



A Passion for Precision.

Press Release

TOPTICA Photonics AG
Lochhamer Schlag 19
D-82166 Graefelfing / Munich

Contact:

Marketing

Elke Marchthaler
Phone + 49 89 85837-123
Fax + 49 89 85837-200
elke.marchthaler@toptica.com

Sales

Dr. Jürgen Stuhler
Phone + 49 89 85837-116
Fax + 49 89 85837-200
juergen.stuhler@toptica.com

www.toptica.com/page/news.php

September 09, 2009

Digital Laser Control and Laser Frequency Stabilization with New Features: DigiLock 110

TOPTICA announces a new release of their DigiLock 110, the world's first feedback controler

TOPTICA's DigiLock 110 is more than just the best digital solution for laser stabilization. It can additionally be used to computer control and analyze the laser digitally. The latest software version enables one computer to control up to four DigiLocks and a comprehensive interface is available for remote TCP/IP access to all functions.

The DigiLock 110 is a module for TOPTICA's SYS DC diode laser driving system. DigiLock's basic capabilities include multi channel oscilloscope functionality, control over laser frequency and frequency scan, two integrated PIDs (e.g. for feedback to Piezo and laser current), a Lock-In regulator, and Pound-Drever-Hall stabilization. Click & Lock, Lock-detection, Auto-Lock and Relock as well as simulation of controller parameters and network analysis are only a few examples of more advanced features.

The FPGA (field programmable gate array) based hardware makes the DigiLock flexible and at the same time very fast and enables its deployment in a wide range of applications. The unit features numerous inputs and outputs, up to 100 MHz sampling rate or up to 21 bit precision to perfectly match the user's needs. With a total delay time of less than 200ns, its digital locking bandwidth is several MHz and an FPGA controlled analog bypass allows for even higher bandwidths e.g. for laser linewidth reduction.

With its new features, the DigiLock can now easily be integrated into complex experiments. It enables not only lock monitoring and control, but also adjustment of many laser parameters like laser current, temperature and scan offset. Both laser locking and control have never been more comfortable and easy.

On www.toptica.com more information on the DigiLock is available, and the latest software version can be downloaded free of charge. It can be tested even without the DigiLock module.



DigiLock 110, TOPTICA's versatile laser control and locking solution.

TOPTICA Photonics AG develops, manufactures, services and distributes technology-leading diode and fiber lasers and laser systems for scientific and industrial applications. Sales and service is offered worldwide through TOPTICA Germany and its subsidiary TOPTICA USA, as well as all through 14 distributors. A key point of the company philosophy is the close cooperation between development and research to meet our customers' demanding requirements for sophisticated customized system solutions and their subsequent commercialization.

Author:

Dr. Rudolf Neuhaus, TOPTICA Photonics AG