

8309

AViiON System Diagnostics Fault Codes

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Revision History

Revision	Date	Description
1.0	03/22/90	Initial Release
2.0	04/10/90	Added controller codes for additional sync boards
3.0	06/06/90	Added processor codes for montezuma and shotgun

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Fault codes will be in the following format:

aa-bb-cc-dd-eeee-ffff

where:

- aa: Processor type
- bb: Most probable failing CRU
- cc: Failing test
- dd: Failing controller or subsystem
- eeee: Failing target (if appl.)
- ffff: Errorcode

All values are in hex.

Processor Type:

- 00 - Not Applicable
- 10 - Monochrome Maverick
- 11 - Color Maverick
- 12 - Single CPU Maverick Plus
- 13 - Dual CPU Maverick Plus
- 14 - Single CPU Maverick Plus 25 MHZ
- 15 - Dual CPU Maverick Plus 25 MHZ
- 16 - Dual Async Color Maverick
- 17 - Dual Async Mono Maverick
- 18 - 33 MHZ Mono Maverick
- 19 - 33 MHZ Color Maverick
- 20 - Single CPU Topgun
- 21 - Dual CPU Topgun

- 23 - Single CPU 25 MHZ Topgun
- 24 - Dual CPU 25 MHZ Topgun
- 26 - Quad CPU Shotgun

Failing CRU:

- 00 - Not Applicable
- 01 - System Board
- 02 - Memory Module 0
- 03 - Memory Module 1
- 04 - Memory Module 2
- 05 - Memory Module 3
- 06 - Memory Module 4
- 07 - Memory Module 5
- 08 - Memory Module 6
- 09 - Controller
- 0A - SCSI Fuse
- 0B - Media
- 0C - Cable
- 0D - Drive (Tape or Disk)
- 0E - Transceiver
- 0F - Target Node
- 10 - Power Supply
- 11 - Printer
- 12 - Battery
- 13 - Memory Module 7
- 14 - Cluster Box

Failing Test:

- 00 - Not Applicable
- 01 - Memory Random Test
- 02 - Memory Retention Test
- 03 - CPU Test
- 04 - Multiple CPU Test
- 05 - Parallel Printer Test
- 06 - Duart Channel A Test
- 07 - Duart Channel B Test
- 08 - Clock
- 09 - Lan Internal Loopback Test
- 0A - Disk Test
- 0B - Tape Test
- 0C - Sync Test
- 0D - Async Test

Failing Controller:

- 00 - Not Applicable
- 01 - ESDI Controller 0 @ffffef00
- 02 - ESDI Controller 1 @fffff100
- 03 - SMD Controller 0 @ffffef00
- 04 - SMD Controller 1 @fffff100
- 05 - SCSI Controller 0 @fffff300
- 06 - SCSI Controller 1 @fffff500

07 - LAN Controller 0 @ffff4000
08 - LAN Controller 1 @ffff5000
09 - Host Adaptor Controller 0 @60000000
0A - Host Adaptor Controller 1 @60020000
0B - Host Adaptor Controller 2 @60040000
0C - Host Adaptor Controller 3 @60060000
0D - 16-line MUX Controller 0 @60000000
0E - 16-line MUX Controller 1 @60020000
0F - 16-line MUX Controller 2 @60040000
10 - 16-line MUX Controller 3 @60060000
11 - Sync Controller 0 @55b00000
12 - Sync Controller 1 @55b10000
13 - Integrated SCSI Controller
14 - Integrated LAN Controller
15 - Integrated Duart Controller (Primary)
16 - CPU 0 (Primary CPU)
17 - CPU 1
18 - CPU 2
19 - CPU 3
1A - Sync Controller 2 @55b20000
1B - Sync Controller 3 @55b30000
1C - Sync Controller 4 @55b40000
1D - Sync Controller 5 @55b50000
1E - Sync Controller 6 @55b60000
1F - Sync Controller 7 @55b70000
20 - ESDI Controller 2 @ffffffb00
21 - ESDI Controller 3 @ffffffd00
22 - SMD Controller 2 @ffffffb00
23 - SMD Controller 3 @ffffffd00
24 - SCSI Controller 2 @ffffff700
25 - SCSI Controller 3 @ffffff900
26 - Host Adaptor Controller 4 @60080000
27 - 16-line MUX Controller 4 @60080000
28 - Integrated Duart Controller (Secondary)

Failing Target:

For SCSI, ESDI, and SMD Controllers:

eeee = Unit Number

NOTE: A unit number of 7 means controller took failure.

