

Technical Specifications of Desktop Digitiser

Sl. No	Specifications	Details
1	Inputs	Analog input 8 channels, single ended (Desktop) Impedance: 50 Ω Bandwidth: 500 MHz or higher Full Scale Range (FSR) 2 Vpp (0.5 Vpp software selectable)
2	Connector	BNC/LEMO (if the input connectors are other than BNC or Lemo, then termination cables must be provided with them)
3	Offset	Programmable DAC for DC offset adjustment. Range: ± 1 V @ 2 Vpp, ± 0.25 V @ 0.5 Vpp
4	Digital Conversion	Resolution: 14 bits Sampling rate: 500 or better MS/s simultaneously on each channel
5	ADC Clock Generation	<ul style="list-style-type: none"> • Clock source: internal/external • Provision of On-Board PLL ADC sampling clock generation from an internal (50 MHz loc. oscillator) or external reference (50 MHz or 62.5 MHz;) on front panel CLK-IN connector
6	Memory	<ul style="list-style-type: none"> • 5.12 MS/ch or better Multi-Event Buffer divisible into 1 \div 1024 buffers with independent read and write access. • Programmable event size and pre- /post-trigger
7	Trigger	Trigger source <ul style="list-style-type: none"> • Self-trigger: channel over/under threshold for either Common or Individual (through firmware) Trigger generation

		<ul style="list-style-type: none"> External-trigger: Common by TRG-IN or Individual by LVDS connectors (Through firmware) <p>Software-trigger: Common by software command</p> <p>Trigger propagation</p> <ul style="list-style-type: none"> GPO (Desktop) digital output <p>Trigger Time Stamp</p> <ul style="list-style-type: none"> Waveform recording firmware for Zero Length Encoding and Dynamic Acquisition Window: 31-bit counter, 16 ns resolution, 17 ns range; 48-bit extension by firmware Pulse Height Analysis/Pulse Shape Discrimination: 31-bit counter, 2 ns resolution, 4 s range; 47-bit extension by firmware; 10-bit and 2 ps fine time stamp by digital CFD; 64-bit extension by software
8	Synchronization	<p>Clock propagation</p> <ul style="list-style-type: none"> One-to-many clock distribution from an external clock source Clock Cable delay compensation <p>Acquisition Synchronization</p> <ul style="list-style-type: none"> Sync Start/Stop through digital I/O (S-IN, TRG-IN or GPI input, TRG-OUT or GPO output) External Trigger Time Stamp reset
9	Communication Interface	<p>Optical Link</p> <ul style="list-style-type: none"> up to 80 MB/s transfer rate <p>USB : direct (USB 2.0 compliant)</p>

		<ul style="list-style-type: none"> • Transfer rate up to 30 MB/s
10	Power Consumptions	<p>Operating supply voltage: +12 V</p> <p>Should be powered by external AC/DC stabilised power supply compatible with 230 V AC, 50Hz</p>
11	Supported Digital pulse processing (DPP) Firmware	<p>Licensed Firmware (Algorithms for Digital Pulse Processing)</p> <ul style="list-style-type: none"> • Pulse Height Analysis • Pulse Shape Discrimination • Zero Length Encoding • Dynamic Acquisition Window • And others
12	Firmware upgrade	Firmware upgrade via USB/Optical link
13	Software	Configuration tools and read out software for both windows and Linux LabVIEW IVs

Accessories:

8 Cable assembly LEMO 00 male to MCX male

8 MCX TO BNC Cable Adapter

8 BNC to BNC 2 meters cable