

USB to D-Sub Control Interface for FEMTO Amplifiers



Features	• Compact digital I/O interface for USB remote control of FEMTO amplifiers • Supports opto-isolation of amplifier signal path from PC USB port • 16 digital outputs, 3 opto-isolated digital inputs • Bus-powered operation • System driver, application software and VI's for use with LabVIEW™ included						
Applications	• Remote control of FEMTO® amplifiers and photoreceivers directly from a PC						
Block Diagram	The block diagram illustrates the system architecture. On the left, a 'Windows PC' is connected to the 'LUCI-10' device via a 'USB Type A' cable. The 'LUCI-10' is a 'Microcontroller' unit that is '+ 5 V, Bus Powered'. Inside the microcontroller, there is a 'USB Controller' connected to the USB cable, a 'Digital I/O' block, and two digital output blocks: 'Digital Out 16 Bit' and 'Digital In 3 Bit'. The 'Digital Out 16 Bit' block is connected to an 'LED' (represented by a diode symbol) and also to an 'Opto-Isolation' block. The 'Digital In 3 Bit' block is connected to another 'Opto-Isolation' block. Both 'Opto-Isolation' blocks are connected to a 'D-Sub 25 Pin Male' connector. This connector is linked to the 'FEMTO Amplifier'. The 'FEMTO Amplifier' has two inputs: 'Amplifier Control Bits' and 'Amplifier Status Bits', both of which are connected to the 'D-Sub 25 Pin Male' connector. The diagram is labeled 'BS-LUCI-10_R1' in the bottom right corner.						
Hardware Specifications	<table><tr><td>General Characteristics</td><td>Bus interface Digital I/O channels Supply Connectors Cable</td><td>USB 2.0 (full-speed) 16 output lines 3 opto-isolated input lines PC USB port, +5 V, typ. 100 mA, bus-powered (no auxiliary power supply required) USB type A D-Sub, 25 pin, male AWG 28, length 1.8 m</td></tr><tr><td>Output</td><td>Number of channels Output voltage range Max. current Writing rate</td><td>16 output lines, supporting opto-isolation inside FEMTO amplifiers and photoreceivers LOW bit: 0 ... +0.5 V (@ 0 ... 2 mA output current) HIGH bit: +4 ... +5.5 V (@ 0 ... 2 mA output current) 6 mA per channel max. 600 operations per second</td></tr></table>	General Characteristics	Bus interface Digital I/O channels Supply Connectors Cable	USB 2.0 (full-speed) 16 output lines 3 opto-isolated input lines PC USB port, +5 V, typ. 100 mA, bus-powered (no auxiliary power supply required) USB type A D-Sub, 25 pin, male AWG 28, length 1.8 m	Output	Number of channels Output voltage range Max. current Writing rate	16 output lines, supporting opto-isolation inside FEMTO amplifiers and photoreceivers LOW bit: 0 ... +0.5 V (@ 0 ... 2 mA output current) HIGH bit: +4 ... +5.5 V (@ 0 ... 2 mA output current) 6 mA per channel max. 600 operations per second
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Software Specifications

Software
(included on CD)

Device driver	dynamic link library (DLL) for integration in Microsoft Windows® 32 bit & 64 bit operating system for use with C/C++, LabWindows™ /CVI™ or LabVIEW™
Application software	GUI (graphical user interface) programs for simple remote control of FEMTO amplifiers and photoreceivers provided as executable programs and LabVIEW projects
LabVIEW programs	sample programs to control and test the LUCI-10 hardware (including front panel and block diagram)
LabVIEW library	special VI toolkit for integration in LabVIEW 32 bit & 64 bit development environment

Note: A National Instruments LabVIEW™ license is not included in this software package. For use of the GUI application programs the LabVIEW Run-Time Engine is required. If not detected on the host PC during the installation process the LabVIEW Run-Time Engine will be installed automatically from the CD.

System Requirements

Operating system	Microsoft Windows XP with Service Pack 3, or higher
Processor	Intel Pentium III or AMD Athlon, or better
System memory	1 GB of RAM, or more
Hard disk space	about 5 GB
Interface port	USB 1.1 or USB 2.0
Supported FEMTO modules	any standard FEMTO amplifier or photoreceiver with 25 pin D-Sub socket, except model HLVA-100

Optional Requirements

For development of own application programs an additional development environment like LabVIEW Version 2012 (or higher) or C/C++ is required.

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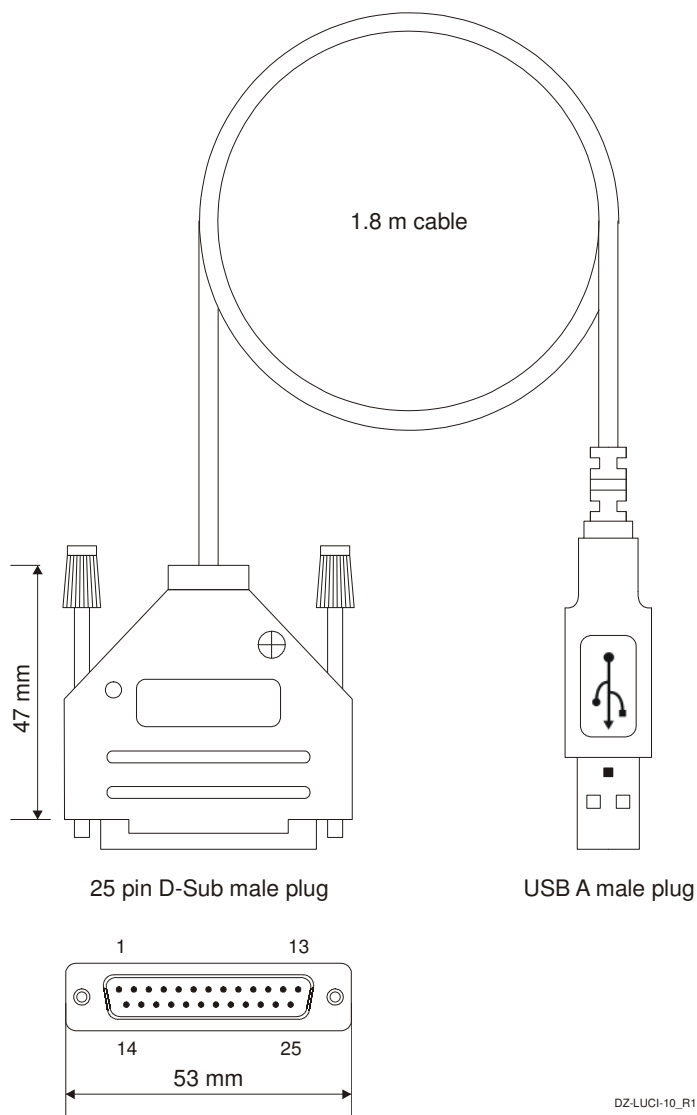
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Dimensions



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