

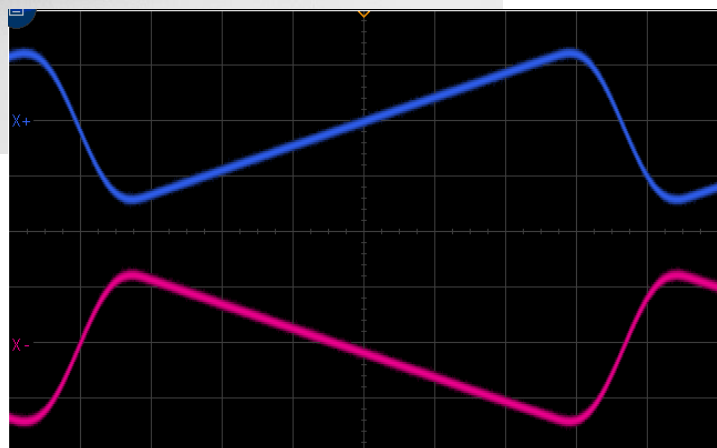
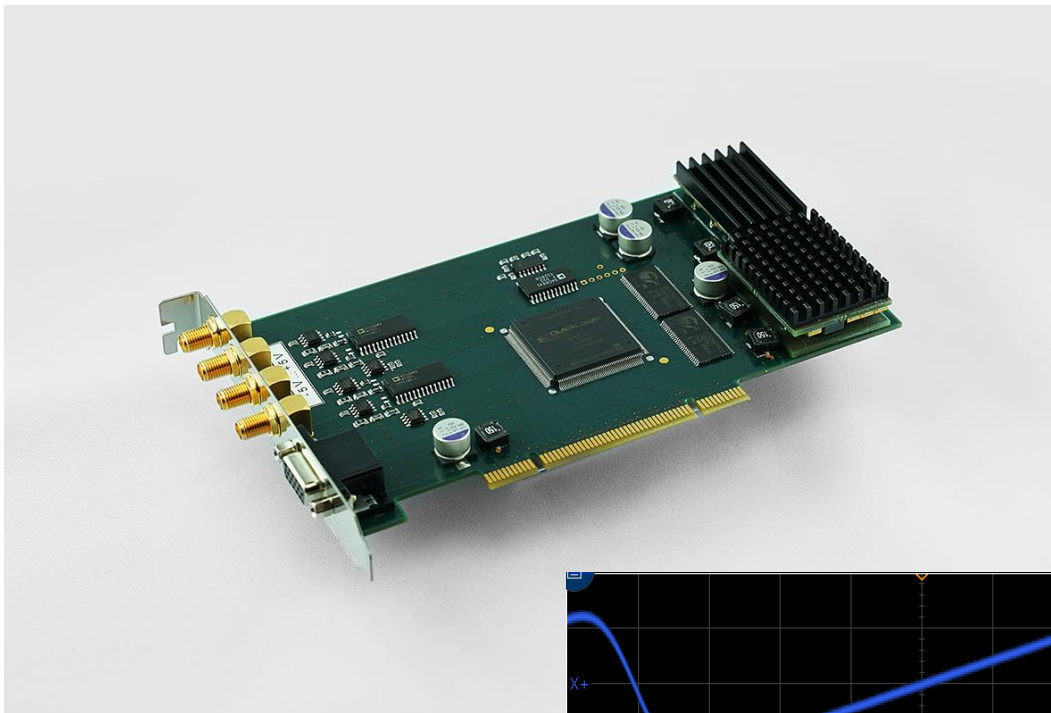


GVD-120 /-120PCle

Scan Controller Card

Scan Controller Card

Scan Controller for Galvanometer and Piezo Scanners
Scan Waveforms Generated Purely by Hardware
Differential Output Voltage X+/X-, Y+/Y-
Standard Output Voltage Range +/- 2.5 V
Maximum Output Voltage Range +/- 10 V
Linear-Ramp or Sinusoidal Scan Modes
Variable Scan Speed and Scan Amplitude
Fast Scan due to Cycloid Flyback Characteristics
Pixel Times Down to 0.6 μ s
Control of 2 Lasers
Laser Power Control, Beam Blanking
Laser ON/OFF Control and Laser Multiplexing
PCI and PCIe Versions Available



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GVD-120 /-120PCle

Scan Controller Card

Differential Outputs (X+/X- and Y+/Y-)

Voltage Range Options	
Maximum	±10 V
Standard	±2.5 V
Unipolar (Example)	0 ... +10 V
Output Impedance	50 Ω

Scan Characteristics

Scan Format	Up to 4096 x 4096
Scan Modes	Single-Point, Linear-Ramp, Stepped Ramp, Sinusoidal
Pixel Time	Down to 600 ns
Flyback Characteristic	Cycloid with Optional Beam Blanking

Scan Clocks (Frame, Line, Pixel)

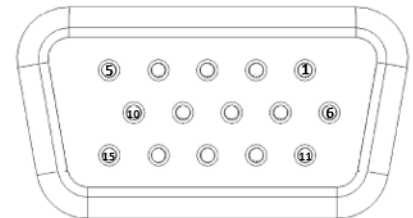
Output Voltage	TTL Compatible
Signal Polarity (Selectable by Software)	Negative / Positive
Pulse Width (Typ.)	
Frame	100 μs
Line	10 μs
Pixel	150 ns

Laser Control (Up to 2 Laser)

Scan Synchronous Laser Multiplexing	OFF, Pixel, Line, Frame
Laser Power (Voltage Range)	0 ... +10 V

PIN Output Scan Control Connector

1	+5 V
2	Laser Routing
3	Laser 1 ON
4	Laser 2 ON
5	GND
6	- do not connect -
7	- do not connect -
8	Frame Clock (to SPC Module)
9	Line Clock (to SPC Module)
10	Laser 1 Power
11	Laser 2 Power
12	Pixel Clock (to SPC Module)
13	- do not connect -
14	- do not connect -
15	GND



Operation Environment

Computer / Operating System	PC Pentium, multi-core, >8GB RAM, Windows 10, Windows 11
Bus Connector	PCI or PCle
Dimensions	176 mm x 105 mm x 22 mm

Related Literature

W. Becker, The bh TCSPC Handbook, 9th edition (2021). 950 pages, available on <https://www.becker-hickl.com>. Please contact bh for printed copies.

The bh TCSPC Technique, Principles and Applications. Overview brochure, 27 pages. Available on <https://www.becker-hickl.com>

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