

## Updated functions are available with the DS-5600

- **Max. 5M-point memory**
- **Judgment parameters expanded to four elements**
- **Increase number of Average times to 65,536**
- **12-bit resolution High resolution mode function**
- **Newly-equipped UART, I2C, SPI Serial BUS Trigger function**
- **Double MATH function**
- **Transparency type available for PNG format (Image data)**



500MHz 4ch 2GS/s 5M-point  
**DS-5654**

#### 4ch MODEL:

DS-5654	500MHz	2GS/s	5M-point
DS-5634	350MHz	2GS/s	5M-point
DS-5624	200MHz	2GS/s	5M-point
DS-5614	100MHz	2GS/s	5M-point

#### 2ch MODEL :

DS-5652	500MHz	2GS/s	5M-point
DS-5632	350MHz	2GS/s	5M-point
DS-5622	200MHz	2GS/s	5M-point
DS-5612	100MHz	2GS/s	5M-point



500MHz 2ch 2GS/s 5M-point  
**DS-5652**

VIEWGO II

## DS-5600 Series specifications

Model	DS-5654	DS-5652	DS-5634	DS-5632	DS-5624	DS-5622	DS-5614	DS-5612
Frequency bandwidth(-3dB)	500MHz		350MHz		200MHz		100MHz	
Rise time(Typical)	750ps		1ns		1.75ns		3.5ns	
Input Channel	4	2	4	2	4	2	4	2
Maximum Sampling Speed	1GS/s (all CHs) / 2GS/s (Channel combined)							
Equivalent Sampling Rate	100GS/s							
Peak detect resolution	1 ns							
Averaging	2 to 65536 times							
Maximum Memory Length	5Mpts(2-channel combine), 2.5Mpts(for all CHs)							
Vertical Resolution (normal)	8-bit (Smoothing with 12bit-class resolution at high resolution mode)							
Offset voltage	2mV/div - 50mV/div : ±1V, 50.2mV/div - 500mV/div : ±10V, 502mV/div - 10V/div : ±100V							
DC gain accuracy	± (1.5% + 0.5% of full scale)							
Maximum Input Voltage	±400Vpeak CAT I (1MΩ), 5Vrms (50Ω)				± 400Vpeak CAT I (1MΩ)			
Band-limiting filter	Analog filter : 100MHz, 20MHz, 2MHz, 200kHz. Digital filter : Either of LPF/HPF/OFF is selected with each channel. 4 independent channels, Simple Moving Average mode				Analog filter : 20MHz, 2MHz, 200kHz. Digital filter : Either of LPF/HPF/OFF is selected with each channel. 4 independent channels, Simple Moving Average mode			
Input coupling	GND, DC 1MΩ, AC 1MΩ, DC50Ω				GND, DC 1MΩ, AC 1MΩ			
Input Impedance	1 MΩ ±1% // 16pF, 50Ω ±1%				1MΩ ±1%/20pF			
Probe sense	Automatic 1:1, 10:1, 100:1, 1000:1, Manual 1:1, 5:1, 10:1, 20:1, 50:1, 100:1, 200:1, 500:1, 1000:1, 2000:1							
Time base	500ps/div - 50s/div		1 ns/div - 50s/div		2ns/div - 50s/div		5ns/div - 50s/div	
Standard probe	SS-101R(multi-channel)				SS-0130R (multi-channel)			
Roll mode	50ms/div - 50s/div (100ks/s, max.)							
Time base (Clock) accuracy	±10ppm							
Trigger function	Edge, Edge ALT, Edge OR, Pulse Count, Pulse Width, Period, Dropout, TV, Logic(OR, NOR, AND, NAND), Serial BUS(UART, SPI, I2C)							
TV mode / Line number / Field sequence	NTSC, PAL, Custom / up to 3,000 / 1, 2, 4 & 8 fields							
Pulse Count Trigger	1 to 9,999 events							
Pulse Width Trigger	15ns to 50s							
Period Trigger	40ns to 50s							
Dropout Trigger	50ns to 50s							
Pattern Trigger	OR, NOR, AND, NAND							
Trigger source/Status/threshold level setting	All channels / High, Low, Don't Care / All channels set independently							
Serial BUS Trigger								
UART	Trigger Selection	START, STOP, PARITY ERROR, DATA PATTERN						
	Bit rate	100bps to 1Mbps(100bps resolution)						
	Comparison Data Length	5bit to 8bit						
	Signal Source	CH1 to CH4, EXT			CH1 to CH2, EXT			
SPI	Trigger Selection	DATA PATTERN						
	CS Selection	ACTIVE HIGH / ACTIVE LOW, IDOR TIME setting when no CS						
	Comparison Data Length	4bit to 64bit						
	Signal Source	CH1 to CH4, EXT			CH1 to CH2, EXT			
I2C	Trigger Selection	START, STOP, RESTART, NACK, DATA PATTERN						
	Address mode	Selecting from 7bit/10bit/Reading from EEPROM						
	Comparison Data Length	1bytes to 5bytes at 7bit/10bit addressed, 1byte at Reading from EEPROM, SHIFT comparizon available						
	Signal Source	CH1 to CH4, EXT			CH1 to CH2, EXT			
Trigger Source	Input CHs, Line, EXT(+/-0.5V), EXT10(+/-5.0V)							
Trigger Slope/Coupling	+/- / AC, DC, HF Rej, LF Rej, Noise Rej							
