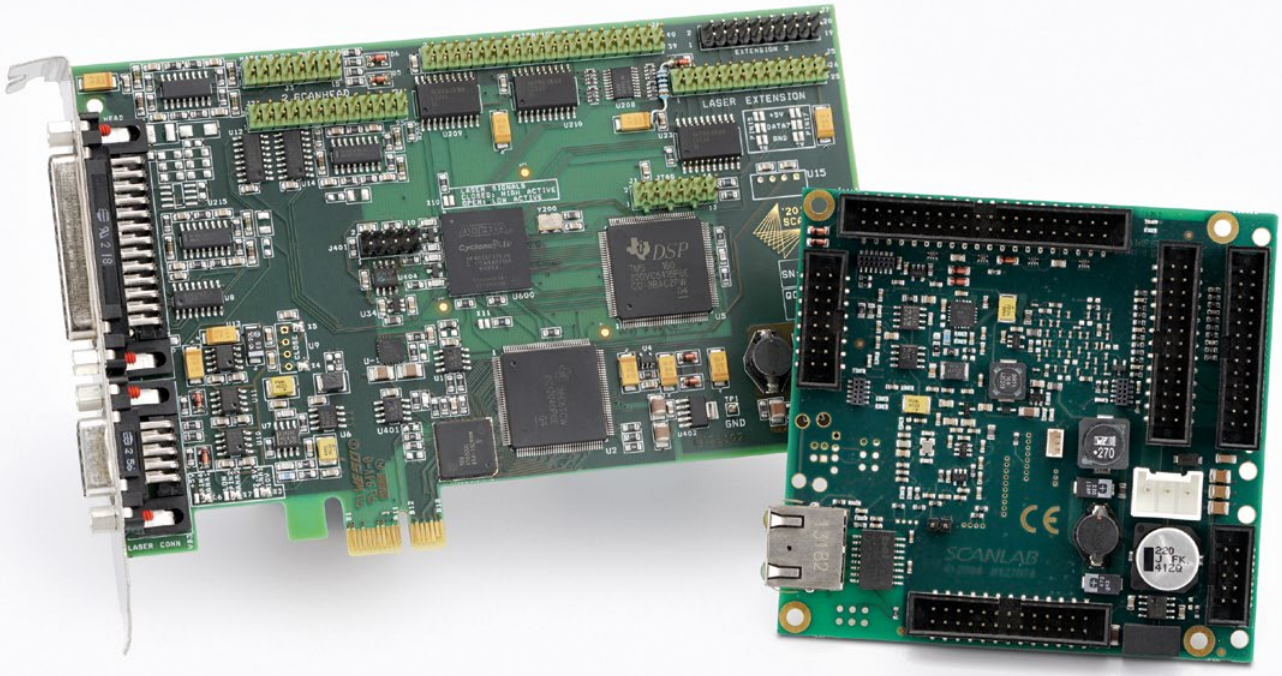


Control and Versatility

The RTC4 series of **control boards** is available with two different interfaces:

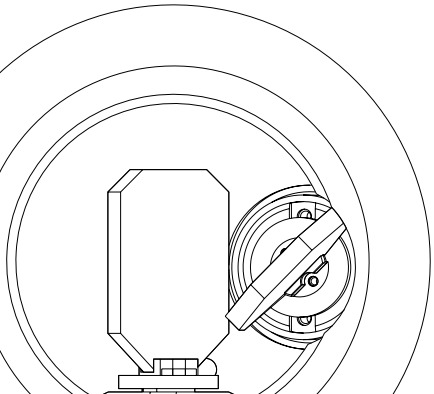
- PCI Express (RTC4 PCIe)
- Ethernet (RTC4 Ethernet).

Equipped with a powerful signal processor, these boards enable synchronous, real-time control of scan systems and lasers. Included DLLs facilitate straightforward program development under Windows. Alternatively, industry-proven software Packages from various third-party suppliers are also available for handling a palette of standard applications.

Every 10 µs, a 16-bit control signal is transmitted to the scan system. The RTC board's processor performs vital steps such as micro-vectorization and image field correction. Various programmable laser signals are available for vector and bitmap processing.

For controlling external components, the RTC4 boards provide 16 digital input ports and 16 digital output ports. Additionally, a multitude of available options (e.g. 3D, galvanically isolated laser signals, processing-on-the-fly) give system integrators maximum flexibility in meeting diverse customer requirements.

The RTC4 Ethernet dispense with needing to integrate a PC into laser processing machines. End customers can connect their own PCs/laptops via Ethernet and this control board also eliminates requiring a PC to be near the scan system (as is normally the case).



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Common Specifications

- XY2-100 enhanced protocol
- 16-bit positioning resolution
- 10 µs output period
- Driver for Windows 10 (x64)
  Legacy driver for previous Windows versions
- Outputs for controlling a scan head and a laser
- Various laser modes selectable (e.g. YAG modes, CO2 mode, fiber laser, polarity)
- Two 10-bit analog outputs
- One 8-bit digital output
- One 16-bit digital output and one 16-bit digital output for controlling external components
- Support of i*DRIVE* technology for scan system diagnostics and tuning selection

Further Options

- Functionality for controlling of 3-axis scan systems
- Processing-on-the-fly functionality for processing objects in motion
- Functionality for simultaneous control of two scan systems
- Opto-decoupled laser control signals

Interface-Dependent Specifications

	RTC4 PCIe	RTC4 Ethernet
PC interfaces	PCI Express	Ethernet (10/100 MBit/s)
Multi board functionality	yes, up to 16 boards in 1 PC	yes
Control of vario*SCAN*$_{FLEX}$ (with step motor extension)	yes	no
Power requirements	via PCIe bus	+12 … 48 V DC (max. power draw 2 W) [1]
Mechanical dimensions	(161 × 106) mm	(96 × 90) mm

[1] measured without any attached peripherals

11/ 2026 Information is subject to change without notice.
Product photos are non-binding and may show customized features.

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