

Compact USB mini DAQ and control modules

ME-RedLab 1208, 1408, 1608



The USB DAQ modules ME-RedLab 1208, 1408 and 1608 fit in a vest pocket. And they contain a complete mini DAQ lab! They are available in 12, 14 or 16 bit A/D resolution and with additional digital I/O, for example for control or switching operations. Use the ME-RedLabs in mobile applications or wherever there's only little room for a DAQ module.

- **12 bit or 14 bit multi I/O min DAQ labs for USB:**
 - 8 single-ended or 4 differential A/D channels.
 - 12 bit or 14 bit A/D conversion. Input range up to ± 20 V.
 - 2 D/A channels, 10 bit (1208) or 12 bit (1408) D/A conversion.
 - 16 TTL/CMOS digital I/O channels.
 - 32 bit event counter.
- **16 bit multi I/O mini DAQ lab for USB:**
 - 8 simultaneous single-ended A/D channels.
 - A 16 bit A/D converter per channel. Input range up to ± 10 V.
 - 8 discrete digital I/O channels.
 - 32 bit event counter.
- 2 rows of screw terminals.
- Size (mm) only $\sim 83 \times 80 \times 25,4$.

Also available as ME-RedPack: Bundle with software ProfiLab-Expert!

Software

Included: TracerDAQ, Universal Library, driver for LabVIEW and SoftWIRE.

» Ordering codes and functions

ME-RedLab 1208 and 1608

Models	Description	Analog inputs	Analog outputs	Digital I/O	Included
ME-RedLab 1208LS	USB 12 bit mini DAQ lab, low-speed	8 se., 11 bit/4 diff. 12 bit. Max. 8 kHz	2, 10 bit. Max. 100 S/s	16 TTL/CMOS (2x 8 bit ports)	USB module, USB cable (type A-B), screw driver, CD with software and PDF user manual
ME-RedLab 1208FS	USB 12 bit mini DAQ lab, full-speed	8 se., 11 bit/4 diff. 12 bit. Max. 50 kHz	2, 10 bit. Max. 1000 S/s		
ME-RedLab 1408FS	USB 14 bit mini DAQ lab, full-speed	8 se., 13 bit/4 diff. 14 bit	2, 12 bit	8 discrete CMOS	
ME-RedLab 1608FS	USB 16 bit mini DAQ lab, full-speed	8 se., simultaneous. 16 bit	-		
ME-RedPack xxxx	ME-RedLab xxxx module bundled with software ProfiLab Expert				

Specifications

	ME-RedLab 1208	ME-RedLab 1408	ME-RedLab 1608
Analog inputs	ME-RedLab 1208	ME-RedLab 1408	ME-RedLab 1608
Number, type	8 single-ended or 4 differential	8 single-ended or 4 differential	8 single-ended, simultaneous
A/D conversion	12 bit differential, 11 bit single-ended. LS: 50 S/s software controlled, 1.2 S/s continuous sampling, 8 kS/s burst-scan in 4 k FIFO FS: 300 S/s software controlled, 50 kS/s continuous sampling	14 bit differential, 13 bit single-ended. 250 S/s software controlled (typ., depending on PC), 48 kS/s continuous sampling	16 bit, individual converter per channel. 0.6 S/s...50 kS/s (software controlled), 20 S/s...50 kS/s (burst-scan in 32 k FIFO). 500 S/s (all channels, software controlled); max. 100 kS/s (in PC memory, depending on number of channels and on PC); max. 200 kS/s (burst-scan in 32 k FIFO)
Input range	± 20 V, ± 10 V, ± 5 V, ± 4 V, $\pm 2,5$ V, $\pm 2,0$ V, $\pm 1,25$ V, $\pm 1,0$ V		
External trigger	1 TTL input	1 CMOS input	1 CMOS input
Analog outputs	ME-RedLab 1208	ME-RedLab 1408	ME-RedLab 1608
Number	2	2	-
D/A conversion	10 bit. LS: 100 S/s (1 channel), 50 S/s (2 channels). FS: Software controlled 1000 S/s (one channel), 500 S/s (2 channels); continuous 2-channel with simultaneous update 12.5 kS/s	12 bit. 250 kS/s (software controlled, 1-channel, typ., depending on PC), 10 kS/s (1 channel continuous), 5 kS/s (2 channels continuous, simultaneous update)	-
Output range	0...5 V		
Digital I/O	ME-RedLab 1208	ME-RedLab 1408	ME-RedLab 1608
Number, type	16 TTL/CMOS channels, grouped in 2x 8 bit ports, each port programmable as input or output		8 discrete CMOS channels, independent configuration as inputs or outputs
Counters	ME-RedLab 1208	ME-RedLab 1408	ME-RedLab 1608
Number, type	32 bit event counter, TTL-Pegel		
Input frequency	max. 1 MHz		
General data	ME-RedLab 1208	ME-RedLab 1408	ME-RedLab 1608
Size (mm)	$\sim 83 \times 80 \times 25,4$		
Power supply	From PC via USB		
Interface	USB 1.1 low-speed	USB 2.0 full-speed	USB 2.0 full-speed
	USB 1.1 and 2.0 compatible with Windows XP, 2000		
Connectors	I/O: 2x 10 screw terminals, USB: Type B. Cable with type B-A included (max. 3 m cable allowed)		
Environmental	Operating temperature 0...70°C, storage temperature -40...85°C; 0...90% rel. humidity, non-condensing		

