X3T9.2/87-211

10-25-87

To: X3T9.2 membership

From : David A. Hatch
Stewart Connector Systems Inc.

Subject: Questionnaire on proposed
SCSI-2 .050 centered
I/O connector standard

Gentlemen,

This letter asks that you help us define, as precisely as possible, your particular requirements for the proposed new .050 centered micro min connector. This information will be distributed to all the members of the X3T9.2 group.

Keep in mind that the X3T9.2 group has, in essence, asked us the connector manufacturers to come to agreement between ourselves on an optimum connector design we think should become the SCSI-2 standard. This is hard to do. Each of us would like to see our particular connector design become that standard. However you are the ultimate user and the final choice of the SCSI-2 connector design will be yours.

Beyond the microribbon vs pin and socket choice there a number of design considerations such as contact durability, contact resistance, latching, adaptability to 26 AWG, daisy chaining to name a few. All connectors are not equal in all areas.

We need your input and completion of this questionaire will give us a start in understanding what you the user need in a SCSI-2 design.

Enclosed is a stamped and addressed return envelope. I would appreciate receiving this in time to assimilate this information before the 11-18-87 connector working session.

These first questions pertain to the adaptability of the proposed SCSI-2 .050 connector to your future product designs:

1 Do you see a need for a .050 centered I/O connector in your products? _17__ yes _3__ no

2 How long will the original SCSI-1 connector serve your needs? _2__ 1yr _3__ 2yrs 7__ 3yrs _3__ 4yrs ___ 5yrs

3 Will there be a point in time when you will use both the -1 and the-2 in different products at the same time? _17 yes _2_ no

4 If an acceptable (to you) .050 micro min connector is decided upon and included as the SCSI standard how soon would you have shippable needs.

1988 _2__ Q1 _3__ Q2 _2__ Q3 _3__ Q4 1989 _1__ Q1 _1__ Q2 ___ Q3 _2__ Q4

5 Anticipated quantity useage per year: _2_ 5M _1_ 10M _1_ 15M _6__ 25MK _4_ 50K _1_ .1MM _1_ .2MM 1MMup

The following questions relate to the numbers of contacts you will require in the connector and the type of cable :

6 I would like to see the following connector contacts included in SCSI-2 12 50 4 60 3 64 3 68

7 I anticipate that I will use the following shielded cable for external interconnections:

11_ round with descrete conducters
_2_ "round to flat" with ribbonized conducters
_6_ shielded flat ribbon cable
___ other: please describe_____

8 Inner conducters will be of the following AWG:

	5%	25%	50%	75%	100%
30 AWG	___	___	___	___	___
28 AWG	___	_4_	___	___	10_
26 AWG	___	___	___	_4_	_1_
24 AWG	___	___	___	___	_1_

9 Length of cable used in your products :

	5%	25%	50%	75%	100%
up to 4'	___	___	___	___	___
up to 10'	___	___	___	___	___
up to 25'	___	___	___	___	___
up to 25 meters	___	___	___	___	___
up to 50 meters	___	___	___	___	___
up to 100 meters	___	___	___	___	___

These questions are posed to determine the max dimensions that may be required in a connector/header that can adequatly handle the .500" plus OD cable that 50 26 AWG conducters represent.

10 Would like to see the header height dimension off the board no higher than : _2__ _2__ _3__ ___ _1__ _2__ ___ ___
.370 .400 .425 .450 .475 .500 .525 .550

5 respondees did not care

11 Max allowable connector height: _5__ _1_ ___ _1_
_3_ .400 .425 .450 .475
.500 .525 .550 over

6 respondees did not care

Interior diasy chaining and exterior connector piggybacking have been suggested as desirable features in the SCSI-2 connector "system"

12 If you elect to use the .050 SCSI-2 cable connector for exterior interconnections will you need to have a corresponding microminiature daisy chainable connector to bus your internal connections. _9_ _8_ _____
yes no depends on

explain : _____

13 If you elect to use the .050 SCSI-2 connector will you need a corresponding non shielded (non daisy chainable) connector for your internal connections : _7__ _8_
yes no depends on

other, explain : _____

14 If your system calls for internal daisy chaining do you prefer to use standard 28 AWG conducters flat ribbon cable or use 32 or 34 AWG in a .025 spaced ribbon cable. _10___ ___1_____
28 AWG 32/34 AWG

15 Is the external piggybacking feature important to your system : _5_ _5_
yes no

16 Would you consider this an impediment to using the new SCSI-2 050 connector system if piggybacking was not available :

Would use the new connector system anyway _7_
Would be a very pivitol factor in decision _ 2_
Would not use new SCSI-2 if not available ___

These questions concern the connector configurations required to produce an integrated interconnection system :

17 Will implementation of the SCSI-2 connector create a need for a bulkhead mounted cable to cable connector. (bulkhead connector terminated to the internal cable and adapted to receive the shielded external cable)
_5_ _3_
yes no

18 In the above application would you use a bulkhead connector which was not terminated to the internal cable but plugged into from both sides :
_3_ _7_
yes no

19 Do you prefer the ease of a latching system such as squeeze to release latch or the rigidity of jack screws to retain the cable connector in the header :
squeeze to release _10__
jack screws __2__

20 If the squueze to release is your choice would you prefer a configuration that has a "snatch proof" feature whereby the cable connector would disengage from the header when subjected to a jerk or pull of over 15 lbs. This prevents possible damage to the connectors as well eliminating the possibility of accidently pulling the device to the floor. _6_ _3_
yes no

21 Metallic or plastic outerhousings : Does your company

have any preference as to the material used in the outer housings of the proposed SCSI-2 connectors :
prefer plastic _5_ prefer metallic _3_

2 respondees said either ok
2 respondees didn't care

22 If a plastic outer housing is preferred do you also prefer to have the connector specificly designed so that it can be easily overmolded by your cable supplier with your particular logo and industrial design.
_9_ yes _6_ no

3 resondees had no comment

The last series of questions seek to determine what you the OEM need in terms of electrical performance and durability :

23 In terms of durability (insertions and withdrawels) how many cycles will be required in that product of yours which is subjected to the greatest number of insertions and withdrawels of the SCSI-2 connector :

___	_1__	_5__	_4__	_7_	_2_
25	100	250	500	1000	5000

24 Would durability be a major consideration in your connector choice if all other factors were equal :
15 yes 1 no

25 In terms of contact resistance do you have any limits that require you to have a "not to exceed" spec on this parameter :

in milliohms	_1_	_1_	_1_	__4_	_1_	___
	10	15	25	50	100	other

more than half the respondees did not answer

If there any other parameters that you as an OEM would like to see addressed or included in this survey please convey that to us here :

_OTHER COMMENTS ON SCSI-2 PROPOSED CONNECTOR :

" Got to be low cost "

" Many answers will be customer driven. Will continue with SCSI-2 until customers request the the SCSI-2 connector"

" Robustness... resistance to normal mechanical and electrical damage... includes immunity to mis-mating... being stuck in the corner of furniture... moisture etc..

" Ease of use " ... required to be installed in blind corners with no more than 4" clearance ... also includes ease of inspection for damage...

" Mass terminate existing .100 28 awg cable to .050 connectors "

" 26 awg wire needed only for termpower signal...

" Wish you'd decide very soon on a standard so we can start designing...

" Cost is paramount ! If a right angle connector were available, we could certainly use it to minimize clearance front to back..