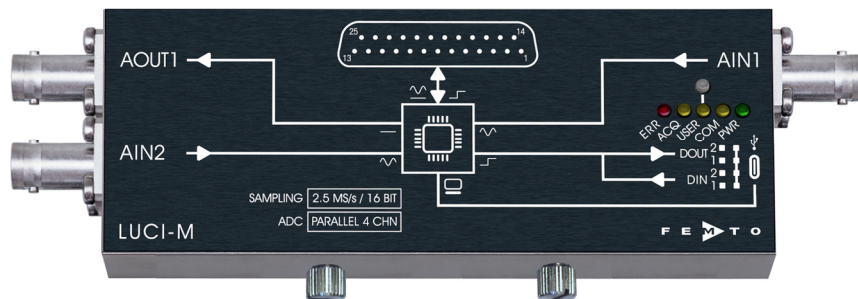


Data Acquisition and Digital Control System



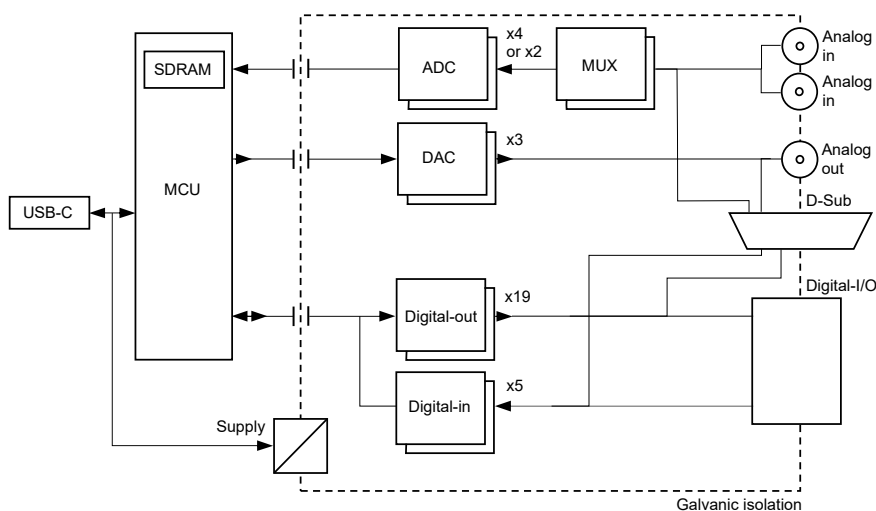
Features

- 4-channel or 2-channel analog signal acquisition
- Analog bandwidth 1.1 MHz, 16-bit $\Sigma\Delta$ -ADC
- 2.5 MS/s per channel, synchronous sampling
- Selectable input sources: 4 from D-Sub, 2 additional per coaxial connector
- 3 Channel DAC for static control signals:
 - 2 channels on control interface for bias or offset adjustments,
 - 1 channel on coaxial connector for general purpose
- Digital outputs: 17 on D-Sub, 2 on external connector for general purpose
- Digital inputs: 3 on D-Sub, 2 on external connector for general purpose
- USB-C interface to host computer, bus-powered on a 3 A port
- SCPI-compatible command set
- D-Sub interface to directly connect to FEMTO devices with digital interface

Applications

- General data acquisition
- Long-term data recording
- Lab automation

Block Diagram



BS-LUCI-M_R01

Data Acquisition and Digital Control System

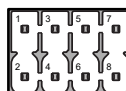
Specifications (continued)

Digital Outputs	Digital output channels Output impedance Max. output current Logic level, low Logic level, high	19 channels, TTL compatible 50 Ω 20 mA ≤0.4 V ≥4.0 V (@ load 1 kΩ)
Power Supply	Power source Supply voltage Supply current	Connected computer via USB connection, USB C port with 3 A power delivery capability or USB 2.0 PD (e.g. via hub) 5 V 2 A
Case	Weight Material	263 g (0.58 lbs) AlMg4.5Mn, nickel-plated
Temperature Range	Storage temperature Operating temperature	-40 °C ... +80 °C 0 °C ... +40 °C

Absolute Maximum Ratings	Analog max. input voltage Digital max. Input voltage	±20 V ±30 V
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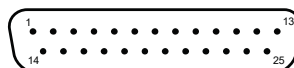
Connectors

Analog inputs	2 × BNC jack (female) and D-Sub port (see below)
Analog outputs	BNC jack (female) and D-Sub port (see below)
Digital inputs and outputs	8-Pin port and D-Sub port (see below)
Power supply and data transfer	USB-C
8-Pin port	DMC 1,5/ 4-G1-3,5 P20THR (mating plug type: DFMC 1,5/ 4-ST-3,5 BK)



- Pin 1: digital input (DIN1)
- Pin 3: digital input (DIN2)
- Pin 5: digital output (DOUT1)
- Pin 7: digital output (DOUT2)
- Pin 2,4,6,8: GND

Universal D-Sub port Sub-D 25-pin, male, qual. class 2



- Pin 1 and 2: not connected
- Pin 3: GND
- Pin 4: not connected
- Pin 5 to 7: analog input or digital input (selectable)
- Pin 8: analog output or digital output (selectable)
- Pin 9: GND
- Pin 10 to 19: digital output
- Pin 20: analog output or digital output (selectable)
- Pin 21 to 23: digital output
- Pin 24: analog input or digital output (selectable)
- Pin 25: digital output

Data Acquisition and Digital Control System

Remote Control Operation	Command syntax	SCPI-compatible (Standard Commands for Programmable Instruments)
Indicator LEDs	ERR (red) ACQ (amber) USER (amber) COM (amber) PWR (green)	Error (e.g. communication error or data overflow) Data acquisition in progress Freely programmable LED USB communication in progress Power status (solid light: OK, flashing: insufficient power supply)
Button	Manual USER button	Freely programmable button
Scope of Delivery	LUCI-M, 8-pin DFMC connector, USB-C to USB-C cable, datasheet, transport package	

Dimensions

LUCI-M

All dimensions in mm unless otherwise noted

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