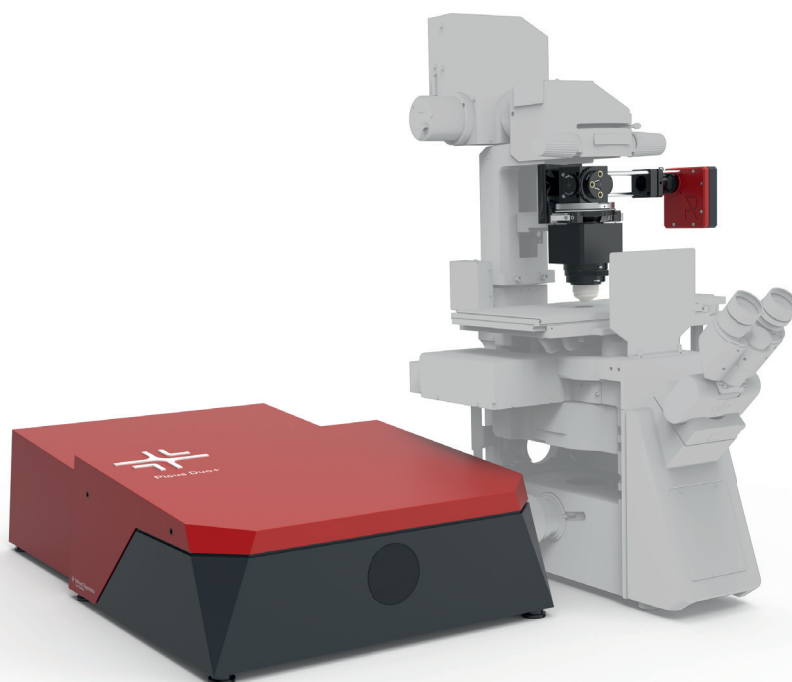


Picus Duo+

Upgrade your microscope with
high-speed, full-spectrum SRS

refined-lasers.com

- ✓ Multicolor SRS & CARS imaging
- ✓ Full-spectrum Raman coverage
- ✓ Millisecond spectral tuning
- ✓ TPEF & SHG ready
- ✓ Pre-aligned single output
- ✓ Compact & air-cooled
- ✓ Integrated beam shaping
- ✓ Automated power control
- ✓ Plug & play microscope upgrade



The Picus Duo+ builds on our Picus Duo platform with integrated automation and beam shaping to upgrade laser scanning microscopes for SRS and CARS imaging. This all-in-one solution minimizes setup time and ensures reproducible, high-contrast imaging, allowing you to focus on your science rather than the hardware.

Two synchronized and overlapped picosecond beams cover the full Raman range from 700 to 3100 cm^{-1} with millisecond wavelength tuning. The compact and air-cooled design requires no water cooling or vibration isolation and provides full computer control of tuning, modulation, delay and power.

Product Specifications Picus Duo+

Optical

Specification	Pump	Stokes
Covered wavenumbers	700 - 3100 cm ⁻¹ with step size of 0.1 cm ⁻¹	
Associated tuning range	approx. 780 - 980 nm	approx. 1027 - 1055 nm
Tuning speed	< 200 ms	
Average power	75 - 185 mW	> 300 mW
Average power (w modulation & reference port for balance detection)	37 - 90 mW	> 200 mW
Typical pulse duration	6 - 12 ps	2 - 3 ps
Spectral resolution	< 12 cm ⁻¹	
Repetition rate	~40.5 MHz	
Modulation (optional)	20 MHz, 50% duty cycle	
Integrated tunable delay	± 4 cm ≈ 260 ps	
Noise performace		3 dB above shot-noise limit (with optional balanced detector at 1–100 mW optical power on detector.)

Hardware

Laser head (pump laser integrated)	49x83x20 cm ³
Lasercontroller dimension	43x45x13 cm ³
Cooling	Air-cooled
Weight	48 kg
Standard umbilical length	1.8m
Power supply	100–240 VAC, 50/60 Hz

Interfaces

Interfaces	Communication through USB or RS232; Trigger in for high speed wavelength tuning; Monitor out for external synchronization;
Software interfaces	GUI and custom serial API, e.g., via Python & Matlab



imaging@refined-lasers.com
+49 251 38 44 14 10

Mendelstraße 11
48149 Münster
Germany

refined-lasers.com