ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *DynamicSignals / GaGe CompuGen 3250* at our website: *Click HERE*

We offer the widest range of high-speed digitizers and instrumentation cards available on the market today. Our powerful PC-based instrumentation products allow you to create reliable, flexible and high-performance solutions quickly and easily.

Reduce development time and costs for testing complex applications such as radar, wireless communications, spectroscopy, etc. by using our Windows-based application software or our SDKs.

APPLICATIONS

Digital pattern generator
Programmable clock source
ATE digital signal source
Communications bus simulation
Digital counter simulation
Simulation of state machines
Microprocessor testing

CompuGen 3250

High-speed digital output card



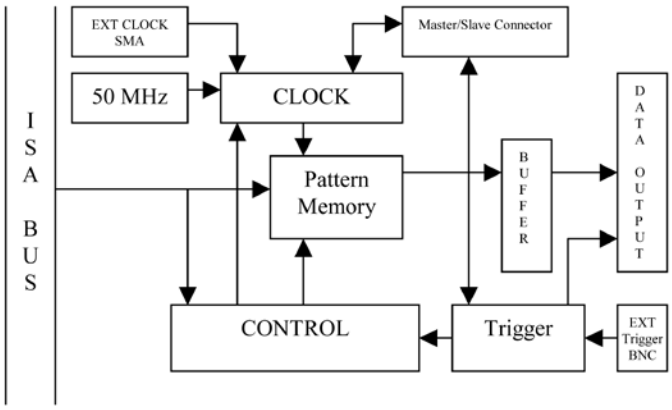
Fast digital pattern generator with large memory buffer for electronic and communication simulation and test.

FEATURES

- 32 bit digital output
- 50 MHz clock rate
- Up to 8 Meg x 32 on-board pattern memory
- One-shot, multi-shot or endless looping of digital patterns
- Up to 256 bit output using an 8 card Master/Slave system
- Free GageBit software allows creating and editing of digital patterns
- Free Software Development Kits for C/C++, MATLAB and LabVIEW

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

CompuGen 3250 Simplified Block Diagram



COMPUGEN 3250

Digital design very often involves testing the response of the circuit to a set of predefined inputs or test vectors. Most engineers have to build small wire-wrapped cards, or "kludges," that generate these test vectors.

Not only is this method cumbersome and prone to human error, it also does not provide enough flexibility to test digital systems, such as microprocessors, which need non-repetitive test vectors.

With the advent of the CG3250, these "kludges" are a thing of the past. With the CG3250, the most complex test vectors can be generated in a matter of minutes by simply typing them out on a PC.

MEMORY DEPTH

CG3250 boasts very deep on-board buffers in which the digital patterns are uploaded by the software and then output at high speeds.

The on-board buffers can be as deep as 8 Million 32 bit words.

DATA ENTRY

GageBit software, which is included with CG3250, allows up to 32 bit data to be input in either binary or hexadecimal mode using the keyboard of the PC.

Data can also be viewed as a logic-analyzer-like display of digital bits.

EDITING OPERATIONS

The data entered in GageBit can be edited very easily. In addition to simple keying in of data, the user can also select a portion of the data for logical operations such as AND, OR, XOR. This selected portion can also be FILLed with a specific pattern.

DIGITAL OR LIST DISPLAY

With GageBit, the user has the option of viewing the data either in a list format or as a digital timing diagram.

List display is useful for editing waveforms while Digital display can be used to compare the inputs against the outputs being displayed from a CompuScope 3200 or a Logic Analyzer.

LOAD, STORE AND PRINT

Unlike the stand-alone Pattern Generators, CG3250 allows a very easy method of loading, storing and printing data. All it takes is a few keystrokes in GageBit.

GENERATION MODES

The CG3250 supports the following generation modes:

Endless Looping: The digital pattern entered by the user is seamlessly repeated over and over again by the CG3250 in this mode. This mode is useful when continuous signals, such as system clock or timer simulation, have to be generated.

Single Shot: The digital pattern entered by the user is output only once in the Single Shot Mode. This mode is useful for burst operations.

Since the CG3250 is "Hardware Re-Triggerable", One-Shot mode can be used with an external or software trigger to yield a powerful tool which generates a specific pattern each time a trigger is received.

This feature is very popular for users doing any kind of pulse-echo measurements, such as radar, ultrasound and disk testing.

Multi Shot: The digital pattern entered by the user is seamlessly generated a specified number of times.

Since the CG3250 is "Hardware-Re-Triggerable," Multi-Shot mode can be used with an external or software trigger to yield a powerful tool that generates a specific pattern multiple times each time a trigger is received.

CRYSTAL-BASED STABILITY

The CG3250 is controlled by a stable crystal oscillator. This provides temperature stability, long-term stability and precision far better than other methods used to generate test vectors.

Unlike many other generators, the CG3250 does not use a Phase Locked Loop (PLL)-based clock, which may cause very large phase errors to accumulate over a few million clock cycles. These phase errors are not noticeable in most PLL-based generators, which usually have very short pattern memory so that the errors are not significant.

