

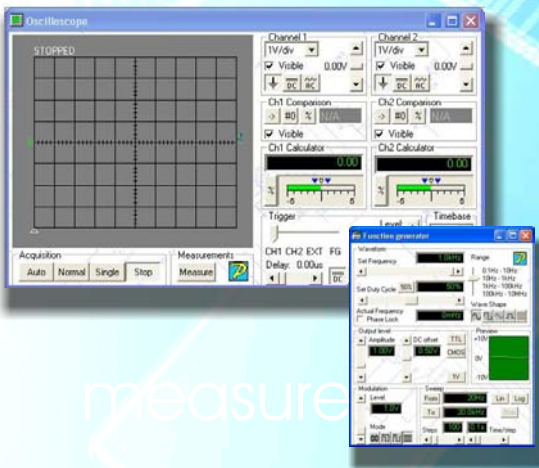
# Universal Instrument Suite

The SYSTEM 8 Multiple Instrument Station (MIS) provides all commonly required test instruments in one compact hardware module installed in a PC or external case. A 100MHz digital storage oscilloscope, 150MHz frequency counter, 10MHz function generator, fully floating multimeter, multi-rail power supply, quad programmable analogue outputs and quad digital outputs cover almost any test and measurement need.

Do you find it takes too long to set up a test or that someone has changed your instrument settings?

Do you need a simplified combination of instruments giving basic control and a versatile user interface to allow problem free operation by all skill levels?

Design Mode allows custom instruments to be created for each individual application and provides an ideal platform for computer based training (CBT) through the highly innovative combination of hardware and software. The sophisticated software can remember unlimited test configurations, controlled by access levels with password protection, so that each operator can save their instrument settings and recall them in seconds.



- Digital Storage Oscilloscope
- Floating Digital Multimeter
- Frequency Counter
- Auxiliary Power Supply
- Function Generator
- Quad Programmable Analogue I/O
- Quad Digital I/O
- Test Flow Manager
- Automated Fault-Finding Sequences
- Customisable Instruments

## SYSTEM 8 Multiple Instrument Station Module

The SYSTEM 8 Multiple Instrument Station is a complete laboratory on your PC, with seven high specification test and measurement instruments in one compact module.



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# Multiple Instrument Station Module

## Digital Storage Oscilloscope

### **Vertical**

Channels	2 + external trigger
Sampling rate	50MS/s (5GS/s ERS mode)
Bandwidth	> 100MHz
Coupling	AC, DC, GND
Input impedance	1M Ohm, 25pF
Vertical sensitivity	20mV to 2V per division
Vertical resolution	8 bits
Max. input voltage	100VDC

### **Horizontal**

Sweep speed	5ns/div to 5s/div
Memory	64kbytes/channel
Modes	normal, auto, single

### **Internal trigger**

Source	channel 1, channel 2, function generator
Slope	positive, negative
Sensitivity	< 0.5 divisions
Coupling	AC, DC, HF reject, LF reject

### **External trigger**

Input impedance	1M Ohm, 25pF
Slope	positive, negative
Sensitivity	< 10mV
Coupling	AC, DC, HF reject, LF reject
Max. input voltage	100V DC

### **Trigger delay**

Pre-trigger	0 to 100% of sweep time
Post-trigger	0 to 100% of sweep time

### **Measurements**

Automatic	standard waveform parameters
Comparison	time and voltage

## Function Generator

Waveforms	sine, square, triangle, single-shot pulse
Frequency range	0.1Hz to 10MHz, resolution 0.1% of range full scale
Pulse width	100ns to 10s
Modulation modes	AM, FM, PWM
Modulation frequency	400Hz internal
Duty cycle	20% to 80%, resolution 1%
Amplitude	0V to 5V, resolution 50mV
DC offset	-7.5V to 7.5V, resolution 50mV
Rise/fall time	25ns
Output impedance	50 Ohm

### **Sweep mode**

Start frequency	0.1Hz to 10MHz
End frequency	0.1Hz to 10MHz
Steps	1 to 1000
Time per step	0.1s to 9.9s

## Digital Floating Multimeter

Channels	2 channels
Input impedance	10M Ohm
Statistics	minimum, maximum, average

### **Channel 1**

Modes	DC volts, AC volts
Voltage range	0 to 400V
DC voltage resolution	0.005% full scale
DC voltage accuracy	+/-0.05%
AC voltage resolution	0.05% full scale
AC voltage accuracy	+/-0.1%

### **Channel 2**

Modes	DC volts, AC volts, DC current, AC current, resistance
Voltage range	0 to 400V
Current range	0 to 2A
Resistance range	0 to 20M Ohm
DC voltage resolution	0.005% full scale
DC voltage accuracy	+/-0.05%
AC voltage resolution	0.05% full scale
AC voltage accuracy	+/-0.1%
DC current resolution	1mA
DC current accuracy	+/-0.1%
AC current resolution	1mA
AC current accuracy	+/-0.2%
Resistance resolution	0.01% full scale
Resistance accuracy	+/-0.1%

## Auxiliary Power Supply

Output Voltages	+5V, +9V, -9V
Output Current	+5V supply - 500mA +9V supply - 100mA -9V supply - 100mA



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# Multiple Instrument Station (continued)

## Frequency Counter

Modes event, frequency, pulse width

### **Channel 1**

Impedance 50 Ohm  
Frequency range 1MHz to 150MHz  
Sensitivity < 5mV rms @ 2MHz to 10MHz  
< 15mV rms @ 10MHz to 100MHz  
Pulse response 50mV, 25ns pulse @ 500Hz  
Maximum input +/- 5V  
Basic accuracy +/- 0.02% +/- 1 count

### **Channel 2**

Impedance 1 MOhm  
Frequency range 2Hz to 100MHz  
Sensitivity < 300mV rms @ 10Hz  
< 150mV rms @ 10kHz to 10MHz  
< 350mV rms @ 33MHz  
Maximum input 200V rms  
Basic accuracy +/- 0.02% +/- 1 count

### **Event Mode**

Ch1 event count 0 to 9,999,999,999  
Ext gate width minimum 20ns  
Ext gate width time 6 hours, 10ms resolution  
10.74s, 5µs resolution  
84ms, 40ns resolution  
Statistics lowest, highest, average  
Display frequency, period, RPM events,  
pulse width, gate time

## Universal I/O

Number of channels 4 channels

### **Analogue Channels**

Modes voltage output, voltage input, current output,  
current input  
Voltage output range -9V to +9Vm resolution 10mV  
Voltage input range -10V to +10V, resolution 10mV  
Current output range 0 to +/-20mA, resolution µA

### **Digital Channels**

Modes logic output high, logic output low  
logic measurement  
Voltage TTL compatible logic levels

## Accessories

Output voltages 2 x DSO probes  
1 x yellow probe and cable  
1x blue probe and cable  
1x black probe and cable  
1x universal I/O cable (not terminated)

## Options

Internal fitting PCI Interface  
External fitting - MultiLink case (cost option) with USB  
- External case (cost option) which will hold up  
to 5 System8 modules (USB interface).

PC Requirements Pentium (1GHz) System  
Windows XP™  
20MB of free hard disk space  
256 MB RAM  
CD ROM Drive

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