QIC DEVELOPMENT STANDARD

BASIC DRIVE INTERFACE FOR
PS/2 FLEXIBLE-DISK-CONTROLLER-COMPATIBLE
1/4-INCH (6.35 MM) MINICARTRIDGE TAPE DRIVES

(See important notices on the following page)

Important Notices
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1.0   SCOPE

This standard describes a basic drive interface for PS/2 flexible disk controller compatible 1/4 inch (6.35mm) mini data cartridge tape drives.

2.0   PHYSICAL INTERFACE

2.1   SIGNAL AND POWER CONNECTOR

The drive shall contain a 40 conductor card edge signal connector with even numbered pins on component side of PWB, odd numbered pins on solder side and pin 1 at left on solder side when facing connector. A key slot shall be located between pins 34 and 36. The mating connector shall be a Sullins EZC20DCSN-S555, JAE PB21-40TN2-C2-9 or equivalent connector.

2.2   SIGNAL AND POWER CABLE

The signal cable shall be a 40 conductor, AWG #28 ribbon cable with a minimum of two (2) and a maximum of five (5) mating connectors for daisy chain installation. The cable shall be a maximun of three (3) feet.

2.4   SIGNAL AND PIN ASSIGNMENTS

PIN	NAME	DIRECTION	DESCRIPTION
2	/HDS	to drive	HIGH SPEED SELECT - NOT USED BY TAPE DRIVE
4	/DI	to drive	DRIVE IN USE - NOT USED BY TAPE DRIVE
6	/DS3	to drive	DRIVE SELECT 3 - Selects drive addressed as #3
8	/IDX	to contr.	INDEX PULSE - Initiates and terminates transfer of controller data to drive when formatting, generated by drive at beginning of each segment during read or write operations
10	/DSO	to drive	DRIVE SELECT 0 - Selects drive addressed as #0
12	/DS1	to drive	DRIVE SELECT 1 - Selects drive addressed as #1
14	/DS2	to drive	DRIVE SELECT 2 - Selects drive addressed as #2
16	/MOT	to drive	NOT USED BY TAPE DRIVE
18	/DIR	to drive	NOT USED BY TAPE DRIVE
20	/STP	to drive	STEP - can be used to send commands to drive
22	/WD	to drive	WRITE DATA - a pulse per flux transition for MFM encoded data to be recorded on tape, low going edge indicates transition
24	-/WG	to drive	WRITE GATE - asserted when write data is to be recorded on tape
26	/TKO	to contr.	TRACK 00 - used to transfer drive status to flexible disk controller
28	/WP	to contr.	WRITE PROTECT - used to transfer drive status to flexible disk controller
30	/RD	to contr.	READ DATA - a pulse per flux transition recovered from the recorded tape, low going edge indicates transition
32	/SS	to drive	SIDE SELECT - optional use for test
34	/DC		DISK CHANGE - NOT USED BY TAPE DRIVE
36	FG		FRAME GROUND
38	+5V	to drive	+5 VOLTS
40	+12V	to drive	+12 VOLTS
ODDS	GND	---------	SIGNAL GND except pin 3 not used

2.5   SIGNAL TERMINATION

No signal terminations are required, but 4.7 Kohms to +5V is permissible.

2.6   NUMBER OF DRIVES

There shall be a maximum of 4 drives in any combination of flexible disk drives and flexible disk controller compatible 1/4 inch mini data cartridge tape drives which can be selected by the flexible disk controller.

2.7   DRIVE SELECTION

Each drive shall be provided with a means of connecting any one of the four drive select lines from the interface to the drives internal drive select line.

2.8   SIGNAL LEVELS, DRIVERS AND RECEIVERS

Signal levels required shall be as follows:

logic "true"	0 to 0.8 VDC
logic "false"	2 to 5.25 VDC

2.9   SIGNAL DRIVER

The signal driver used by the drive shall be a 74HCT367 or equivalent.

2.10   SIGNAL RECEIVER

The signal receiver used- by the drive shall be a 74HCT14 or equivalent. One signal receiver per line per drive maximum shall be used.