

# FemtoFiber pro

## TVIS

Tunable VISible



### Key features

- Fiber laser system with SAM mode-locked oscillator and core-pumped high power amplifier
- Supercontinuum generated by highly nonlinear fiber
- Two motorized prism compressors for supercontinuum and pulse optimization
- Second harmonic generation by manually tunable crystal
- Free-beam output
- Control unit with laser drivers, power PC control, communication interfaces and power supply
- Secondary oscillator fiber output (FC/APC connector)
- High bandwidth monitor output (SMA connector)

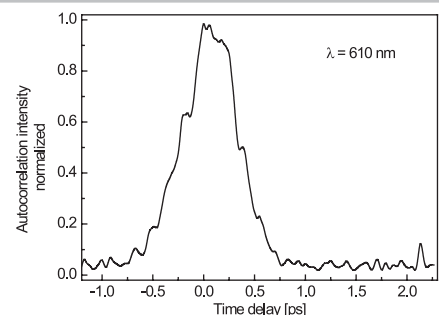
### Key specifications

Wavelength range continuum	<b>488 – 640 nm</b>
Laser output power	1 – 10 mW
Pulse width	< 1 ps
Repetition rate	80 MHz standard
Linear polarization	> 95 % (horizontal)
Beam shape	TEM <sub>00</sub> , M <sup>2</sup> < 1.2
Beam size (1/e <sup>2</sup> )	t.b.d.
Beam divergence	< 1 mrad
Output coupling	Free space
Laser head dimensions	280 x 458 x 151 mm <sup>3</sup> (w x d x h)
Laser head weight	< 15 kg
Control unit dimensions	235 x 315 x 140 mm <sup>3</sup> (w x d x h)
Control unit weight	< 4.5 kg
Line input	90 – 260 VAC, 47 – 63 Hz
PC interface	Ethernet, USB, RS 232

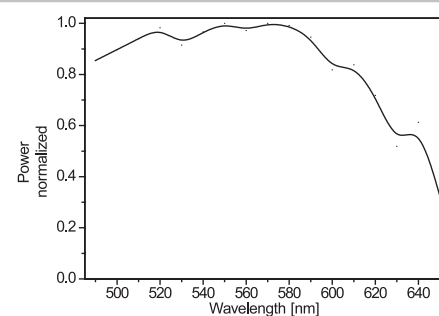
### Options

- Repetition rate 40 MHz (M40) or customized (some specifications may change)
- Further two oscillator outputs for seeding purposes (on total 3 FC/APC outputs)
- System without oscillator (AMP) for multiple beam extension systems (FC/APC input)
- Can be combined with TNIR option (contact TOPTICA)
- Variable laser repetition rate VAR (for more information see options page)
- Phase-locked loop laser synchronization electronics LRC (see options page)

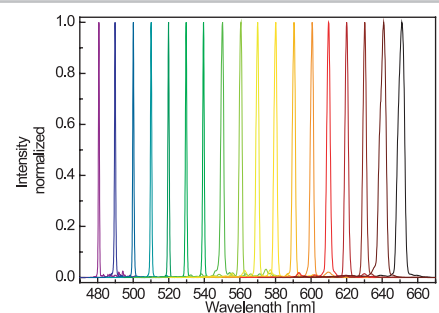
Contact TOPTICA for customized systems



Autocorrelation intensity (typical, e.g. at 610 nm).



Typical spectral output power levels.



Spectral tunability between 485 and 650 nm.

# FemtoFiber pro Control Unit

## Key features

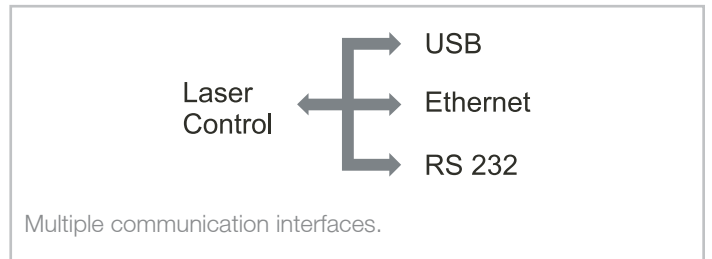
- Built-in power PC for system control
- Easy communication through web browser
- Access to motorized controls, such as variable pulse compression
- LabVIEW™ routines available for system integration
- Manual interface: Push ON/OFF button only
- Key lock switch
- Interlock capabilities
- 12 inch rack housing including interfaces, driver electronics for pump diodes and power supplies



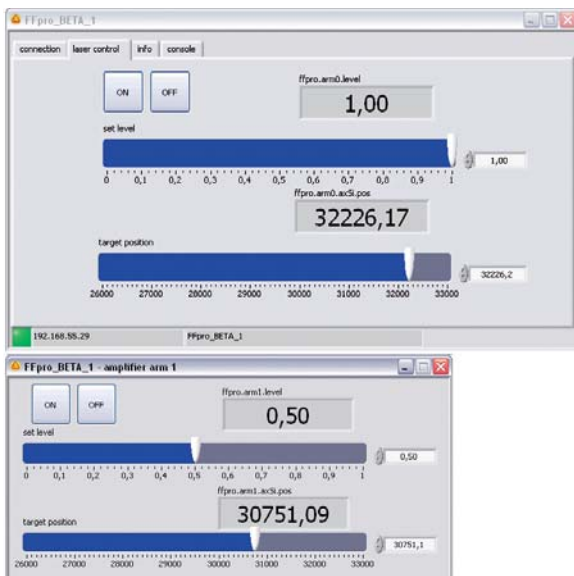
FemtoFiber pro control unit.

The laser control unit includes a power PC that controls all laser parameters. This ensures turnkey and hands-off operation with a single ON/OFF button for the user. Standard communication interfaces (Ethernet, USB and RS 232) give access to all relevant parameters for an easy integration in complex setups.

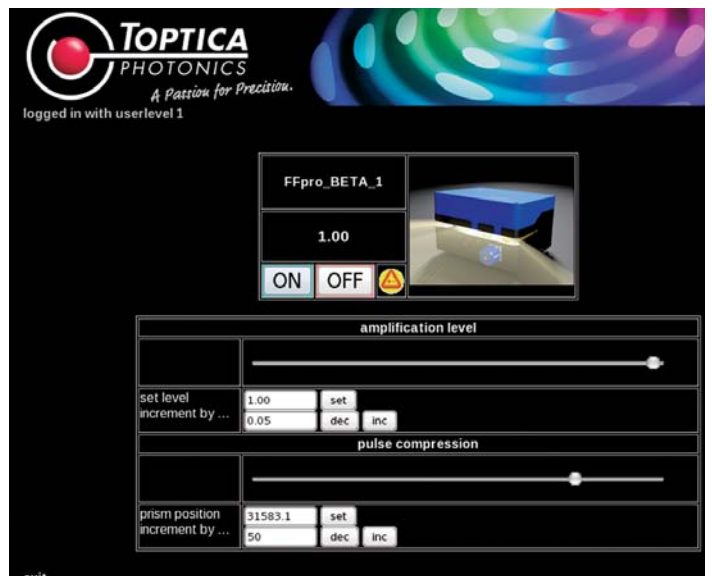
The user can choose between three alternatives. Simplest way is to login via any web browser already installed on the user's computer. Another way is employing the LabVIEW™ routine that is included free of charge. The most sophisticated way is to use self-written scripts with a pool of pre-defined commands.



Multiple communication interfaces.



Graphical user interface based on LabVIEW™.



Web browser based GUI.