

4455 ASI Protection Switch

Command Set Protocol

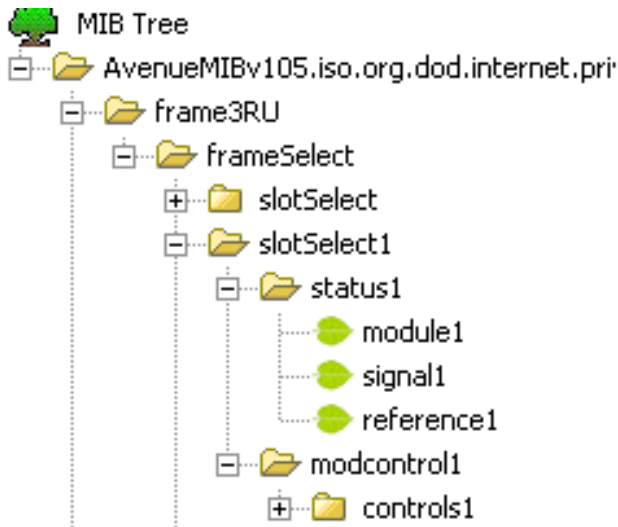
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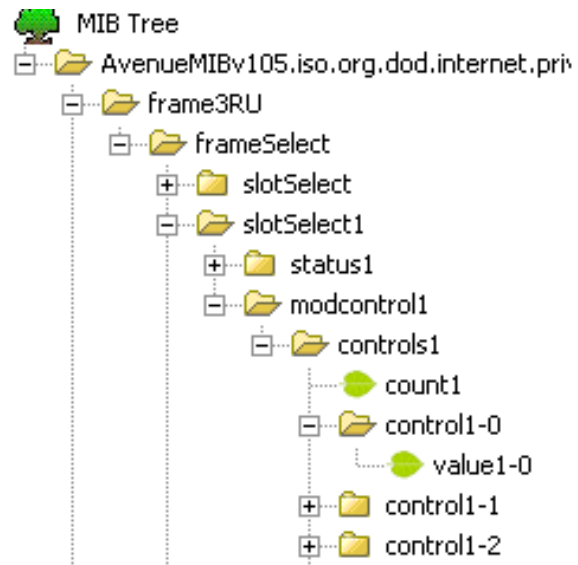
This document details the control and indicator index numbers that can be accessed through the command set to monitor and control an Ensemble Designs Avenue System 4455 ASI Protection Switch. The information provided herein can be used in tcp/ip interfaces that follow the Avenue Serial Control Protocol, and in systems using SNMP interfaces to the Avenue System.

For each module there are two types of Controls, Status and Modcontrols. The Status is generic to each module and gives the status of the modules CPU, Input Signal and Reference Status, these are read-back controls only. Modcontrols are specific controls that relate directly to the individual modules and can be read or read/write.

Status read-backs



Modcontrols



Status Read-Backs

StatusX - X relates to the slot number of the module. There are 3 status read-backs available for each module.

Name: ModuleX - Indicates status of the moduleCPU. X = slot the module is in.
Type: Read Only
Min/Max: 1/3
Reports: 1 - normal
 2 - kernal
 3- not installed

Name: SignalX - Signal input or output Status. X = slot the module is in.
Type: Read Only
Min/Max: 1/3
Reports: 1 - normal
 2 - faulted
 3 - unknown

Name: ReferenceX - Status of module reference. X = slot the module is in. Min/
Max 1/3
Reports: 1 - normal *7455,5455, 4455 & 4450 will always readback 1, normal.
 2 - faulted
 3 - unknown

ModControls

CountX This is a read only function that reads back the total number of controls the module has. X indicates slot of card being read.

Control 0 Not used on 4455

Control 1 Not used on 4455

Control 2

Name: Auto

Menu: Status

Type: Toggle Push Button Read/Write

Min/Max: 0/1

Reports: 0- Module is not in automatic switch mode.

1 - Module is in automatic switch mode.

Change: Write 0 to this control to toggle the status.

Description: When in auto the protection switch will change to the secondary when a failure on the primary is detected.

Control 3

Name: Auto Reset

Menu: Status

Type: Scroll List Read/Write

Min/Max: 0/1

Reports: 0 - "Off"

1 - "On"

Control: Write 0 to this control to set Auto Reset to "Off".

Write 1 to this control to set Auto Reset to "On".

Description: When Auto Reset is on the protection switch will change back to the primary once it is error free. Reset time is set with control 4.