se. = single-ended, diff. = differential

Mini digital control and switching module for USB

ME-RedLab 1024



With the ME-RedLab 1024 you can control digital inputs and outputs via USB. Use the module to control switching applications or relays or for the acquisition of digital status. The unbeatable benefits of these modules: They are small and space-saving, easy to install and use. And they are available at a very low price.

- Digital interface module for USB.
- 24 TTL/CMOS digital I/O channels (82C55), grouped in three 8 bit ports.
- HLS: High-drive inputs/outputs instead of TTL/CMOS 82C55
- 32 bit event counter
- Screw terminal connectors.
- Size (mm) only 83 x 80 x 25,4.

Also available as ME-RedPack bundled with software ProfiLab-Expert!

Software

Included: TracerDAQ, Universal Library, driver for LabVIEW and SoftWIRE.

» Ordering codes and functions

ME-RedLab 1208 and 1608

Model	Description	Included
ME-RedLab 1224LS	USB digital box, 24 TTL/CMOS digital I/O channels	USB module, USB cable (type A-B), screw terminals, CD/software and PDF manual
ME-RedLab 1224HLS	USB digital box, 24 high-drive digital I/O channels	

Specifications

Digital inputs/outputs	
Number	24 bidirectional input/output channels, grouped in 3x 8 ports or 2x 8 bit and 2x 4 bit ports; each port programmable as inputs or outputs
Version LS	82C55 TTL/CMOS; standard: All channels connected to V _s via a 47 kΩ resistor. Optional pull-down to GND. Input high: 2.0 V min./5.5 V abs. max. Input low: 0.8 V max./-0.5 V abs. min. Output high: (I _{OH} =-2.5 mA) 3.0 V min.
Version HLS	HLS: High-drive, 74ACT373 inputs/74FCT244 outputs Internal 47 kΩ resistor; user configured for pull-up or pull-down via external connector "port x pull-up/pull-down" to USB +5 V or GND. Ports A, B and C independently configurable. Input high: 2.0 V min./5.5 V abs. max. Input low: 0.8 V max./-0.5 V abs. min. Output high: (I _{OH} =-15 mA) 2.4 V min. Output low: (I _{OL} =64 mA) 0.55 V max. Max. current = 15 mA per output
Counter	
Number, type	1x 32 bit event counter
Input frequency	Max. 1 MHz
General data	
Size (mm)	~83 x 80 x 25,4
Power supply	From PC via USB
Interface	USB 1.1 low-speed, USB 1.1 and 2.0 compatible with Windows XP, 2000
Connector	I/O: 2x 10 screw terminals, USB: Type B. Cable type B-A included (max. 3 m cable allowed)
Environmental	Operating temperature 0...70°C, storage temperature -40...85°C; 0...90% rel. humidity, non-condensing

USB Connectors Type A and Type B



USB type A female/male - at a PC/notebook or Hub



<< USB type A "extension"



USB type B female/male - at a USB device (for example MEphisto Scope)