For 16-Line MUX:

eeee = Port Number

NOTE: A port number of FFFF indicates controller took failure.

For Host Adaptor:

eeee is redefined as xxyy where

xx = Cluster Number
yy = Port Number on that Cluster
NOTE: A cluster/port number of FFFF indicates
controller took failure.

For Duart Controller:

eeee = Channel Number

For all other controllers this field is not applicable and
eeee will be set to 0000.

Errorcode:

0000 - Invalid Error Condition
0001 - Invalid command
0002 - Bad unit number specification
0003 - Bad unit type for this command
0004 - Drive not configured
0005 - Bad logical block number specified
0006 - Bad number of blocks specified
0007 - Bad track starting block
0008 - Bad number of block for track-wide operation
0009 - Reserved field not zero
000a - Bad number of scatter/gather headers specified
000b - Bad length of scatter/gather table
000c - Command list stopped
000d - Bad command list size field
000e - Bad command list number to start/stop
000f - List state wrong for start/stop command
0010 - VME (software) bus memory timeout
0011 - VME (software)Bus Error (reported by control chip)
0012 - Drive won't select or not present(SCSI sel)
0013 - SCSI disconnect timeout
0014 - Drive reported parity error
0015 - Unexpected disconnect
0016 - Undefined or uninterpretable SCSI error
0017 - Check condition bit set
0018 - Bad gap size found during format
0019 - Command complete timeout
001a - Floppy disk unit not ready
001b - Seek fault on floppy drive
001c - CRC error in ID
001d - Write fault on drive
001e - Data CRC error
001f - Sector not found
0020 - Floppy disk data lost
0021 - Data underrun during operation
0022 - No sense
0023 - Recovered error
0024 - Medium error
0025 - Hardware error
0026 - Illegal request

0027 - Unit attention
0028 - Data protect, or incorrect media type
0029 - Blank check
002a - Vendor unique
002b - Copy aborted
002c - Aborted command
002d - Equal
002e - Volume overflow
002f - Data compare error
0031 - Drive not ready
0032 - Mass storage device busy
0033 - Drive reported seek fault
0034 - Write fault detected
0035 - Sector too short / overrun error
0036 - Data ECC error, no correction done
0037 - ID sync error, sector not found
0038 - ID CRC error
0039 - No data synchronization
003a - Seek timeout
003b - Data operation timeout
003c - Misseek / direct access to alt.
003d - Error reading sector ID
003e - Direct access to bad track or sector
003f - ECC correction performed
0040 - ECC correction failed
0041 - Sectors per track do not match disk
0042 - Sectors per track bad or greater than physical size
0043 - Field too long (preamble gap)
0044 - Bad parameter in configure command
0045 - Attempt to initialize control group 0
0046 - Bad source in defect mapping command
0047 - Bad destination in defect mapping command
0048 - No spares left on track
0049 - Bad recovery field in defect mapping command
004a - Reservation conflict
004b - End of media encountered
004c - Filemark encountered
004d - Illegal length indicator
004e - Cache memory diagnostic error
004f - Static RAM error
0050 - PROM Checksum error
0051 - Undefined diagnostic specified
0052 - Too many media defects found
0053 - Media defects found
0054 - I/O timeout
0055 - Intentional SCSI bus reset
0056 - Hard bus error during disconnect
0057 - Unexpected SCSI bus reset
0058 - Unexpected SCSI bus free
0059 - Memory parity error
005A - SCSI phase mismatch
005B - Media change (or device reset)
005C - Command not completed
005d - Request sense failure