Control 4

Name: Reset Time

Menu: Status

Type: Adjustable Numerical Field Read/Write

Min/Max: 0/600

Reports: Value is length of reset time in tenths of seconds.

Control: Write any value between 0 (dec) and 600 (dec) to set the length of the reset delay. A value of 150 corresponds to a delay of 15.0 seconds.

Control 5

Name: Pri
Menu: Status
Type: Ganged Push Button Read/Write
This control is ganged with Control 6
Min/Max: 0/1
Reports: 0 When the Primary Input is selected.
1 When the Secondary Input is selected.
Control: Write 0 to select the Primary Input.
NOTE: This control can only force the selection of the Primary input. It cannot cause the Secondary input to be selected.

Control 6

Name: Sec
Menu: Status
Type: Ganged Push Button Read/Write
This control is ganged with Control 5
Min/Max: 0/1
Reports: 1 When the Secondary Input is selected.
0 When the Primary Input is selected.
Control: Write 0 to select the Secondary Input.
NOTE: This control can only force the selection of the Secondary input. It cannot cause the Primary input to be selected.

Control 7

Name: Pri Status
Menu: Status - Seen on Avenue PC only.
Type: Indicator List Read Only
Min/Max: 0/4
Reports: 0 - "Signal Good"
1 - "Signal Fault" - exact fault is not specified
2 - "GPI Fault"
3 - "All Fault"
4 - "GPI Forced Good"

Control 8

Name: Sec Status
Menu: Status -Seen on Avenue PC only.
Type: Indicator List Read Only
Min/Max: 0/4
Reports: 0 - "Signal Good"
1 - "Signal Fault" - exact fault is not specified
2 - "GPI Fault"
3 - "All Fault"
4 - "GPI Forced Good"

Control 9

Name: Switch Pos
Menu: Status (Seen on Avenue PC Only)
Type: Indicator List Read Only
Min/Max: 0/1
Reports: 0 - "Primary"
 1 - "Secondary"

Control 10

Name: Primary Input
Menu: Inputs
Type: Indicator List Read Only
Min/Max: 0/2
Reports: 0 - "DVB-ASI"
 1 - "No Input"
 2 - "Unknown"

Control 11

Name: Secondary Input
Menu: Inputs
Type: Indicator List Read Only
Min/Max: 0/2
Reports: 0 - "DVB-ASI"
 1 - "No Input"
 2 - "Unknown"

Control 12 Not used on 4455

Control 13

Name: ASI Test
Menu: Config
Type: Scroll List Read/Write
Min/Max: 0/3
Reports: 0 - "Off"
 1 - "Simple"
 2 - "Pgm Specific"
 3 - "PID Specific"
Control: Write 0, 1, 2 or 3 to configure the ASI Test.

Control 14 Not used on 4455

Control 15 Not used on 4455

Control 16 Not used on 4455

Control 17

Name: Sec Test Enable

Menu: Config

Type: Scroll List Read/Write

Min/Max: 0/1

Reports: 0 - "Off"

1 - "On"

Control: Write 0, or 1 to turn Sec Test Enable off/on.

Control 18 Not used on 4455

Control 19 Not used on 4455

Control 20 Not used on 4455

Control 21 Not used on 4455

Control 22 Not used on 4455

Control 23 Not used on 4455

Control 24 Not used on 4455

Control 25 Not used on 4455

Control 26 Not used on 4455

Control 27 Not used on 4455

Control 28 Not used on 4455

Control 29 Not used on 4455

Control 30 Not used on 4455

Control 31 Not used on 4455

Control 32 Not used on 4455

Control 33 Not used on 4455

Control 34 Not used on 4455

Control 35 Not used on 4455

Control 36

Name: ASI ErrSec
Menu: Pri Errors
Type: Resettable Counter Read/Write
Min/Max: 0/10,000(dec)
Reports: Error-seconds count for Primary ASI error detector. Each count marks a one second interval which contained at least one ASI Error.
Reset: Write 0 to this control to reset the counter to 0.

Control 37

Name: ASI Vid ErrSec
Menu: Pri Errors
Type: Resettable Counter Read/Write
Min/Max: 0/10,000(dec)
Reports: Error-seconds count for Primary ASI Video error detector. Each count marks a one second interval which contained a ASI Video Error.
Reset: Write 0 to this control to reset the counter to 0.

Control 38

Name: ASI Aud ErrSec
Menu: Pri Errors
Type: Resettable Counter Read/Write
Min/Max: 0/10,000(dec)
Reports: Error-seconds count for Primary ASI Audio error detector. Each count marks a one second interval which contained at least one ASI Audio Error.
Reset: Write 0x0000 to this control to reset the counter to 0.

Control 39 Not used on 4455

Control 40 Not used on 4455

Control 41 Not used on 4455

Control 42 Not used on 4455

Control 43

Name: ASI ErrSec
Menu: Sec Errors
Type: Resettable Counter Read/Write
Min/Max: 0/10,000(dec)
Reports: Error-seconds count for Secondary ASI error detector. Each count marks a one second interval which contained at least one ASI Error.
Reset: Write 0 to this control to reset the counter to 0.

Control 44

Name: ASI Vid ErrSec
Menu: Sec Errors
Type: Resettable Counter Read/Write
Min/Max: 0/10,000(dec)
Reports: Error-seconds count for Secondary ASI Video error detector. Each count marks a one second interval which contained at least one ASI Video Error.
Reset: Write 0x0000 to this control to reset the counter to 0.

Control 45

Name: ASI Aud ErrSec
Menu: Sec Errors
Type: Resettable Counter Read/Write
Min/Max: 0/10,000(dec)
Reports: Error-seconds count for Secondary ASI Audio error detector. Each count marks a one second interval which contained at least one ASI Audio Error.
Reset: Write 0x0000 to this control to reset the counter to 0.

Control 46 Not used on 4455

Control 47 Not used on 4455

Control 48 Not used on 4455

Control 49

Name: Sec Sw Cnt
Menu: Pri Errors, Sec Errors
Type: Resettable Counter Read Only
Min/Max: 0/10,000(dec)
Reports: Number of times that the switch has thrown from Primary to Secondary.
Reset: Write 0 to this control to reset the counter to 0.

Control 50 Not used on 4455

Control 51 Not used on 4455

Control 52 Not used on 4455

Control 53 Not used on 4455

Control 54

Name: Pgm Target
Menu: ASI Config
Type: Scroll List Read/Write
Min/Max: 0/4
Reports: 0 - "Any"
1 - "Pgm 1"
2 - "Pgm 2"
3 - "Pgm 3"
4 - "Pgm 4"
Control: Write 0, 1, 2, 3, or 4 to this control to set the ASI Program Target.

Control 55

Name: ASI Time
Menu: ASI Config
Type: Number Field Read/Write
Min/Max: 1/3000 (dec)
Reports: Value in seconds
Control: Write any value between 1 (dec) and 3000 (dec) to set value in seconds.

Control 56

Name: Min Vid Rate
Menu: ASI Config
Type: Number Field Read/Write
Min/Max: 1/10000 (dec)
Reports: Value in PIDs
Control: Write any value between 1 (dec) and 10000 (dec) to set value in PIDs.

Control 57

Name: Min Aud Rate
Menu: ASI Config
Type: Number Field Read/Write
Min/Max: 1/10000 (dec)
Reports: Sets minimum Audio rate in PIDs.
Control: Write any value between 1 (dec) and 10000 (dec) to set value in PIDs.

Control 58

Name: Target Select
Menu: PID Config
Type: Adjustable Numerical Field Read/Write
Min/Max: 1/32
Reports: Numeric value of targeted PID
Control: Write value of Target to select.

Control 59

Name: Target Mode
Menu: PID Config
Type: Drop down box Read/Write
Min/Max: 0/1
Reports: 0 - Off
1 - On
Control: Write value to turn on or off Target Mode.

Control 60 * Target Mode, Control 59 must be On.

Name: PID Target
Menu: PID Config
Type: Adjustable Numerical Field Read/Write
Min/Max: 0/8191
Reports: Numeric value of targeted PID
Control: Write value of PID Target to select.

Control 61 * Target Mode, Control 59 must be On.

Name: Min Rate
Menu: PID Config
Type: Adjustable Numerical Field Read/Write
Min/Max: 0/10000
Reports: Numeric value of minimum PID's per sec.
Control: Write value of of the minimum rate.

Control 62 * Target Mode, Control 59 must be On.

Name: Pri Targ Status
Menu: PID Config
Type: Numeric Field Read Only
Min/Max: 0/3
Reports: 0 - Off
1 - Good
2 - Failed
3 - No ASI

Control 63 * Target Mode, Control 59 must be On.

