SkuTek Instrumentation

Where Science Meets Industry

FemtoDAQ Kingfisher

10-Channel Digitizer With SiPM Bias Supply

The FemtoDAQ Kingfisher is a compact, high performance data acquisition system. It uses a Linux-bsed Single Board Computer for control. It provides ten digitizer channels and logic I/O for connecting to external devices, and a detector bias supply for use with silicon photomultipliers, PIN diodes, and similar detectors.

FemtoDAQ Kingfisher Specifications	
Channel Count	10
Bit Resolution	14
Sampling Frequency (MHz)	100 / 250
Analog Inputs	LEMO (Max 2Vpp input)
Waveform Length	Up to: 81.92 µs (100MHz), 32.7 us (250MHz)
Trigger Modes	Hit Pattern, Multiplicity
Real-Time Pulse Processing	4-part pulse integration, Pulse height, Trigger height, Timestamping
Data Products	Waveforms, Histograms *(in-firmware)*, Pulse Summaries

	Additional customization available on a contract-basis
Analog Outputs	Arbitrary Waveform Generator (LEMO) Filter Output (LEMO)
Readout Options	Internal Storage, download files via web interface (future: 1 Gbps streaming ethernet)
Physical Dimensions (cm)	20.3 x 25.4 x 7.0
Weight (kg)	1.35
Form Factor	Benchtop
Digital I/O	4 LEMO Input 4 LEMO Output
Synchronization	Sync Timestamp Input (ideal for White Rabbit or GPS pulse-per-second) External Clock Input
Computer Interfaces	USB and Mini-USB Serial barrel jack Gigabit Ethernet
Detector Bias	34-80V, 4mA
Power	5V DC Barrel Jack
User Interface	Easy-to-use Web-based interface (no installation required!)
API	Full-function API for Python and C Remote Control over REST interface Bash Utilities for Terminal usage
Operating System	Embedded Linux

About SkuTek Instrumentation

We are a small company dedicated to serving physics researchers worldwide. We specialize in high-speed Data Acquisition systems and Digital Pulse Processing electronics. Our product line comprises the whole data acquisition chain: detectors, digitizers, firmware pulse processing, and data management for scientific big-data applications.

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