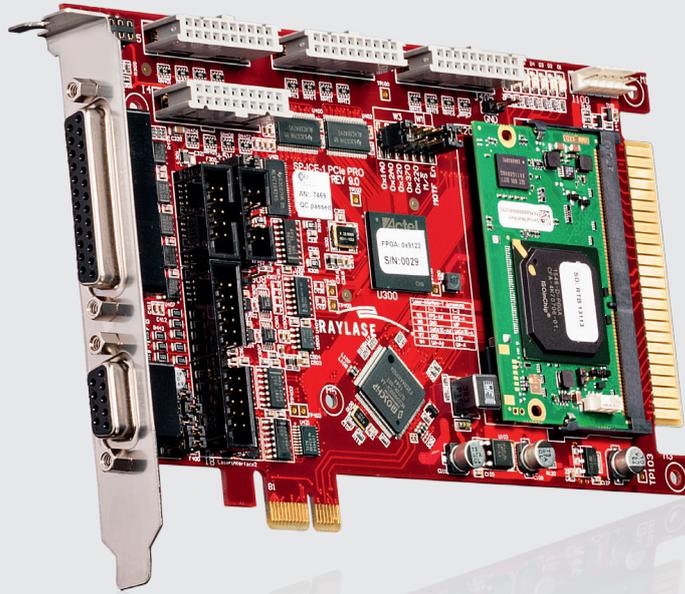


# SP-ICE-1 PCIe PRO



CONTROL CARD FOR LASER AND DEFLECTION UNITS

FOR CHALLENGING INDUSTRIAL APPLICATIONS



- Micro SD Card with 4 GB memory on-board
- Master-slave and master-master operation
- Mark-on-the-fly operation as an option
- Interface XY2-100 enhanced with feedback channel
- Interfaces: PCIe

## ABSOLUTE CONTROL FOR BEST PERFORMANCE

### YOUR BENEFITS

The SP-ICE-1 PCIe PRO control card offers highest precision, flexibility, and easy integration. Windows based DLLs are included. Scanning motion and laser control signals are precisely synchronized with the on-board processor unit. Dual buffering allows for downloading of the next job whilst executing the current job.

### INNOVATION AND QUALITY

Innovation and maintaining high product quality standards are our priorities at RAYLASE. All our products are developed, built and tested in our own laboratories and production facilities. Through our world-wide support network we can offer best maintenance and rapid service for our customers.

### INTERFACES

The SP-ICE-1 PCIe PRO control card interfaces to deflection units via the XY2-100 standard/enhanced. Laser control signals are: laser modulation, laser gate, first pulse suppression and lamp/diode current. Analog and digital signals are available. Buffered and unbuffered I/O ports are available for interfacing to external equipment.

### OPTIONS

Master-Slave configuration: for highest throughput. Control up to 4 deflection units simultaneously. Master-Master configuration: allows minimum process time combined with maximum flexibility. Up to 4 lasers and 4 deflection units can be controlled independently. Fiber laser-Interface board: for controlling fiber lasers in combination with a RAYLASE control card.

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## FURTHER PERFORMANCE FEATURES

- On-board real time processor
- Precise synchronization between scanning motion and laser control signals
- PCIe bus card with plug-and-play capability
- Interface to XY- and XYZ-deflection units based on XY2-100 standard/enhanced
- 16 bit resolution in the working field
- 20  $\mu$ s output step period
- Programmable laser control signals for commonly used lasers (e. g. Nd:YAG, CO<sub>2</sub>, ...)
- Separate control of standby pulse frequency and pulse width in CO<sub>2</sub> mode
- Selectable polarity of laser signals
- 2 x analog (0–10 V) or 1 x digital output signals for diode or lamp current with 8 bit resolution
- Buffered and unbuffered digital input and output signals
- Dimensions: length 175 mm, width 107 mm
- Mark-on-the-fly operation optional
- Master-slave or master-master operation
- Interface for different fiber laser

## DLL driver software for Windows

- Real time control of deflection unit and laser
- DLL driver software for Windows Vista, Windows 7 or Windows 10
- Double buffer concept with 1,000,000 commands per list
- Simultaneous processing of current list and downloading of new commands to next list
- Scalable output of new data with sub 1  $\mu$ s resolution
- Shortest possible output interval 20  $\mu$ s (variable in 1  $\mu$ s steps)

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