Name: Sec Targ Status
Menu: PID Config
Type: Numeric Field Read Only
Min/Max: 0/3
Reports: 0 - Off
1 - Good
2 - Failed
3 - No ASI

Control 64 * Target Mode, Control 59 must be On.

Name: Pri Actual Rate
Menu: PID Config
Type: Numeric Field Read Only
Reports: Numeric value of actual Pri PID rate per sec.

Control 65 * Target Mode, Control 59 must be On.

Name: Sec Actual Rate
Menu: PID Config
Type: Numeric Field Read Only
Reports: Numeric value of actual Sec PID rate per sec.

Control 66

Name: Pri ASI Status
Menu: PID Config
Type: Indicator List Read only
Min/Max: 0/8 *4455 will never show a 1 "310M Good"
Reports: 0 - "ASI Good"
1 - "310M Good"
2 - "No ASI"
3 - "No Packets"
4 - "No PAT"
5 - "No PMT"
6 - "No Video"
7 - "No Audio"
8 - "PID Failed"

Control 67

Name: Sec ASI Status
Menu: PID Config
Type: Indicator List Read only
Min/Max: 0/8 *4455 will never show a 1 "310M Good"
Reports: 0 - "ASI Good"
1 - "310M Good"
2 - "No ASI"
3 - "No Packets"
4 - "No PAT"
5 - "No PMT"
6 - "No Video"
7 - "No Audio"
8 - "PID Failed"

Control 68

Name: Vid per Sec
Menu: ASI Status
Type: Number Field Read Only
Min/Max: 0/15000 (dec)
Reports:

Control 69

Name: Aud per Sec
Menu: ASI Status
Type: Number Field Read Only
Min/Max: 0/15000 (dec)
Reports:

Control 70

Name: PAT per Sec
Menu: ASI Status
Type: Number Field Read Only
Min/Max: 0/500 (dec)
Reports:

Control 71

Name: PMT per Sec
Menu: ASI Status
Type: Number Field Read Only
Min/Max: 0/500 (dec)
Reports:

Control 72

Name: PCR per Sec
Menu: ASI Status
Type: Number Field Read Only
Min/Max: 0/15000 (dec)
Reports:

Control 73

Name: Packet Length
Menu: ASI Status
Type: Indicator List Read Only
Min/Max: 0/4
Reports: 0 - "None"
1 - "188 Bytes"
2 - "204 Bytes"
3 - "208 Bytes"
4 - "Non Std"

Control 74

Name: Pri GPI Mode
Menu: GPI
Type: Scroll List Read/Write
Min/Max: 0/4
Reports: 0 - "Off"
1 - "Neg Edge Switch"
2 - "Ext Fault Low"
3 - "Ext Inhibit Low"
4 - "Neg Edge Reg 1" (Recall Memory Register 1)
Control: Write 0, 1, 2, 3 or 4 to set Primary GPI mode.

Control 75

Name: Pri GPI Status
Menu: GPI
Type: Indicator List Read Only
Min/Max: 0/1
Reports: 0 - "GPI is LOW"
1 - "GPI is HIGH"

Control 76

Name: Sec GPI Mode
Menu: GPI
Type: Scroll List Read/Write
Min/Max: 0/4
Reports: 0 - "Off"
1 - "Neg Edge Switch"
2 - "Ext Fault Low"
3 - "Ext Inhibit Low"
4 - "Neg Edge Reg 2" (Recall Memory Register 2)
Control: Write 0, 1, 2, 3 or 4 to set Primary GPI mode.

Control 77

Name: Sec GPI Status
Menu: GPI
Type: Indicator List Read Only
Min/Max: 0/1
Reports: 0 - "GPI is LOW"
1 - "GPI is HIGH"

Control 78

Name: Save
Menu: Memory
Type: Toggle Push Button Read/Write
Min/Max: 0/1
Reports: 0 - Module is not in SAVE mode.
1 - Module is in SAVE mode.
Change: Write 0 to this control to toggle that status.
NOTE: Once Save mode is set, it will clear automatically in 10 seconds if no register is selected.

Control 79

Name: Reg 1
Menu: Memory
Type: Toggle Push Button Read/Write
Min/Max: 0/1
Reports: 0 - Module is not in SAVE mode.
1 - Module is in SAVE mode.
Change: Write 0 to this control to toggle Save On/Off.
NOTE: Once Save mode is set, it will clear automatically in 10 seconds if no register is selected.

Controls 80 through 83

Identical to Control 71 for remaining registers
Name: Reg 2, 3, 4, 5