

53A-145 DIFFERENTIAL CHAINING CARD
OPERATING MANUAL

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53A-145 DIFFERENTIAL CHAINING CARD

DESCRIPTION

The 53A-145 Differential Chaining Card is a printed circuit board assembly for use in the 53A system. This card provides a differential communication link between the card cage it is plugged into, and the next card cage in a chained system.

The Chaining Card allows data transfer rates of 500,000 ASCII characters (8-bit parallel) per second up to a distance of 1,000 feet.

POWER LED

This LED provides a valuable diagnostic tool. The LED gives the system programmer a visual indication of what action the system is taking. Whenever, there is a activity on the "Flag" line (data is being transferred) the LED will blink.

The Power LED being lit is not only an indication that data is being transferred but also, that all required DC power (+5V) is being supplied.

FUSE

The fuse is on the 5 volt power bus and protects the system from overload conditions. If the fuse has blown, the Power LED will not light.

I/O LED

The I/O LED will be lit when the system is in input and out when in output. As a matter of convention input means data being input by the system controller.

DATA LEDs (B0 - B7)

Below the I/O LED is a column of eight LED's, labeled from top to bottom B0 through B7. These LED's display the current data word that is being either received or transmitted by the Chaining Card. The least significant bit is B0.

SPECIFICATIONS

<u>Differential Drivers/Receivers:</u>	TI 75119
<u>Differential Impedance:</u>	130 ohms.
<u>Protocol:</u>	ASCII 8-bit parallel.
<u>Chaining Distance:</u>	300 meters.
<u>Data Rate:</u>	500,000 ASCII characters per second.
<u>Power Requirements:</u>	The 5V power is provided by a 53A-060 power supply located in the 53A-002 Card Cage. Voltage: 4.75V to 5.25V DC. Current: 0.95 amperes, maximum quiescent. 0.98 amperes, peak.
<u>Cooling:</u>	Provided by the fan in the 53/63 Card Cage.
<u>Temperature:</u>	-10°C to +65°C, operating (assumes ambient temperature of 55° and airflow to assure less than 10°C temperature rise). -40°C to +85°C, storage.
<u>Humidity:</u>	Less than 95% R.H. non-condensing, -10°C to +30°C. Less than 75% R.H. non-condensing, +31°C to +40°C. Less than 45% R.H. non-condensing, +41°C to +55°C.
<u>Dimensions:</u>	197mm High, 220mm Deep, 13mm Wide. (7.75" X 8.66" X 0.5")
<u>Dimensions, Shipping:</u>	When ordered with a 53A-002 Card Cage this card will be installed in the Card Cage Chaining slot. When ordered alone the shipping dimensions are: 254mm X 254mm X 127mm. (10" X 10" X 5")
<u>Weight:</u>	0.23 Kg. (0.5 lbs.)
<u>Weight, Shipping:</u>	When ordered with a 53A-002 Card Cage this card will be installed in the Card Cage Chaining slot. When ordered alone the shipping weight is: 0.64 Kg. (1.4 lbs.)
<u>Mounting Position:</u>	Any orientation.

Mounting Location:

Installs in the Chaining slot of the 53A-002 Card Cage.

Output Connections:

53A-743 Cable.

Equipment Required:

Communications Card, Control Card and mainframe.

Equipment Supplied:

53A-145 Chaining Card.
Spare fuse (part #42202-54001).
Operating manual (part #00000-11450).
Service manual (part #00000-21450).

INSTALLATION

The 53A-145 Chaining Card is plugged into the red chaining slot.

CAUTION:

To avoid plugging the card in backwards, observe the following:

- a. Match the keyed slot on the card to the key in the backplane connector. The component side should be to the right for a 53 Series Chassis and to the top for a 63 Series Chassis.
- b. There are two ejectors on the card. Make sure the ejector marked "53A-145" is at the top for a 53 Series Chassis and to the left for a 63 Series Chassis.

CAUTION:

The 53A-145 Card is a piece of electronic equipment and therefore has some susceptibility to electrostatic damage (ESD). ESD precautions must be taken whenever the module is handled.