Display size/resolution	7.5-inch color TFT-LCD with Touch screen/VGA(640*480pixels)							
Display mode	Y-T, XY, XY (Triggered)							
Vector Display Method	Interpolation on sample points or Dots							
Analog persistence mode	Monochrome gray scale or Color Spectrum							
Persistence time setting	100ms, 200ms, 500ms, 1 s, 2s, 5s, 10s, Infinite							
Reference waveform memory	5 waveforms							
Panel setting memory	5 settings for Internal memory or USB memory							
<b>Parameter measurement, Cursor, Zoom, Calculation, Replay</b>								
Parameter measurement	Maximum, Minimum, Peak-Peak, RMS, Cycle RMS, Mean, Cycle Mean, Top, Base, Top-Base, +Overshoot, -Overshoot, Tr 20-80%, Tf 80-20%, Tr 10-90%, Tf 90-10%, Freq., Period, +Pulse Count, -Pulse Count, +Pulse Width, -Pulse Width, Duty Ratio, Integral, Skew (+, -), Skew at level							
Concurrent number of measurements/statistics	4(four) parameters maximum /Max (Maximum), Min (Minimum), Num (Number of the total waveforms)							
Logging item, destination	Time and parameter measurement results (conditions A, B, C, D), Pass/Fail judgment results when recording: Pop-up window, internal memory (up to 86,400 entries), After recording: USB memory							
Pass/Fail	Judgment mode: Select max. 4(four)Parameters judgment or Mask judgment, Judgment result: Save waveform (USB memory) / Beep/ Pulse output (when equipped with DS-578 option)/Logging, Page search function: Select any of Fail or Pass, you can search forward or backward							
Cursor	Time, Amplitude, Time and Amplitude, Value at cursor							
Zoom	Zoom key enable display at individual grid area							
Calculation(MATH)	Addition, Subtraction, Multiplication, Differentiation, Integration, FFT(8k points maximum, RECTANGULAR, HANNING, FLATTOP), Double MATH on combination by one of Addition, Subtraction or Multiplication and one of Differentiation, Integration or FFT							
Rescaling/Unit conversion	a*x+b(x: input voltage at User defined a and b) / Volt, Ampere, Watt, degree and unit-less							
Replay	Automatic waveform recording upto 2,048waveforms, History Replayable							
Counter	6-digit							
Interface (standard)	USB 2.0(Host&Device), LAN(100Base-TX), GPIB(Factory option: DS-576)							
AUX Interface	AUX connector for External(future-expanding) options							
<b>Options</b>								
DS-577 AUXIO CH1/CH2 output	AUX IO1 : Output of CH1 input signal with applied offset voltage, AUX IO2 : Output of CH2 input signal with applied offset voltage							
DS-578 AUX IO CH1/TRIG output	AUX IO1 : Output of CH1 input signal with applied offset voltage, AUX IO2: H-level pulse signal output occurs under the following conditions - Output when triggered, - Output when Pass/Fail/Pass or Fail judgment results							
DS-576 GPIB interface	GPIB: IEEE488.2 (factory option)							
DS-579 probe power supply options	Iwatsu active probe power supply (upto 2 probe systems)							
Waveform Data Storage	USB memory for Binary, ASCII, Mathcad, Calculation(ASCII) & Calculation(Mathcad)							
Hardcopy Output	Output from front panel USB port to USB memory at TIFF, BMP & PNG format or Output to PictBridge(R) Printers							
Calibration signal output	Square waveform at 1 kHz, 3Vp-p							
Power/power consumption	AC 90Vrms to 240Vrms(47Hz to 63Hz), AC 90Vrms to 132Vrms(380Hz to 420 Hz), 95VA max. (60W max.)							
Dimensions/Weight	Approx. 330W × 190H × 124D(mm) /Approx. 3.7kg							
Performance guarantee temperature	10°C to 35°C							
Operation temperature and humidity /Altitude conditions	0deg. to 40°C, 5% to 80%(RH<=30°C, non-condensation), 55%RH or less at 40°C non-condensation / 2,000meter or lower							
Storage temperature	-20°C to 60°C							

# IWATSU

## IWATSU TEST INSTRUMENTS CORP.

INTERNATIONAL SALES SECTION / SALES DEPT.

7-41, 1-Chome, Kugayama, Suginami-ku,

Tokyo, 168-8511 Japan

PHONE: Tokyo +81-3-5370-5483 FACSIMILE: +81-3-5370-5492