

CENTRAL ELECTRONIC BOARD

FOR FIBER LASER R&D AND INTEGRATION

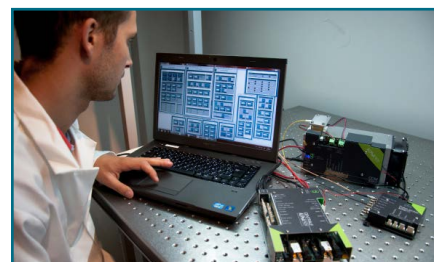
Electronic board for driving laser diodes, photodiodes and other external devices for fiber laser development or integration



The Central Electronic Board allows to control up to two single-mode butterfly laser diodes, six photodiodes and several other external devices. It provides a simple way to control On/Off/Security stages of complex multistage fiber lasers. Its performance have been optimized to be compatible with fiber lasers constraints in term of noise, precision, response time, interlock, etc. It is the central element of ALPhANOV Multiboard series which includes more than 20 innovations and make fiber laser developments very efficient.

Key features:

- Drives several optoelectronics elements independently or simultaneously :
 - 1 Butterfly laser diode in CW regime up to 1.5Amp with very low noise floor
 - 1 Butterfly laser diode for pulsing 1 nsec to CW with internal pulse duration and repetition rate adjustments
 - 2 Photodiodes to measure CW optical power with high precision
 - 1 Photodiode to measure the repetition rate of an optical signal
 - 2 Photodiodes to measure the average optical power of a pulsed signal
 - 1 Photodiode to measure the optical back reflected power in CW or pulse regime
- 20 different alarms with potential interlock effects
- Special pump pulse regimes for low repetition rate or pulse-on-demand needs
- Special interconnections with ALPhANOV Multiboard Series to allow complete integration of complex fiber laser architectures (MOPA, Mode-locked, Q-Switch, etc.)
- Smart control (USB interface to drive simultaneously several modules from ALPhANOV's laser electronics series)

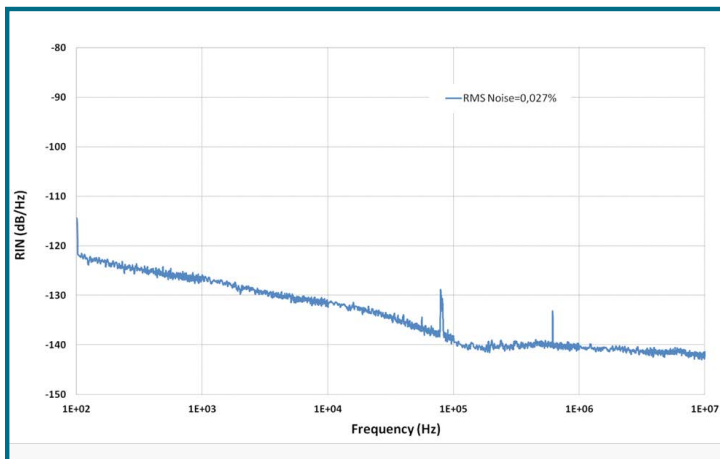


TECHNICAL SPECIFICATIONS

Electronic

Central Electronic Board		Min	Max
Laser diode 1 (CW)	Current	0	1500mA
	Noise level (laser diode dependant)	-	0.03% rms
	Adjustement precision	-	0.5mA
	Current stability	-	0.01%
	T° stability	-	10mK
Laser diode 2 (CW or pulsed)	Current (pulse regime)	0	1500mA
	Current (CW regime)	0	500mA
	Pulse duration	1nsec	CW
	Pulse jitter	-	10psec
	Pulse repetition rate	any to CW	250MHz
Alarms/interlock response time		-	2µsec

Subject to change without notice



RMS noise = 0.027% (100Hz to 10MHz)

Mechanical