EXTERNAL CLOCK UPGRADE

Optionally, users can provide their own clock source to the CG3250. This is necessary for the generation of digital patterns which need to be coherent with the rest of the test system or which need a special clock frequency that is not available on the CG3250.

The external clocking signal must be a TTL/CMOS signal with a minimum positive or negative pulse width of 10 nanoseconds.

The maximum frequency of an external clocking signal must not be higher than 50 MHz. Contact the factory for faster clock rates.

In externally clocked systems, the CG3250 may be armed to accept a trigger in the absence of a clocking signal. However, a trigger will not be registered until the clock signal becomes active.

CLOCK OUTPUT

One of the signals on the CG3250 output connector is Clock Out. This signal is the one which clocks out the pattern data from the CG3250.

In the case of internal clocking, the Clock Out signal is a continuous clock signal with the internal frequency selected by the user. When External Clocking is used, the Clock Out signal is a copy of the external clock provided by the user.

PROGRAMMABILITY

The CG3250 is fully programmable for embedded applications.

Users may write their own test programs using Gage's powerful CompuGen Software Development Kits (SDKs) for C/C++, MATLAB or LabVIEW. These SDKs are provided with your CG3250.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

TRIGGERING

External and sofware triggering capability is provided for burst mode operation. A digital pattern will be produced as a single or multiple bursts upon receiving a trigger either through software or upon the rising or falling edge of a TTL/CMOS-level external trigger input.

Data output starts within 3 clock cycles of receiving a trigger signal.

HARDWARE RETRIGGERING

A very powerful triggering feature that is available on the CG3250 is its ability to do Hardware Re-Triggering.

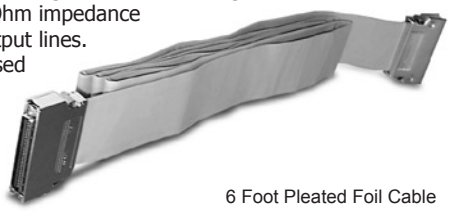
Once generation of an output pattern has terminated, the trigger circuitry is re-armed in hardware. No software interaction is required.

This feature allows the user to build sophisticated systems that can respond to a system trigger in real-time even if the software environment is non-real time, e.g. Windows.

OUTPUT CABLE

The CG3250 outputs data over a connector built specifically for high-speed digital transmission.

As such, any cable assembly that must interface to this connector must also very specialized. A 6 foot Pleated Foil Cable that meets this requirement is available from Gage at an extra charge. This cable guarantees 50 Ohm impedance for each of the CG3250 output lines. The cable uses a teflon-based di-electric and a pleated copper foil, which also virtually eliminates EMI radiation from the cable.



6 Foot Pleated Foil Cable

BREAKOUT BOARD

In order to make it easier for users to monitor data outputs from the CG3250, a break-out board has been designed which provides all 32 data outputs, the clock output as well as the SYNC output on separate BNC connectors.

Given the 50 Ohm output impedance of CG3250, it is possible to connect each of these BNC connectors to an oscilloscope or user-circuitry using RG-58 co-axial cables or oscilloscope probes.

This break-out board can be purchased from Gage for an extra charge.

The break-out board is not constructed using terminated traces with controlled impedances. Consequently, the break-out board should only be used for viewing CG3250 signals and should not be incorporated into final digital circuitry.

COMPLEMENT TO A COMPUSCOPE 3200

The CG3250 is a natural complement to a CompuScope 3200. The CG3250 and CS3200 use the same connector and pin assignments.

The CG3250 may be used to generate necessary test vectors to stimulate a circuit under test and the response of the circuit may be recorded by a CS3200.

In fact, GageBit software allows the user to control both a CG3250 and a CS3200 to do complete digital stimulus-response testing.

SIMULATE A DIGITAL STREAM

The CG3250 lends itself to usage as a simulator of complex aperiodic digital signals, such as those found in the communications industry.

For example, the next time you need to simulate the output of an ADC chip in your communications system, all you have to do is program the CG3250 to output a digital pattern that is equivalent to the ADC output. Different ADC logic formats (e.g. binary or 2s-complement) may easily be simulated.

Pin Layout on CG3250 Connector			
1	CLK	35	GND
2	D0	36	GND
3	D1	37	GND
4	D2	38	GND
5	D3	39	GND
6	D4	40	GND
7	D5	41	GND
8	D6	42	GND
9	D7	43	GND
10	D8	44	GND
11	D9	45	GND
12	D10	46	GND
13	D11	47	GND
14	D12	48	GND
15	D13	49	GND
16	D14	50	GND
17	D15	51	GND
18	D16	52	GND
19	D17	53	GND
20	D18	54	GND
21	D19	55	GND
22	D20	56	GND
23	D21	57	GND
24	D22	58	GND
25	D23	59	GND
26	D24	60	GND
27	D25	61	GND
28	D26	62	GND
29	D27	63	GND
30	D28	64	GND
31	D29	65	GND
32	D30	66	GND
33	D31	67	GND
34	TRIG IN	68	GND

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

SYSTEM REQUIREMENT
ISA bus compatible PC with at least one free ISA slot; 128 MB RAM, 50 MB free space on hard drive and SVGA video.