005e - Memory transfer alignment error
005f - Bad Surface specified for Read Defect Map
0060 - ESDI bit send timeout without attention
0061 - ESDI attention won't clear
0062 - ESDI drive-controller interface fault
0063 - ESDI drive reported invalid command
0064 - ESDI write gate with track offset (firmware error)
0065 - Drive reported power on reset
0066 - Drive reported spindle moter stopped
0067 - Drive write protected
0068 - Bytes per sector bad or greater than physical
0069 - Not ESDI drive, cannot use
006a - Drive cannot set requested physical sectors per track
006b - Floppy disk option not installed
006c - Scatter/gather descriptor block read error
006d - Bad byte seen by SCSI controller chip
006e - Error in synchronous transfer negotiation
006f - Bus hang during programmed I/O
0070 - Device not open
0071 - Framing Error
0072 - Silo Overflow
0073 - CRC Error
0074 - Buffer Error - No Receive Buffer While Chaining
0075 - Missed Packet - No Receive Buffer
0076 - Memory Error
0077 - Babble Error - Transmit Packet too Large
0078 - Collision Error
0079 - Transmit Failure - Excessive Collisions
007A - Silo Underflow
007B - Transmit Failure - Loss of Carrier
007C - Transmit Buffer Error
007D - Late Collision
007E - Lan Reset
007F - Out of paper
0080 - Offline
0081 - Busy
0082 - Character not requested
0083 - Printer not attached
0084 - IOCB error...IOCB structure invalid
0085 - Non-IOCB nonfatal error
0086 - Nonfatal application error
0087 - FATAL system error
0088 - IOCB error...Requested operation invalid
0089 - HPS not jumpered to execute (or failure to request)
host portion of self-test
008A - HPS host self-test start/error/completion code timeout
008B - HPS host portion of self-test detected error
008C - Cannot get HPS system address table
008D - Cannot get HPS initial on-board config table
008E - Cannot get HPS initial on-board TRACER table
008F - Attempt to overwrite existing HPS config table
0090 - Write error when attempting to download O/S
0091 - HPS VRTX table write failed
0092 - HPS TRACER table write failed

0093 - Checksum error during HPS O/S load
0094 - Port open failed due to selftest failure
0095 - Undefined error code
0096 - ROM checksum error
0097 - Stack data test error
0098 - Stack address test error
0099 - Stack checkerboard test error
009A - Zero stack test error
009B - Stack addressing conflict error
009C - Watchdog timeout test error
009D - Real-time clock interrupt error (no RTC present)
009E - Real-time clock interrupt error (bad clock pulse width)
009F - Undefined error code
00A0 - DRAM address test error
00A1 - DRAM checkerboard test error
00A2 - Zero DRAM test error
00A3 - Serial port 00 failed DUART test
00A4 - Serial port 01 failed DUART test
00A5 - Serial port 02 failed DUART test
00A6 - Serial port 03 failed DUART test
00A7 - Serial port 04 failed DUART test
00A8 - Serial port 05 failed DUART test
00A9 - Serial port 06 failed DUART test
00AA - Serial port 07 failed DUART test
00AB - Serial port 08 failed DUART test
00AC - Serial port 09 failed DUART test
00AD - Serial port 10 failed DUART test
00AE - Serial port 11 failed DUART test
00AF - Serial port 12 failed DUART test
00B0 - Serial port 13 failed DUART test
00B1 - Serial port 14 failed DUART test
00B2 - Serial port 15 failed DUART test
00B3 - OctART/Network interrupt error
00B4 - Watchdog timeout error
00B5 - Watchdog timeout occurred too early
00B6 - ALL ports failed OctART test
00B7 - DPRAM address test error
00B8 - DPRAM checkerboard test error
00B9 - DPRAM zero test error
00BA - Host to HPS I/F test: data wrap test error
00BB - Host to HPS I/F test: flag byte interrupt test error
00BC - Host to HPS I/F test: host interrupt bit will not reset
00BD - Host to HPS I/F test: data returned <> data sent
00BE - Host to HPS I/F test: host not ready for more data error
00BF - RAM parity error..Bank 0
00C0 - RAM parity error..Bank 1
00C1 - RAM parity error..Bank 0 & 1
00C2 - RAM parity error..Bank 2
00C3 - RAM parity error..Bank 0 & 2
00C4 - RAM parity error..Bank 1 & 2
00C5 - RAM parity error..Bank 0, 1, & 2
00C6 - RAM parity error..Bank 3
00C7 - RAM parity error..Bank 0 & 3
00C8 - RAM parity error..Bank 1 & 3

