To: T10 Technical Committee
From: Rob Elliott, HP (elliott@hp.com)
Date: 25 May 2004
Subject: 04-165r0 SAS-1.1 SMP functions for SGPIO

Revision history
Revision 0 (25 May 2004) First revision

Related documents
sas1r05 - Serial Attached SCSI 1.1 revision 5
sff-8485r0.4 - Serial GPIO (SGPIO) Bus revision 0.4 (available from http://www.sffcommittee.org)
03-240r2 - SAS-1.1 internal wide connector and cable (Rob Elliott, HP)

Overview
SFF-8485 (SGPIO) revision 0.4 defines two SMP functions to control a Serial GPIO bus (or parallel GPIOs) in an expander. SAS-1.1 should define the function codes for SFF-8485 but let SFF-8485 define the contents of those functions.

Suggested changes

2.4 Other references

For information on the current status of the listed documents, or regarding availability, contact the indicated organization.

...

SFF-8223, *2.5" Drive Form Factor with Serial Connector*

SFF-8323, *3.5" Drive Form Factor with Serial Connector*

SFF-8523, *5.25" Drive Form Factor with Serial Connector*

SFF-8410, *HSS Copper Testing and Performance Requirements*

SFF-8460, *HSS Backplane Design Guidelines*

SFF-8470, *Shielded High Speed Multilane Copper Connector*

SFF-8482, *Internal Serial Attachment Connector*

SFF-8485, *Serial GPIO (SGPIO) Bus*

> NOTE 1 - For more information on the current status of the SFF documents, contact the SFF Committee at 408-867-6630 (phone), or 408-867-2115 (fax). To obtain copies of these documents, contact the SFF Committee at 14426 Black Walnut Court, Saratoga, CA 95070 at 408-867-6630 (phone) or 408-741-1600 (fax) or see http://www.sffcommittee.org.

10.4.3 SMP functions

10.4.3.1 SMP function request frame format

...

Table 1 — SMP functions

Code	SMP function	Description	Request frame size (in bytes)	Response frame size (in bytes)	Reference
00h	REPORT GENERAL	Return general information about the device	8	32	10.4.3.3
01h	REPORT MANUFACTURER INFORMATION	Return vendor and product identification	8	64	10.4.3.4
02h	READ GPIO REGISTER	See SFF-8485			
~~02h~~03h - 0Fh	Reserved for general SMP input functions				
10h	DISCOVER	Return information about the specified phy	16	56	10.4.3.5
11h	REPORT PHY ERROR LOG	Return error logging information about the specified phy	16	32	10.4.3.6
12h	REPORT PHY SATA	Return information about a phy currently attached to a SATA device	16	60	10.4.3.7
13h	REPORT ROUTE INFORMATION	Return route table information	16	44	10.4.3.8
14h - 1Fh	Reserved for phy-based SMP input functions				
20h - 3Fh	Reserved for SMP input functions				
40h - 7Fh	Vendor specific				
80h - 81h	Reserved for general SMP output functions				
82h	WRITE GPIO REGISTER	See SFF-8485			
83h - 8Fh	Reserved for general SMP output functions				
90h	CONFIGURE ROUTE INFORMATION	Change route table information	44	8	10.4.3.9
91h	PHY CONTROL	Request actions by the specified phy	44	8	10.4.3.10
92h - 9Fh	Reserved for phy-based SMP output functions				
A0h - BFh	Reserved for SMP output functions				
C0h - FFh	Vendor specific				