-  
ParErr- Stepping- SERR+ FastB2B-  
Status: Cap+ 66MHz- UDF- FastB2B- ParErr- DEVSEL=medium

TAbsort- <TAbsort- <MAbsort- >SERR- <PERR-

Latency: 57 (1750ns min, 1000ns max), Cache Line Size: 64 bytes  
Interrupt: pin A routed to IRQ 22  
Region 0: Memory at fc206800 (32-bit, non-prefetchable) [size=256]  
Capabilities: [80] Power Management version 2  
Flags: PMEClk- DSI- D1+ D2+ AuxCurrent=0mA  
PME(D0+,D1+,D2+,D3hot+,D3cold-)  
Status: D0 PME-Enable- DSel=0 DScale=0 PME-

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Ciao  
Maurizio  
<http://stregatto.wordpress.com>

"Well we all shine on  
Like the moon and the stars and the sun" (John Lennon)

## Spurious completions during NCQ with ahci/WDC WD1600BEVS-2

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