00C9 - RAM parity error..Bank 0, 1, & 3
00CA - RAM parity error..Bank 2 & 3
00CB - RAM parity error..Bank 0, 2, & 3
00CC - RAM parity error..Bank 1, 2, & 3
00CD - RAM parity error..Bank 0, 1, 2, & 3
00CE - Centronics option data loop error
00CF - HPS local bus exception error
00D0 - HPS local address exception error
00D1 - HPS illegal instruction exception error
00D2 - HPS interrupt exception error
00D3 - HPS trap exception error
00D4 - HPS unknown/other exception error
00D5 - One or more serial ports failed DUART test
00D6 - Break detected
00D7 - Parity error
00D8 - Framing error
00D9 - Data Overrun
00DA - HPS Network RAM data test error
00DB - HPS Network RAM location addressability test error
00DC - HPS Network RAM checkerboard test error
00DD - HPS Network RAM zero test error
00DE - HPS COM 9026 test: status register incorrect value
00DF - HPS COM 9026 test: network ID invalid (cannot = 0)
00E0 - HPS COM 9026 test: network interrupt test error
00E1 - COM 9026 interrupt occurred when interrupts disabled
00E2 - COM 9026 'POR bit' is not set during interrupt
00E3 - HPS Dynamic RAM parity error
00E4 - Cannot set HPS address modifier level
00E5 - DCP Dynamic RAM address lines test fails
00E6 - DCP Dynamic RAM data and data line test fails
00E7 - DCP Unspecified Error Code
00E8 - DCP Unspecified Error Code
00E9 - DCP Dual Port RAM address lines test fails
00EA - DCP Dual Port RAM data and data lines test fails
00EB - DCP DMA controller test fails (DMA1)
00EC - DCP DMA controller test fails (DMA2)
00ED - DCP Prom Checksum Failure
00EE - DCP 8255 data and data bus test fails
00EF - DCP Serial I/O failed to interrupt CPU
00F0 - DCP Serial I/O failed DMA Test
00F1 - DCP Unspecified Error Code
00F2 - DCP 8255 BUSERR input is set
00F3 - DCP 8255 NMIINT input is set
00F4 - DCP Selftest Timeout
00F5 - HPS port status error
00F6 - Size Discrepancy error
00F7 - Clock failure
00F8 - Branch test failed
00F9 - BCND instruction with r0 failed
00FA - CMP instruction with r0 = 0 failed
00FB - ADDU or SUBU instruction failed
00FC - BCDN equal to 0 with r1 failed
00FD - Error detected in the Branch test
00FE - Instruction combination OR/CMP/BB0 failed

00FF - Error detected in the BSR test
0100 - Branch on bit set (bb1) failed
0101 - Branch on bit clear (bb0) failed
0102 - Error detected in the JMP test
0103 - Error detected in the OR test
0104 - Error detected in the AND test
0105 - Error detected in the ROT test
0106 - Error detected in the ADDU test
0107 - Error detected in the ADD test
0108 - Error detected in the SUBU test
0109 - Error detected in the SUB test
010A - Error detected in the MASK test
010B - Error detected in the XOR test
010C - Error detected in the CMP test
010D - Error detected in the FF1 test
010E - Error detected in the FFO test
010F - Error detected in the DIVU test
0110 - Error detected in the DIV test
0111 - Error detected in the MUL test
0112 - Error detected in the CLR test
0113 - Error detected in the EXTU test
0114 - Error detected in the EXT test
0115 - Error detected in the SET test
0116 - Error detected in the MAK test
0117 - Error detected in the LD test
0118 - Error detected in the ST test
0119 - Error detected in the LDA test
011A - Error detected in the XMEM test
011B - Error detected in the FLT test
011C - Error detected in the INT test
011D - Error detected in the NINT test
011E - Error detected in the TRUN test
011F - Error detected in the FCMP test
0120 - Error detected in the FADD test
0121 - Error detected in the FSUB test
0122 - Error detected in the FMUL test
0123 - Error detected in the FDIV test
0124 - Error detected in the FLDCR test
0125 - Error detected in the FSTCR test
0126 - Error detected in the FXCR test
0127 - Error detected in the LDCR test
0128 - Error detected in the STCR test
0129 - Error detected in the XCR test
012A - Error detected in the RTE test
012B - Error detected in the TB1 test
012C - Error detected in the TBO test
012D - Error detected in the TBND test
012E - Error detected in the TCND test
0137 - Error detected in XMEMIM test
0138 - Error detected in XMEMRG test
0139 - Error detected in XMEMBU test
013A - Error detected in EXCEPTION PROCESSING test
0147 - Remote processor Branch test failed
0148 - Remote processor BCND instruction with r0 failed

