

USB to D-Sub Control Interface for FEMTO Amplifiers



<p>Features</p>	<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 															
<p>Applications</p>	<ul style="list-style-type: none"> • Remote Control of FEMTO® Amplifiers and Photoreceivers Directly from a PC 															
<p>Block Diagram</p>																
<p>Hardware Specifications</p>	<table border="0"> <tr> <td data-bbox="274 1496 513 1529"> <p>General Characteristics</p> </td> <td data-bbox="561 1496 742 1556"> <p>Bus Interface Digital I/O Channels</p> </td> <td data-bbox="874 1496 1308 1641"> <p>USB 2.0 (full-speed) 16 output lines 3 opto-isolated input lines</p> </td> </tr> <tr> <td></td> <td data-bbox="561 1579 630 1612"> <p>Supply</p> </td> <td data-bbox="874 1579 1308 1641"> <p>PC USB port, + 5 V, typ. 100 mA, bus-powered (no auxiliary power supply required)</p> </td> </tr> <tr> <td></td> <td data-bbox="561 1641 670 1675"> <p>Connectors</p> </td> <td data-bbox="874 1641 1061 1697"> <p>USB type A D-Sub, 25 pin, male</p> </td> </tr> <tr> <td></td> <td data-bbox="561 1697 619 1731"> <p>Cable</p> </td> <td data-bbox="874 1697 1082 1731"> <p>AWG 28, length 1.8 m</p> </td> </tr> <tr> <td data-bbox="274 1753 343 1787"> <p>Output</p> </td> <td data-bbox="561 1753 750 1933"> <p>Number of Channels Output Voltage Range Max. Current Writing Rate</p> </td> <td data-bbox="874 1753 1388 1933"> <p>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</p> </td> </tr> </table>	<p>General Characteristics</p>	<p>Bus Interface Digital I/O Channels</p>	<p>USB 2.0 (full-speed) 16 output lines 3 opto-isolated input lines</p>		<p>Supply</p>	<p>PC USB port, + 5 V, typ. 100 mA, bus-powered (no auxiliary power supply required)</p>		<p>Connectors</p>	<p>USB type A D-Sub, 25 pin, male</p>		<p>Cable</p>	<p>AWG 28, length 1.8 m</p>	<p>Output</p>	<p>Number of Channels Output Voltage Range Max. Current Writing Rate</p>	<p>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</p>
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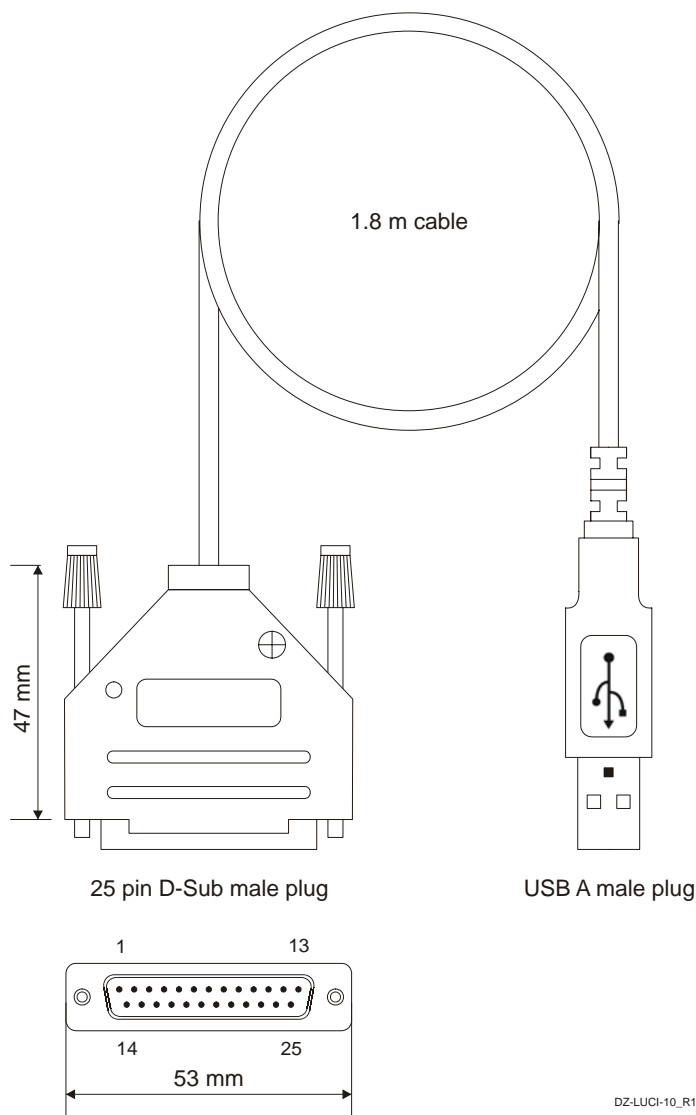
Input	<p>Number of Channels: 3 opto-isolated input lines</p> <p>Input Voltage Range: LOW bit: - 20 ... + 1.5 V HIGH bit: + 3 ... + 20 V</p> <p>Switching Current: 1 mA typ. @ 5 V</p> <p>Reading Rate: max. 300 operations per second</p>
Power Supply	<p>USB Port, Bus Powered: + 4.5 ... + 5.5 V DC</p> <p>Active Current: max. 200 mA / typ. 100 mA</p> <p>Suspend Current: < 0.5 mA (standby mode of Windows®)</p>
Case	<p>D-Sub Case: metal hood (EMI/RFI shielding), with jack screws</p> <p>Weight: 130 g (0.3 lb.)</p> <p>Material: zinc die-cast, nickel plated</p>
Temperature Range	<p>Storage Temperature: - 40 ... + 100 °C</p> <p>Operating Temperature: 0 ... + 50 °C</p>
Absolute Maximum Ratings	<p>Max. Voltage at Input: +/- 30 V</p> <p>Max. Short Circuit Output Current: +/- 20 mA per channel, 200 mA total</p> <p>Max. Isolation Voltage: +/- 60 V (Input Ground to Output Ground)</p>
Connectors	<p>Device Port</p> <p>D-Sub, 25 pin, male</p> <p>Pin 1: NC</p> <p>Pin 2: NC</p> <p>Pin 3: GND (IN)</p> <p>Pin 4: NC</p> <p>Pin 5: Digital IN</p> <p>Pin 6: Digital IN</p> <p>Pin 7: Digital IN</p> <p>Pin 8: NC</p> <p>Pin 9: GND (OUT)</p> <p>Pin 10: Digital OUT Low Byte, LSB</p> <p>Pin 11: Digital OUT Low Byte</p> <p>Pin 12: Digital OUT Low Byte</p> <p>Pin 13: Digital OUT Low Byte</p> <p>Pin 14: Digital OUT Low Byte</p> <p>Pin 15: Digital OUT Low Byte</p> <p>Pin 16: Digital OUT Low Byte</p> <p>Pin 17: Digital OUT Low Byte, MSB</p> <p>Pin 18: Digital OUT High Byte, LSB</p> <p>Pin 19: Digital OUT High Byte</p> <p>Pin 20: Digital OUT High Byte</p> <p>Pin 21: Digital OUT High Byte</p> <p>Pin 22: Digital OUT High Byte</p> <p>Pin 23: Digital OUT High Byte</p> <p>Pin 24: Digital OUT High Byte</p> <p>Pin 25: Digital OUT High Byte, MSB</p> <p>PC Port</p> <p>USB type A</p>