SIZE
Single-slot full-length ISA bus printed circuit board

POWER
20 Watts at +5 Volts

DIGITAL OUTPUT

Number of output bits:	32
Number of output clocks:	1
Number of output SYNC:	1
Voltage Levels:	TTL/CMOS
1 MΩ Load:	0 to 5 Volts
50 Ω Load:	0 to 3.5 Volts
Internal Clocking Speed:	50 MHz, 25 MHz, 10 MHz, 5 MHz, 2 MHz, 1 MHz, 500 kHz, 200 kHz, 100 kHz, 50 kHz, 20 kHz, 10 kHz, 5 kHz, 2 kHz, 1 kHz, 500 Hz, 200 Hz, 100 Hz, 50 Hz, 20 Hz, 10 Hz, 5 Hz, 2 Hz, 1 Hz
Buffer Depth:	Max. 8 million double words (32 bits each) Min. 4 double words
Minimum Record Length:	8 double words (32 bits wide)
Record Length Resolution:	2 double words (32 bits wide)
Output Impedance:	50 Ω

MATING PARTS

On-Board Connector:	68 pin MDR Type, 3M p/n 10268-55H3VC
Mating Connector:	Connector is 3M p/n 10168-6000EC, Hood is 3M p/n 10368-A230-00
Cable:	6 foot 68 Wire Pleated Foil Cable, available from Gage at an extra charge. The 68 wire cable provides 50 Ω characteristic impedance for all outputs. Pleated foil construction virtually eliminates EMI.

MEMORY DEPTH

Memory Depth:	256K, 512K, 1M, 2M, 4M, 8 M double words (1 sample = 32-bit word = 1 double word)

TRIGGERING

Source:	Internal or External
External Trigger:	0 to 5 Volt TTL
Trigger Slope:	Rising or Falling
Connector:	BNC

EXTERNAL CLOCK INPUT (OPTIONAL)

Clock Frequency:	Minimum DC, Maximum 50 MHz
Voltage:	TTL/CMOS
Connector:	On-board SMA connector

MULTI-CARD SYSTEMS

Operating Modes:	Master/Slave or Multiple/Independent
Maximum Number of Cards:	
Master/Slave:	8 (1 Master and 7 Slave cards)
Multiple/Independent:	Limited by backplane

OPERATING SYSTEMS SUPPORTED
Windows 95/98/ME/2000/XP CompuGen Driver version 1.3x.xx

SOFTWARE DEVELOPMENT KITS (SDK)
CompuGen SDK for C/C++ for Windows
CompuGen SDK for MATLAB for Windows
CompuGen SDK for LabVIEW for Windows

APPLICATION SOFTWARE
GageBit Application for Windows

WARRANTY
One year parts and labor
All specifications subject to change without notice;
specifications are not guaranteed under all possible combinations of modes of operation.

RECOMMENDED ACCESSORIES
6 foot Pleated Cable
BNC Breakout Board

MATERIALS SUPPLIED
One CompuGen 3250 Card
One Gage CompuGen ISA CD
includes GageBit Software, Drivers, and SDKs

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ORDERING INFORMATION

Hardware & Upgrades	
CompuGen 3250 - 256K	325-101-001
CompuGen 3250 - 512K	325-101-002
CompuGen 3250 - 1M	325-101-003
CompuGen 3250 - 2M	325-101-004
CompuGen 3250 - 4M	325-101-005
CompuGen 3250 - 8M	325-101-006
CG3250 Memory Upgrades	Contact Factory
CG3250: External Clock Upgrade	325-181-016
CG3250: Master Multi-Card Upgrade	325-181-018
CG3250: Slave Multi-Card Upgrade	325-181-019
CG32X0: BNC Breakout Board	325-181-020
CG3250: 6' Pleated Cable	325-181-021
Application Software	
GageBit Digital I/O Software	Included
Software Development Kits (SDKs)	
CompuGen SDK for C/C++	Included
CompuGen SDK for MATLAB	Included
CompuGen SDK for LabVIEW	Included

All Upgrades performed at the factory

Updated July 7th, 2006

Copyright © 2004, 2006 Gage Applied Technologies. All rights reserved.

900 N. State St.
Lockport, IL 60441-2200

Toll-Free (US and Canada):
phone 1-800-567-4243
fax 1-800-780-8411

Direct:
phone +1-514-633-7447
fax +1-514-633-0770

Email:
prodinfo@gage-applied.com

To find your local sales representative or distributor or to learn more about GaGe's products visit:

www.gage-applied.com

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP