

GX5733 SERIES

3U PXI MODULAR DIGITAL I/O CARD

- Three 32-bit TTL ports for a total of 96 TTL input or output channels
- One 32-bit configurable port accepting one GX57xx I/O module for customized input or output levels
- Available I/O modules include Digital Input Latch, Digital Output Latch, Optically Coupled Digital Power Output, Differential TTL (RS-422), LVDS, and input / output modules with vector memory



DESCRIPTION

The GX5733 is a 3U modular digital I/O card that offers up to 128 I/O channels. Designed for ATE, data acquisition, or process control systems where a large number of discrete I/O channels are required, the GX5733 offers the highest channel density and flexibility in the industry for a single slot, 3U PXI plug-in board. 96 channels support TTL levels and an additional 32 I/O channels can be customized by installing one of Geotest's GX57xx series I/O modules.

FEATURES

The GX5733's 128 digital inputs or outputs are arranged as four, 32-bit ports. Three of the ports provide 96 TTL levels and can be programmed for input or output in groups of 8. The remaining port requires a GX57xx I/O module and offers customized levels, handshaking, and on-board memory. The GX57xx expands the I/O capability of the GX5733 to 128 input or output channels.

I/O MODULES

The GX5733 can accommodate one GX57xx module and provides custom I/O levels and functions. I/O modules provide between 16 and 32 channels with some versions offering on-board memory.

GX5701 - Digital Input Latch (DIL)

The GX5701 provides 32 input channels with programmable threshold (-12 V to +12 V), handshaking for synchronization, and 16 KB of vector memory.

GX5702 - Digital Output Latch (DOL)

The GX5702 provides 32 TTL output channels, handshaking for synchronization, and 16 KB of vector memory.

GX5703 - LVDS Input Latch

The GX5703 provides 32 LVDS input channels, handshaking for synchronization, and 16 KB of vector memory.

GX5704 - Digital Power Output Latch (DPO)

The GX5704 provides 32 optically isolated Open-Collector Outputs capable of driving signals up to 50 V with 500 mA current sink capability, handshaking for synchronization, and 16 KB of vector memory.

GX5705 - RS-232 to TTL (RTT)

The GX5705 provides 32 RS-232 inputs.

GX5709 - RS-422 Differential Digital I/O

The GX5709 provides 32 RS-422 differential I/O channels. Direction is programmable in groups of eight.

GX5710 - LVDS Differential Digital I/O

The GX5710 provides 32 LVDS differential I/O channels. Direction is programmable in groups of eight.

GX5711 - LVDS to TTL Converter

The GX5711 bi-directional I/O module converts 16 differential LVDS inputs to TTL outputs or 16 TTL inputs to 16 differential LVDS outputs.

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GX5712 - RS-422 to TTL Converter

The GX5712 bi-directional I/O module converts 16 differential RS-422 inputs to TTL outputs or 16 TTL inputs to 16 differential RS-422 outputs.

SOFTWARE

The GX5731 is supplied with a virtual instrument panel, which includes 32-bit DLL driver libraries and documentation. The virtual panel can be used to interactively to monitor and control the instrument from a window that displays the instrument's current settings and measurements.

In addition, various interface files are provided for the support of programming tools and languages such as ATEasy, Microsoft® and Borland® C/C++, Microsoft Visual Basic®, Borland Delphi, LabVIEW, and more.

APPLICATIONS

- Factory Automation
- Process Control
- Data Acquisition
- Automatic Test Equipment (ATE)

SPECIFICATIONS

TTL I/O LEVELS:	MIN	MAX
LOW	0 V	0.8 V
HIGH	2.0 V	5.0 V
NUMBER OF CHANNELS:	96	
POWER		
3.3 VDC	0.6 A Max	
5 VDC	0.8 A Max	
ENVIRONMENTAL		
TEMPERATURE OPERATING STORAGE	0° to 55° C -20° C to 85° C	
SIZE	3U PXI	
WEIGHT	9 oz	
GX5701		
INPUT RANGE THRESHOLD (PROGRAMMABLE)	-50 V (Min.) 50 V (Max.)	
PROGRAMMING RESOLUTION	1 mv	
ACCURACY	±0.05 V Typical	
SETUP TIME	100 nSec Typical	
NUMBER OF CHANNELS	32 (all input)	

MEMORY	4,096 vectors
MAX. INPUT RATE	> 1 KHz
POWER	Supplied by GX5733
TEMPERATURE OPERATING STORAGE	0° to 55° C -20° C to 85° C
SIZE	5" x 2.1"
WEIGHT	6 oz.
GX5702	
OUTPUT LEVELS	TTL (5 V)
SINK CURRENT	40 mA Max
SOURCE CURRENT	1.8 mA Max
SKEW (BETWEEN CHANNELS)	10 nSec Typical
NUMBER OF CHANNELS	32 (all output)
MEMORY	4,096 vectors
MAX. OUTPUT RATE	> 1 KHz
POWER	Supplied by GX5733
TEMPERATURE OPERATING STORAGE	0° to 55° C -20° C to 85° C
SIZE	5" x 2.1"
WEIGHT	6 oz.
GX5703	
INPUT LEVELS	LVDS (differential)
SETUP TIME	100 nSec Typical
NUMBER OF CHANNELS	32 (all input)
MEMORY	4,096 vectors
MAX. INPUT RATE	> 1 KHz
POWER	Supplied by GX5733
TEMPERATURE OPERATING STORAGE	0° to 55° C -20° C to 85° C
SIZE	5" x 2.1"
WEIGHT	6 oz.
GX5704	
OUTPUT LEVELS	Open Collector (50 V Max)
SINK CURRENT (ALL CHANNELS)	125 mA Max (simultaneous)
SINK CURRENT (ONE CHANNEL)	500 mA Max
SKEW (BETWEEN CHANNELS)	10 nSec Typical
NUMBER OF CHANNELS	32 (all output) isolated
MEMORY	4,096 vectors

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SPECIFICATIONS (CONT'D)

MAX. INPUT RATE	> 1 KHz
POWER	Supplied by GX5733
TEMPERATURE OPERATING STORAGE	0° to 55° C -20° C to 85° C
SIZE	5" x 2.1"
WEIGHT	6 oz.
GX5705	
INPUT LEVELS	RS-232
NUMBER OF CHANNELS	32 (all input)
POWER	Supplied by GX5733
TEMPERATURE OPERATING STORAGE	0° to 55° C -20° C to 85° C
SIZE	5" x 2.1"
WEIGHT	6 oz.
GX5709	
OUTPUT LEVELS	RS-422 (differential)
INPUT LEVELS	RS-422 (differential)
NUMBER OF CHANNELS	32 (input or output, programmable in groups of eight)
POWER	Supplied by GX5733
TEMPERATURE OPERATING STORAGE	0° to 55° C -20° C to 85° C
SIZE	5" x 2.1"
WEIGHT	6 oz.
GX5710	
OUTPUT LEVELS	LVDS (differential)
INPUT LEVELS	LVDS (differential)
NUMBER OF CHANNELS	32 (input or output, programmable in groups of eight)
POWER	Supplied by GX5733
TEMPERATURE OPERATING STORAGE	0° to 55° C -20° C to 85° C
SIZE	5" x 2.1"
WEIGHT	6 oz.

GX5711	
OUTPUT LEVELS	TTL or LVDS (differential)
INPUT LEVELS	LVDS (differential) or TTL
NUMBER OF CHANNELS	16 (all input or output)
POWER	Supplied by GX5733
TEMPERATURE OPERATING STORAGE	0° to 55° C -20° C to 85° C
SIZE	5" x 2.1"
WEIGHT	6 oz.
GX5712	
OUTPUT LEVELS	TTL or RS-422 (differential)
INPUT LEVELS	RS-422 (differential) or TTL
NUMBER OF CHANNELS	16 (all input or all output)
POWER	Supplied by GX5733
TEMPERATURE OPERATING STORAGE	0° to 55° C -20° C to 85° C
SIZE	5" x 2.1"
WEIGHT	6 oz.

Note: Specifications are subject to change without notice.

ORDERING INFORMATION

GX5733	Advanced static I/O Board
GX5701	Digital input latch module for GX5733
GX5702	Digital output latch module for GX5733
GX5703	LVDS input latch module for GX5733
GX5704	Digital power output latch module for GX5733
GX5705	RS-232 to TTL module for GX5733
GX5709	RS-422 differential digital I/O module for GX5733
GX5710	LVDS differential digital I/O module for GX5733
GX5711	16 Ch. LVDS to TTL bi-directional converter for GX5733
GX5712	16 Ch. RS-422 to TTL bi-directional converter for GX5733
GT95014	Connector interface for GX5xxx/GX5732, SCSI to 100 Mil Grid, Single Ended
GT95015	Connector interface for GX515x, SCSI to 100 Mil Grid, Differential
GT95020	Connector I/F for GX515x, SCSI to 100 Mil Grid, single ended (both 64 & 14 pin)
GT95021	2' shielded cable for GX5732 (68-pin)
GT95022	3' Shielded cable for GX5732 (68-pin)
GT95028	10' Shielded cable for GX5732 (68-pin)
GT95031	6' Shielded cable for GX5732 (68-pin)

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PIN ASSIGNMENT

GX5733 WITH GX5701 MODULE CONNECTOR J1			
IN(n)0+	1	35	GND
IN(n)1+	2	36	GND
IN(n)2+	3	37	GND
IN(n)3+	4	38	GND
IN(n)4+	5	39	GND
IN(n)5+	6	40	GND
IN(n)6+	7	41	GND
IN(n)7+	8	42	GND
IN(n)8+	9	43	GND
IN(n)9+	10	44	GND
IN(n)10+	11	45	GND
IN(n)11+	12	46	GND
IN(n)12+	13	47	GND
IN(n)13+	14	48	GND
IN(n)14+	15	49	GND
IN(n)15+	16	50	GND
IN(n)16+	17	51	GND
IN(n)17+	18	52	GND
IN(n)18+	19	53	GND
IN(n)19+	20	54	GND
IN(n)20+	21	55	GND
IN(n)21+	22	56	GND
IN(n)22+	23	57	GND
IN(n)23+	24	58	GND
IN(n)24+	25	59	GND
IN(n)25+	26	60	GND
IN(n)26+	27	61	GND
IN(n)27+	28	62	GND
IN(n)28+	29	63	GND
IN(n)29+	30	64	GND
IN(n)30+	31	65	GND
IN(n)31+	32	66	GND
BufRdy	33	67	XStrb
OutStrb	34	68	XStrbEn

GX5733 WITH GX5702 OR GX5704 MODULE CONNECTOR J1			
OUT(n)0+	1	35	GND
OUT(n)1+	2	36	GND
OUT(n)2+	3	37	GND
OUT(n)3+	4	38	GND
OUT(2)4+	5	39	GND
OUT(n)5+	6	40	GND
OUT(n)6+	7	41	GND
OUT(n)7+	8	42	GND
OUT(n)8+	9	43	GND
OUT(2)9+	10	44	GND
OUT(n)10+	11	45	GND
OUT(n)11+	12	46	GND
OUT(n)12+	13	47	GND
OUT(n)13+	14	48	GND
OUT(2)14+	15	49	GND
OUT(n)15+	16	50	GND
OUT(n)16+	17	51	GND
OUT(n)17+	18	52	GND
OUT(n)18+	19	53	GND
OUT(2)19+	20	54	GND
OUT(n)20+	21	55	GND
OUT(n)21+	22	56	GND
OUT(n)22+	23	57	GND
OUT(n)23+	24	58	GND
OUT(2)24+	25	59	GND
OUT(n)25+	26	60	GND
OUT(n)26+	27	61	GND
OUT(n)27+	28	62	GND
OUT(n)28+	29	63	GND
OUT(2)29+	30	64	GND
OUT(n)30+	31	65	GND
OUT(2)31+	32	66	GND
BufRdy	33	67	XStrb
OutStrb	34	68	XStrbEn

PORTS 2-4 DIGITAL I/O CONNECTORS J2-J4			
I/On0	1	35	GND
I/On1	2	36	GND
I/On2	3	37	GND
I/On3	4	38	GND
I/On4	5	39	GND
I/On5	6	40	GND
I/On6	7	41	GND
I/On7	8	42	GND
I/On8	9	43	GND
I/On9	10	44	GND
I/On10	11	45	GND
I/On11	12	46	GND
I/On12	13	47	GND
I/On13	14	48	GND
I/On14	15	49	GND
I/On15	16	50	GND
I/On16	17	51	GND
I/On17	18	52	GND
I/On18	19	53	GND
I/On19	20	54	GND
I/On20	21	55	GND
I/On21	22	56	GND
I/On22	23	57	GND
I/On23	24	58	GND
I/On24	25	59	GND
I/On25	26	60	GND
I/On26	27	61	GND
I/On27	28	62	GND
I/On28	29	63	GND
I/On29	30	64	GND
I/On30	31	65	GND
I/On31	32	66	GND
VCC	33	67	VCC
GND	34	68	GND