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Software Specifications	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; padding: 5px;">Software (included on CD)</td> <td style="padding: 5px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; padding: 5px;">Device Driver</td> <td style="padding: 5px;">dynamic link library (DLL) for integration in Microsoft Windows[®] operating system for use with C/C++, LabWindows[™] /CVI[™] or LabVIEW[™]</td> </tr> <tr> <td style="padding: 5px;">Application Software</td> <td style="padding: 5px;">GUI (graphical user interface) programs for simple remote control of FEMTO amplifiers and photoreceivers provided as executable programs and LabVIEW projects</td> </tr> <tr> <td style="padding: 5px;">LabVIEW Programs</td> <td style="padding: 5px;">sample programs to control and test the LUCI-10 hardware (including front panel and block diagram)</td> </tr> <tr> <td style="padding: 5px;">LabVIEW Library</td> <td style="padding: 5px;">special VI toolkit for integration in LabVIEW development environment</td> </tr> </table> </td> </tr> </table> <p style="margin-top: 10px;">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.</p>	Software (included on CD)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; padding: 5px;">Device Driver</td> <td style="padding: 5px;">dynamic link library (DLL) for integration in Microsoft Windows[®] operating system for use with C/C++, LabWindows[™] /CVI[™] or LabVIEW[™]</td> </tr> <tr> <td style="padding: 5px;">Application Software</td> <td style="padding: 5px;">GUI (graphical user interface) programs for simple remote control of FEMTO amplifiers and photoreceivers provided as executable programs and LabVIEW projects</td> </tr> <tr> <td style="padding: 5px;">LabVIEW Programs</td> <td style="padding: 5px;">sample programs to control and test the LUCI-10 hardware (including front panel and block diagram)</td> </tr> <tr> <td style="padding: 5px;">LabVIEW Library</td> <td style="padding: 5px;">special VI toolkit for integration in LabVIEW development environment</td> </tr> </table>	Device Driver	dynamic link library (DLL) for integration in Microsoft Windows [®] 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 development environment		
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Optional Requirements	<p>For development of own application programs an additional development environment like LabVIEW Version 8.5 (or higher) or C/C++ is required.</p>												
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Dimensions



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