

LUCI-10

USB to D-Sub Control Interface for FEMTO Amplifiers



Features	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• Remote control of FEMTO® amplifiers and photoreceivers directly from a PC																											
Block Diagram	<p>The block diagram illustrates the LUCI-10 system architecture. On the left, a dashed box represents the 'Windows PC', which contains a 'USB Type A' port. A 'USB Cable' connects this port to the 'LUCI-10' Microcontroller. The Microcontroller is shown as a central block with a '+ 5 V, Bus Powered' input. Inside the Microcontroller, there is a 'USB Controller' connected to the USB cable, a 'Digital I/O' block, a 'Digital Out 16 Bit' block, and a 'Digital In 3 Bit' block. An 'LED' is connected to the Microcontroller. The Microcontroller is connected to a 'D-Sub 25 Pin Male' connector, which is part of the 'FEMTO Amplifier' (shown in a dashed box). The connection between the Microcontroller and the D-Sub connector includes 'Opto-Isolation' for 'Amplifier Control Bits' and 'Amplifier Status Bits'. The diagram is labeled 'BS-LUCI-10_R1'.</p>																											
Hardware Specifications	<table><tr><td>General Characteristics</td><td>Bus interface</td><td>USB 2.0 (full-speed)</td></tr><tr><td></td><td>Digital I/O channels</td><td>16 output lines 3 opto-isolated input lines</td></tr><tr><td></td><td>Supply</td><td>PC USB port, +5 V, typ. 100 mA, bus-powered (no auxiliary power supply required)</td></tr><tr><td></td><td>Connectors</td><td>USB type A D-Sub, 25 pin, male</td></tr><tr><td></td><td>Cable</td><td>AWG 28, length 1.8 m</td></tr><tr><td>Output</td><td>Number of channels</td><td>16 output lines, supporting opto-isolation inside FEMTO amplifiers and photoreceivers</td></tr><tr><td></td><td>Output voltage range</td><td>LOW bit: 0 ... +0.5 V (@ 0 ... 2 mA output current) HIGH bit: +4 ... +5.5 V (@ 0 ... 2 mA output current)</td></tr><tr><td></td><td>Max. current</td><td>6 mA per channel</td></tr><tr><td></td><td>Writing rate</td><td>max. 600 operations per second</td></tr></table>	General Characteristics	Bus interface	USB 2.0 (full-speed)		Digital I/O channels	16 output lines 3 opto-isolated input lines		Supply	PC USB port, +5 V, typ. 100 mA, bus-powered (no auxiliary power supply required)		Connectors	USB type A D-Sub, 25 pin, male		Cable	AWG 28, length 1.8 m	Output	Number of channels	16 output lines, supporting opto-isolation inside FEMTO amplifiers and photoreceivers		Output voltage range	LOW bit: 0 ... +0.5 V (@ 0 ... 2 mA output current) HIGH bit: +4 ... +5.5 V (@ 0 ... 2 mA output current)		Max. current	6 mA per channel		Writing rate	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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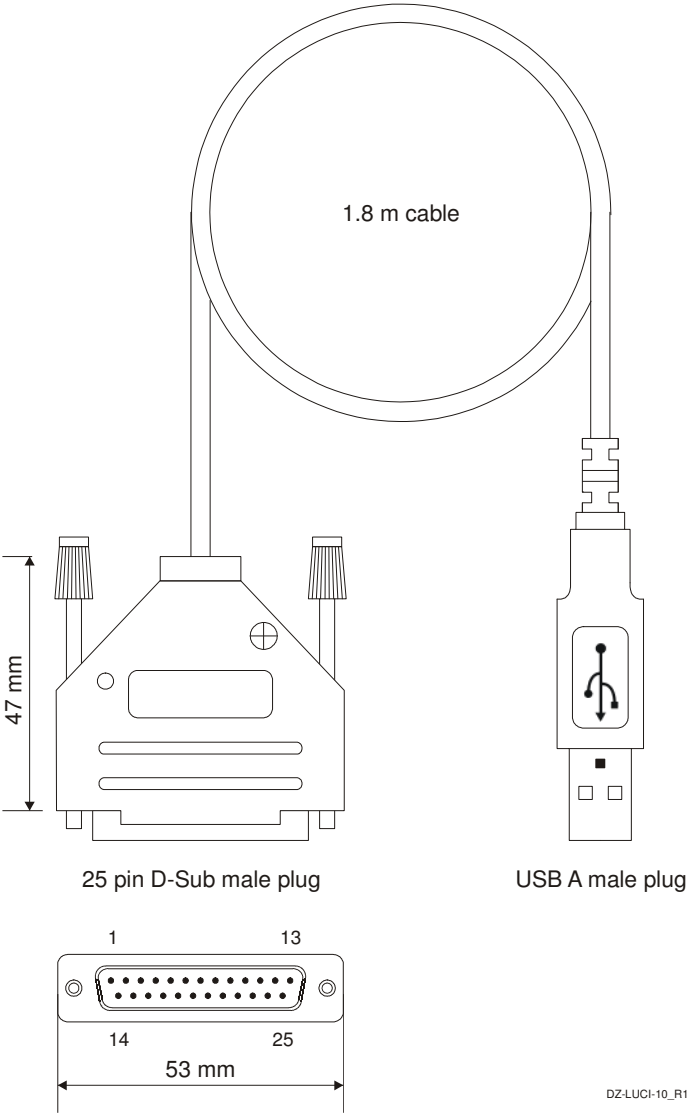
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Datasheet

LUCI-10

USB to D-Sub Control Interface
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Dimensions



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