

To: INCITS T10 Committee
From: Mark VonLintel, Quantum
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Subject: ADC-2 port specific pages for SAS

1. Revision History

Revision 0:
Posted to the T10 web site on 22 December 2004.

2. General

The addition of a new protocol type supported by the DT device primary port requires new Log parameters and Mode parameters for the automation drive interface devices. The new protocol type is Serial Attached SCSI, protocol standard SAS-1.1.

3. Proposal

This proposal defines a new DT Device primary port status log parameter for SAS and a new DT Device Primary Port subpage for SAS.

3.1 Log Parameter addition

Add the follow subclause to ADC-2 clause 6

6.1.2.4.4 Serial Attached SCSI port status data

The format of the DT device primary port status data for a serial attached SCSI port (see SAS-1.1) is shown in table A.

Table A – format of SAS port log parameter

Bit	7	6	5	4	3	2	1	0
Byte								
0	NEGOTIATED PHYSICAL LINK RATE				Reserved		SIGNAL	PIC
1-3	CURRENT HASHED SAS ADDRESS							

A port initialization complete (PIC) bit is set to one indicates that the port has successfully completed speed negotiation and the identification sequence (see SAS-1.1). When the port initialization is complete the SAS port is ready to receive an open frame.

A SIGNAL bit set to one indicates that a signal is detected at the DT device primary port. A SIGNAL bit set to zero indicates a signal is not detected.

The NEGOTIATED PHYSICAL LINK RATE field indicates the negotiated physical link rate (see SAS-1.1) for the port.

The CURRENT HASHED SAS ADDRESS field indicates the 24 bit hashed address that is assigned to the DT device primary port. The CURRENT HASHED SAS ADDRESS shall be ignored when the PIC bit is set to zero.

3.2 Mode Parameter addition

Add the following subclause to ADC-2 clause 6.

6.2.2.3.5 Serial Attached SCSI descriptor parameter format

Table B describes the format of the descriptor parameter for SAS port types.

Table B – SAS descriptor format

Bit	7	6	5	4	3	2	1	0
Byte								
0	Reserved				MPN		Rsvd	PE
1	Reserved							
2-3	Reserved							
4-11	PORT NAME							

A Port Enable (PE) bit set to one enables the DT device primary port. When the PE bit is set to zero, the DT device shall not enable the DT device primary port's phy (see SAS-1.1).

The modify port name (MPN) and PORT NAME fields control the DT device primary port's name identifier (see SAS-1.1) as defined in the table C.

Table C – SAS descriptor MPN field description

Value	MODE SENSE command	MODE SELECT command
00b	The MPN field shall be set to zero for a MODE SENSE command. The PORT NAME field shall contain the currently assigned value.	Do not modify the DT device primary port's name identifier (see SAS-1.1). The PORT NAME field shall be ignored.
01b	Invalid value for a MODE SENSE command.	Reserved
10b	Invalid value for a MODE SENSE command.	Set the DT device primary port's name identifier to the manufacturer's default value. The value in the PORT NAME field shall be ignored.
11b	Invalid value for a MODE SENSE command.	Set the DT device primary port's name identifier to the value in the PORT NAME field.

The PORT NAME field contains the DT device's primary port name identifier (see SAS-1.1). When the MPN field is set to 11b, the PORT NAME field shall contain an NAA identifier type name identifier (see SPC-3).