

Date: September 14, 2005  
To: T10 Technical Committee  
From: Alvin Cox ([alvin.cox@seagate.com](mailto:alvin.cox@seagate.com))  
Subject: SAS 2 wide cable parameter measurements

Abstract: The attached information defines the electrical tests to be performed on internal and external wide cable assemblies to determine cable specification parameters and transceiver performance requirements for 6Gbps.

Cable parameter measurements needed for transceiver modeling and cable specification refinement:

Length of external cable ranges from 12" to 10 meters, internal from 3" to 1 meter – need cable characteristics (S4P files – see T11/05-346v1) <http://www.t11.org/ftp/t11/member/incoming/05-346v1.pdf> for multiple lengths so that transmitter and receiver requirements can be defined.

Testing to include mated connector pairs on both ends.

Post data by Oct 14, 2005.

Include test set up in report.

Max length, short length and something between desired.

50MHz – 20GHz, 10MHz step size.

Preferred format for export is magnitude and phase.

Input ports 1 and 3, output ports 2 and 4 (1 → 2, 3 → 4)

Cable testing: Molex, HP, Meritec/Xilinx, Amphenol, Infineon (3<sup>rd</sup> party internal cable testing).

Simulations: PMC Sierra, Infineon, Vitesse

LSIL: TCTF model.