0149 - Remote processor CMP instruction with r0 =0 failed
014A - Remote processor ADDU or SUBU instruction failed
014B - Remote processor BCDN equal to 0 with r1 failed
014C - Remote processor error running the Branch test
014D - Remote processor combination OR/CMP/BBO failed
014E - Remote processor error running the BSR test
014F - Remote processor Branch on bit set (bb1) failed
0150 - Remote processor Branch on bit clear (bb0) failed
0151 - Remote processor error running the JMP test
0152 - Remote processor error running the OR test
0153 - Remote processor error running the AND test
0154 - Remote processor error running the ROT test
0155 - Remote processor error running the ADDU test
0156 - Remote processor error running the ADD test
0157 - Remote processor error running the SUBU test
0158 - Remote processor error running the SUB test
0159 - Remote processor error running the MASK test
015A - Remote processor error running the XOR test
015B - Remote processor error running the CMP test
015C - Remote processor error running the FF1 test
015D - Remote processor error running the FFO test
015E - Remote processor error running the DIVU test
015F - Remote processor error running the DIV test
0160 - Remote processor error running the MUL test
0161 - Remote processor error running the CLR test
0162 - Remote processor error running the EXTU test
0163 - Remote processor error running the EXT test
0164 - Remote processor error running the SET test
0165 - Remote processor error running the MAK test
0166 - Remote processor error running the LD test
0167 - Remote processor error running the ST test
0168 - Remote processor error running the LDA test
0169 - Remote processor error running the XMEM test
016A - Remote processor error running the FLT test
016B - Remote processor error running the INT test
016C - Remote processor error running the NINT test
016D - Remote processor error running the TRUN test
016E - Remote processor error running the FCMP test
016F - Remote processor error running the FADD test
0170 - Remote processor error running the FSUB test
0171 - Remote processor error running the FMUL test
0172 - Remote processor error running the FDIV test
0173 - Remote processor error running the FLDCR test
0174 - Remote processor error running the FSTCR test
0175 - Remote processor error running the FXCR test
0176 - Remote processor error running the LDCCR test
0177 - Remote processor error running the STCR test
0178 - Remote processor error running the XCR test
0179 - Remote processor error running the RTE test
017A - Remote processor error running the TB1 test
017B - Remote processor error running the TBO test
017C - Remote processor error running the TBND test
017D - Remote processor error running the TCND test
0187 - No Index/Sector signal (Hardware)

0188 - No Seek Complete (Hardware)
0189 - Write Fault (Hardware)
018a - Drive Not Ready
018b - Drive Not Selected (Not Ready)
018c - No Track Zero Found ((Hardware)
018d - Multiple Drives Selected (Hardware)
018e - Logical Unit Communication Failure (Hardware)
018f - Track Following Error
0196 - ID CRC or ECC error (Hardware/Medium)
0197 - Unrecovered Read error of data blocks (Medium)
0198 - No Address Mark found in ID field (Medium)
0199 - No Address Mark found in Data field (Medium)
019a - No record found (Medium)
019b - Seek Positioning Error (Hardware/Medium)
019c - Data Synchronization Mark error (Medium)
019d - Recovered Read data with retries (Recovered)
019e - Recovered Read data with ECC (Recovered)
019f - Defect List Error (Medium/Recovered)
01a0 - Parameter Overrun (Hardware)
01a1 - Synchronous Transfer Error (Medium/Illegal Req.)
01a2 - Primary Defect List Not Found (Medium/Illegal Req.)
01a3 - Compare Error (Miscompare)
01a6 - Invalid Command Operation Code
01a7 - Illegal Logical Block Address.
01a8 - Illegal function for device type
01aa - Illegal field in CDB
01ab - Invalid LUN
01ac - Invalid field in Parameter List
01ad - Write Protected (Hardware)
01ae - Medium Changed (Unit Attention)
01af - Power On or Reset Occured (Unit Attention)
01b0 - Mode Select Parameters Changed
01b6 - Incompatible Cartridge (Medium)
01b7 - Medium Format corrupted (Medium)
01b8 - No Defect Spare Location Available
01c6 - RAM failure (Hardware)
01c7 - Data Path diagnostic failure (Hardware)
01c8 - Power On Diagnostic Failure (Hardware)
01c9 - Message Reject Error (Hardware/Aborted)
01ca - Target Internal Controller Error (Hardware/Aborted)
01cb - Select/Reselect failed (Hardware/Aborted)
01cc - Unsuccessful Soft Reset (Hardware/Aborted)
01cd - SCSI Interface Parity Error (Hardware/Aborted)
01ce - Initiator Detected Error (Hardware/Aborted)
01cf - Inappropriate/Illegal Message (Hardware/Aborted)
01d6 - Memory Corruption Error
01d7 - Target command not found in search
01d8 - Floppy diskette unformatted
01d9 - No floppy media in drive
01da - Bad tag number, issue tag/return status
01db - Parity of received ESDI status bad
01dc - ESDI command timeout
01dd - Select timeout
01de - Disconnect timeout

0ldf - Error in scatter/gather operation
0le0 - Vendor unique command set up improperly
0le1 - Download to cluster box failed