TE-6100

Digital Storage Oscilloscope, Spectrum Analyzer, Transient Recorder, Voltmeter

Features

- Four Instruments In One
- 100 MS/s DSO/Spectrum
- DC to 50 MHz Bandwidth
- 100 mV to 80 V Full Scale
- Powerful Software

Introduction

The TE6100 is the first 100 MS/s measuring instrument that consists of a Digital Storage Oscilloscope, Spectrum Analyzer, Transient recorder and Voltmeter. This new PXI based and compact measuring instrument can solve almost every measurement problem. Analyzing signals is done with an 8-bit resolution and a maximum sampling speed of 100 MS/s. The input ranges from 0.1 Volt full scale to 80 Volt full scale. The record length is 32K/64K samples.

Specifications

Hardware

- Input channels:
  2 analog BNC, 1 digital external trigger
  - A/D converter
  - Sensitivity: 100 mV for 80 V full scale
  - Resolution: 8 bits =0.39%
  - Effective data throughput 50,000,000 samples/sec, 100,000,000 samples/sec on one channel
  - Conversion time: 20 ns, 10 ns on one channel
- Analog input
  - Sensitivity: 100 mV for 80 volt full scale
  - Maximum voltage:
    200 volt (DC +AC peak <10 kHz)
  - Impedance: 1 MΩ /30 pF
  - Coupling: AC /DC
  - Accuracy: 1% ±1 LSB
  - Bandwidth: DC to 50 MHz
- Digital external trigger: 5 V/TTL
- Trigger system: digital, 2 levels
  - Trigger modes: edge, window, peak, TV, external
  - Level adjustment: 0 -100%of full scale
  - Resolution: 0.39%(8 bits)
  - Pre trigger: 0 -32768 samples (0 -100%)
  - Post trigger: 0 -32768 samples (0 -100%)
- Maximum sample rate: 50 MS/s on 2 channels, 100 MS/s on 1 channel
- Memory: 32/64 k Word per channel
- Ambient temperature: 10 to 35°C
- Dimensions: PXI, 3U single slot
- Accessories:
  2 oscilloscope probes x1 and x10 switchable

Digital Storage Oscilloscope

- Time Base
  - Record length: adjustable between 10 samples and 32760 samples
  - Pre trigger: adjustable between 0 and 100%
  - Sampling:
    adjustable between 100 mHz - 100 MHz
  - Magnification:
    adjustable between 1 and ±50
    (depends on display size)
- Vertical
  - Sensitivity: 100 mV for 80 V full scale in 2-4-8 sequence and autoranging
  - Coupling: AC /DC selectable through menu, button and keyboard
  - Hardware: offset -2 *input range ..+2 *input range
  - Software: offset -input range ..+input range, mouse controlled
  - Software gain: 0.25 ..4, mouse controlled
  - Software invert: yes
  - Measurement unit: 12 presets and user definable
  - Axis re-definable: yes
- Trigger
  - Source: Ch1,Ch2,Ch1 and Ch2,Ch1 or Ch2,Ch1 xor Ch2,Analog Ext, Digital Ext Rising slope,falling slope,inside window, outside window, TV frame,TV line
  - Mode: fully adjustable between +input range and -input range and autolevel fully adjustable between 0 and 2 *input range
  - Level: 0 -100 sec and infinite
- Measuring
  - Channels: Ch1,Ch2,Ch1 and Ch2
  - XY: yes
  - Single shot: yes
  - Auto setup: yes, affects sensitivity, trigger level and sampling frequency
  - Averaging: 1 -256 measurements
  - Envelope mode: yes, resets after 2 ..infinite measurements (user selectable)
  - Auto disk logging: yes
- Math: (in separate trace)
  - Functions
    - Ch1 +Ch2
    - Ch1 -Ch2
    - Ch2 -Ch1
- Cursors: (two pair horizontal and vertical)
  - Vertical readout: voltage left, voltage right, voltage difference
  - Horizontal readout: time left, time right, time difference, cursor frequency
  - Measurements readout: True RMS, peak to peak, Mean, Max, Min, dBm, Power, Crest factor, frequency, duty cycle
  - Rise time readout: at left cursor, at right cursor
  - Phase difference: readout degrees, rad, cos()
  - Other features: selectable between free adjustable and waveform based automatic zero crossing detection readout window fully configurable
- Reference channels: 2,one for each live channel
  - Individually selectable: yes
  - Scaleable to live signals: yes
- Miscellaneous
  - Save/recall waveforms: yes
  - File type: binary / ascii
  - Save/restore settings: yes
  - Hardcopy: yes, color /black
  - Hardcopy preview: yes
  - Measurement comment:
    yes, 3 lines of 80 characters
  - Text balloons: yes, fully configurable
  - Interpolation: yes, linear and quadratical