Datasheet LUCI-10

USB to D-Sub Control Interface for FEMTO Amplifiers

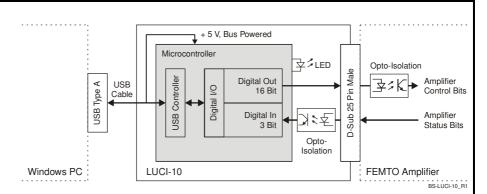


Compact digital I/O interface for USB remote control of FEMTO amplifiers
 Supports opto-isolation of amplifier signal path from PC USB port
 16 digital outputs, 3 opto-isolated digital inputs
 Bus-powered operation

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



Hardware Specifications

General Characteristics

Bus interface
Digital I/O channels

USB 2.0 (full-speed)
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 AWG 28, length 1.8 m

Output Number of channels

Cable

16 output lines, supporting opto-isolation inside FEMTO

amplifiers and photoreceivers

Output voltage range LOW bit: $0 \dots +0.5 \text{ V } (@ 0 \dots 2 \text{ mA output current})$ HIGH bit: $+4 \dots +5.5 \text{ V } (@ 0 \dots 2 \text{ mA output current})$

Max. current 6 mA per channel

Writing rate max. 600 operations per second

SOPHISTICATED TOOLS FOR SIGNAL RECOVERY

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DE-LUCI-10_R4/MG,JM/27JUL2017 Page 1 of 4

Datasheet LUCI-10

USB to D-Sub Control Interface for **FEMTO Amplifiers**

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Input	Number of channels Input voltage range Switching current	3 opto-isolated input lines LOW bit: -20 +1.5 V HIGH bit: +3 +20 V 1 mA typ. @ 5 V
Power Supply	Reading rate USB port, bus powered Active current Suspend current	max. 300 operations per second +4.5 +5.5 V DC max. 200 mA / typ. 100 mA <0.5 mA (standby mode of Windows®)
Case	D-Sub case Weight Material	metal hood (EMI/RFI shielding), with jack screws 130 g (0.3 lb.) zinc die-cast, nickel plated
Temperature Range	Storage temperature Operating temperature	-40 +100 °C 0 +50 °C
Absolute Maximum Ratings	Max. voltage at input Max. short-circuit output current Max. isolation voltage	±30 V ±20 mA per channel, 200 mA total ±60 V (input ground to output ground)
Connectors	Device port	D-Sub, 25 pin, male Pin 1: NC Pin 2: NC Pin 3: GND (IN) Pin 4: NC Pin 5: Digital IN Pin 6: Digital IN Pin 7: Digital IN Pin 8: NC Pin 9: GND (OUT) Pin 10: Digital OUT Low Byte, LSB Pin 11: Digital OUT Low Byte Pin 12: Digital OUT Low Byte Pin 13: Digital OUT Low Byte Pin 14: Digital OUT Low Byte Pin 15: Digital OUT Low Byte Pin 16: Digital OUT Low Byte Pin 17: Digital OUT Low Byte Pin 18: Digital OUT Low Byte Pin 19: Digital OUT High Byte Pin 20: Digital OUT High Byte Pin 21: Digital OUT High Byte Pin 22: Digital OUT High Byte Pin 23: Digital OUT High Byte Pin 24: Digital OUT High Byte Pin 25: Digital OUT High Byte, MSB
	PC port	USB type A

LUCI-10 **Datasheet**

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Software Specifications

Software (included on CD) Device driver

dynamic link library (DLL) for integration in Microsoft

Windows $^{\otimes}$ 32 bit & $\acute{6}4$ bit operating system for use with C/C++, LabWindows $^{\text{TM}}$ /CVI $^{\text{TM}}$ or LabVIEW $^{\text{TM}}$

GUI (graphical user interface) programs for simple Application software

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

about 5 GB Hard disk space USB 1.1 or USB 2.0 Interface port

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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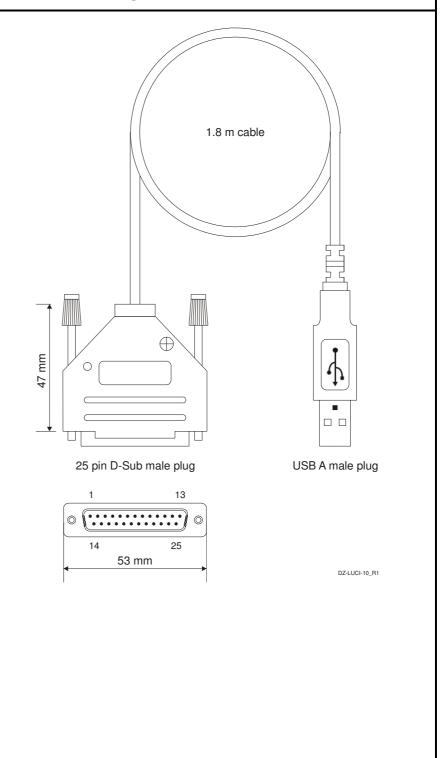
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Datasheet LUCI-10

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Dimensions



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