GT6064 SERIES

MARVIN TEST SOLUTIONS
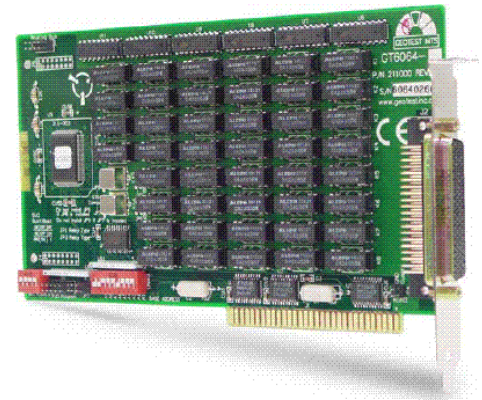
SCANNER / MULTIPLEXER CARD

- High density mulitplexer configurable as 64 Single ended or 32 Differential channels
- Four groups configurable as Single ended or four Differential channels each
- 100 V
- 250 V
- Fast switching time with 0.5 A rating per channel
- Fully software programmable
- Occupies one ISA board slot
- DISCONTINUED - SEE DETAILS BELOW

DESCRIPTION

The GT6064 is an ISA scanner / multiplexer that plugs directly into an ISA or GTXI PC mainframe. The GT6064 provides either differential or single-ended scanning capability and is configurable via software commands or DIP switches.

FEATURES

The GT6064 is available in two versions: commercial and high reliability (Hi-REL). The commercial version includes plastic molded DIP reed relays and is suitable for most commercial applications. The Hi-REL version uses quasi-military relays and is suitable for industrial and military applications.

ARCHITECTURE

The architecture of both versions consists of four scan groups, A through D, which provide scanning/multiplexing of eight differential or 16 single-ended channels. Mixed configurations of single-ended and differential channels can be used simultaneously. Typical configurations include:
- 1 x 64 Single-ended
- 1 x 32 Differential
- 2 x 1 x 32 Single-ended
- 2 x 1 x 16 Differential

The GT6064 can operate in three modes: direct switching, universal bus switching, or combination switching mode. In the direct mode, the GT6064 can route each scan group directly to a dedicated bus without routing through additional relays. This mode is differential only.

The GT6064 includes four universal buses, X0, Y0, X1 and Y1, which are accessible by each of the eight scanning groups in universal switching bus mode. Each scan group can be utilized in either differential or single-ended mode, extending its scanning and multiplexing capability to sixteen channels per group. Since the eight scanning groups are independent, they can be used for either scanning to a direct bus or the universal bus.

In combination switching mode, each scan group may be individually configured for use with direct or universal busses, thus allowing multiple configurations.

DIRECT MODE

In direct mode the GT6064 can route each of the scan groups directly to a dedicated bus without routing through additional relays. This mode is differential only.

UNIVERSAL BUS

In addition to the direct buses, the GT6064 includes two universal buses, Bus X and Bus Y, accessible by each of the four scanning groups. In this mode, each scan group can be utilized in either differential or single-ended mode, extending its scanning and multiplexing capabilities to 16 channels per group. Since the four scanning groups are independent of one another, they can beused for either scanning to a direct bus, or the universal bus.

COMBINATION MODE

Each scan group may be individually configured as direct or universal bus, thus allowing for multiple configurations.

LEGACY

PROGRAMMING

The GT6064 is supplied with software drivers to support development environments such as ATEasy, C++, C, Microsoft Visual Basic, Pascal, Delphi, and more. A virtual panel is provided for standalone applications and debug

APPLICATIONS

- Automatic Test Equipment (ATE)
- Data acquisition systems
- Process control systems
- Hi-density switching systems

SPECIFICATIONS

Contact Specifications	GT6064-C (Commercial)	GT6064-I (Hi-REL)	GT64-MS-M (Military)
Relay Contact Resistance	<0.2	<0.15	<0.1
Contact Life Rating - Low Level	5×10^6 (typ)	5×10^6 (typ)	1×10^7 (typ)
Contact Life Rating - 28 VDC @ 0.5 A	5×10^6 (typ)	5×10^5 (typ)	1×10^6 (typ)
Switchable Voltage Maximum (300 VAC if conformal coated)	100 VDC / 150 VAC	250 VDC / 150 VAC	250 VDC / 115 VAC
Switchable Current	0.2 A (max)	0.5 A (max)	0.5 A (max)
Contact Carry Current	0.5 A (max)	1.0 A (max)	1.0 A (max)
Operate Time	700 µs (max)	6 ms (max)	2 ms (max)
Frequency Response	10 MHz	20 MHz	20 MHz
Release Time	75 µs (max)	3 ms (max)	1.5 ms (max)
Power Requirements			
Operating Voltage	+5 VDC	+5 VDC	+5 VDC
Power Consumption	950 mA (typ) / 1.05 A (max)	950 mA (typ) / 1.25 A (max)	950 mA (typ) / 1.25 A (max)
Environmental			
Operating Temperature	0 °C to +40 °C	0 °C to +50 °C	-20 °C to +80 °C
Storage Temperature	-10 °C to +70 °C	-20 °C to +70 °C	-40 °C to +125 °C
Vibration	5 g at 500 Hz	10 g at 500 Hz	25 g at 3 kHz
Shock ½ Sine	5 g for 6 ms	20 g for 6 ms	55 g
Physical			
Size (Full size ISA slot)	13.25" x 4.875"		
Weight	250 g		

Note: Specifications are subject to change without notice

ORDERING INFORMATION

GT6064-C	64 Ch. Scanner/Multiplexer (Reed Relays), with Mating Connector (Replaces GT64-MS-C)
GT6064-I	64 Ch. Scanner/Multiplexer (Hi-Rel Relays), with Mating Connector (Replaces GT64-MS-I)
GT64-MS-M	64 Ch. Scanner/Multiplexer (Military Relays), with Mating Connector
ACCESSORY	
GT96002	Connector, D-Type 78-Pin Male with Crimp Pins
GT96078	78-Pin Connector to Screw Terminal Interface
GT97103	1 ft Harness, 78-Pin Male Connector on One End, Loose Wired (Numbered) Other End
GT97104	1 foot Harness, 78-Pin Male Connector on Both Ends
GT97102	3 ft Harness, 78-Pin Male Connector on One End, Loose Wired (Numbered) Other End
GT97107	3' Harness, 50-Pin Male Connector on One End, Loose Wired (Numbered) Other End
GX96106	6 ft. Harness, 78 Pin Male Connector on Both Ends
GT96203	Replacement Reed Relay for GX6264-I and GT1034
GT96202	Replacement Reed Relay for GX6264-C
GT96204	Replacement Military Relay (QPL) for GT1034 and GT6064-MS-M

LEGACY