



The Dataman 774 is a dual isolated channel oscilloscope with 150 MHz bandwidth and USB 2.0 connectivity. The 774 advanced PC based oscilloscope is built to meet the demands of development labs and field engineers.

Dataman 774 is a small, fast and powerful isolated oscilloscope offering real time sampling rates of up to 100 megasamples per second and equivalent sampling rates of up to 10 gigasamples per second. Comprehensive software combined with high sampling rates and 1 megasample onboard buffer give the 774 features normally found on more expensive equipment.

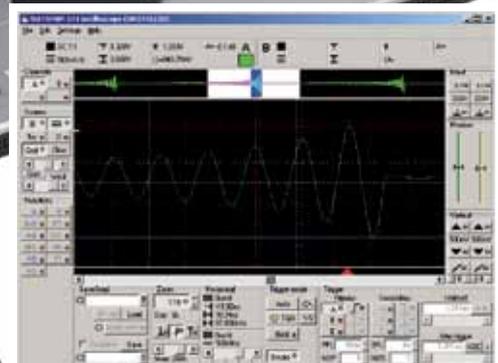
Hardware

General

- USB 2.0/1.1 compatible interface
- Dual channel with external trigger
- 150 MHz bandwidth
- Isolated measuring inputs
- Deflection factor: 10 mV/div to 5 V/div in 1-2-5 sequence
- Maximum real time sampling rate: 100 MS/s
- Maximum equivalent sampling rate: 10 GS/s
- Large internal sample buffer: 1,000,000 per channel
- Powered from USB (no batteries or additional power supply required)

Vertical Deflection System

- No. of horizontal divisions: 8
- No. of samples per division: 32
- Deflection factor range: 10 mV/div to 5 V/div in 1-2-5 sequence
- Accuracy: +- 2% of current value + 1 pixel
- Resolution: 8 bits (0,39%)
- Frequency response (-3 dB): DC: 0 - 150 MHz, AC: 1.2 Hz - 150 MHz



- USB powered - no additional power supply is required
- Dual channel with external trigger
- Isolated measuring inputs
- 150 MHz bandwidth
- 100 MS/s real time sampling rate
- 10 GS/s equivalent sampling rate
- 1 MS sample buffer per channel
- Hi-speed USB 2.0 connectivity allowing fast and easy connection to PC's and laptops
- Comprehensive 2 years parts and labour warranty
- Free life-time software updates

- Step response rise time: max. 2.4 ns
- Channel isolation: min. -60 dB
- Resistance: 1 MOhm +5 %, -2 %
- Input resistance inaccuracy adjustment: Digital for absolute accuracy +- 2% of current voltage + 1 pixel
- Capacitance: 30 pF +- 2 pF
- Zero setting accuracy: +- 2% of the screen
- Maximum input voltage: +- 200 V at 100 kHz or less

Triggering

- System type: Dual level
- Trigger source for primary level: selectable Channel A, Channel B or external trigger input
- Trigger source for secondary level: selectable Channel A, Channel B or external trigger input
- Threshold setting: Channel A and Channel B on the whole display range. External fixed on about 1.5 V
- Slope selection: Leading or trailing edge independently on each source
- Minimum trigger pulse period: 5 ns
- Minimum trigger pulse length: 2.5 ns
- Maximum voltage on external trigger input: -10 V to +13 V at 20 kHz or less
- Adjustments: Digital filter with ability of setting the valid pulse length up to 131072*Ts for each level and counter of valid triggering events settable from 1 to 32768 for each level. HOLD-OFF settable up to 1048576*Ts with selectable AUTO mode, to sample proper amount of data before trigger. (Ts – actual real time sampling period)

Data Acquisition System

- No. of horizontal divisions: 10
- No. of samples per division: 50
- Mode of operation: Sampling before and after trigger with continual selection of the trigger position
- Record length: Settable from 1024 to 1048576 (1M) samples for each channel
- Time base range in 1:1 mode: 5 ns/d to 100 ms/d in 1-2-5 sequence
- Time base range using different ZOOM modes: 625 ps/d to 204.8 s/d
- Time base accuracy: 0.01 % to 100 ns/d, 0.5 % for 50 ns/d to 5 ns/d
- Real time sampling frequency: 1 kHz to 100 MHz
- Equivalent sampling frequency: 1 kHz to 10 GHz
- Display range with respect to trigger event: 1048576 samples before and 1048576 samples after trig. event in length of 1048576 samples

Probe Compensation Generator

- Output connector: BNC, together with External trigger input
- Output impedance: 1 kOhm to parallel with 10 nF and approx. 50 Ohm serial
- Output waveform: Pulse with 1:1 duty cycle
- Frequency: 1465 Hz
- Output voltage (no load): 3.3 V +- 5%

Isolation Characteristics

- Impedance between measuring channels and computer ground: > 2 GOhm in parallel with approx. 150 pF
- Maximum isolation voltage: 500 Vp
- Maximum voltage * frequency factor (V*Hz): 50000

Software

User Interface

The included software allows complete control of the device from a PC and contains standard features expected in modern digital storage oscilloscopes (DSO) such as hold acquisition process, hold-off, zoom. In addition the software offers saving/loading of waveforms for future use, export to clipboard, printing of results and scope settings.

- All basic oscilloscope controls are easily accessible directly from the main window making measurement similar to that of a stand-alone device.
- Most parameters can be set by dragging items on the main screen such as vertical shift by dragging waveform or after trigger amount by dragging trigger mark. Other controls such as timebase up/down can be controlled by configurable hotkey. You can use two horizontal and two vertical cursors to perform any measurements on the waveform.
- The software can automatically calculate 19 waveform parameters and the fourier transformation can be used for analysis of the frequency domain.
- Software automatically determines the waveform period and transforms just one period of the waveform. Alternatively, if manual mode is activated, you can select the data to be transformed. You can use inverse fourier transformation to simulate the waveform transition through a simple filter. The XY mode (Lissajous figures) is also included.
- The software offers several export options:
 - Internal Dataman format which can be opened in the software for comparison with measured data
 - ASCII file with options to configure format
 - Image with options to customise appearance and format
- Measured data and protocol can be printed with options available to customise the layout.

Two optional software packages are available: 770 Development kit, which allows you to write your own application using the device and the 770 Roll mode, which turns the oscilloscope into a data logger.

Package Includes

- **Dataman 774 150MHz Isolated Oscilloscope**
 - Dimensions: 182 x 111 x 39 mm (7.1 x 4.3 x 1.5 inches)
 - Weight: 0.5 Kg (1.1 lbs)
 - Operating voltage: USB 1.1: 350 mA / USB 2.0: 450 mA
 - Power consumption: max. 2.25 W active
- Moulded USB Cable
- User manual
- Software

Optional Accessories

- Probes
- Data logging software
- Development kits

Warranty and Support

- 30 day money back guarantee* - If you don't like it, send it back
- Two year guarantee - Two years parts and labour warranty, on the 774 150 MHz isolated oscilloscope
- Life-Time Technical Support - 774 technical support is available free via our website and telephone helpdesk for life
- Life-Time Software Updates - 774 software updates are available free via our website for life

*Applies to orders from UK/US offices only



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