Measurably better value

- Linear / logarithmic sweep with single or dual slope
- FSK and PSK modulation
- Better than 10ppm accuracy
- Dedicated sync output



TOUCH CONTROL

TEST BRIDGE

USB UNIVERSAL SERIAL BUS

ATG1005

5MHz Function Generator

aimtti.com

A-SERIES
ATG1005



The ATG1005 function generators are the first release from Aim-TTi's new A Series line. Developed to meet the requirements of design, test and education customers, the ATG1005 provides high quality DDS waveforms with Sweep and FSK/PSK modulation.

INTUITIVE TOUCH SCREEN

The A series features a simple touch operated GUI with customisable display options. Parameters can also be edited using the hard keys and the rotary knob, providing ultimate flexibility.



Home Screen



Setup Screen

HIGH QUALITY WAVEFORMS

Direct digital synthesis is used to provide high performance waveforms alongside useful functions, at a breakthrough price.

Sine, square and pulse waveforms can be generated over the full frequency range of 1mHz to 5MHz, triangle waveforms are available from 1mHz to 500kHz, all with a resolution of 9 digits and accuracy better than 10ppm. 1% to 99% variable symmetry/ duty-cycle is available for square and pulse waveforms.

SWEEP FUNCTIONS

All waveforms can be swept from 0.1Hz to their maximum frequency in a single sweep at a rate variable between 100 milliseconds and 999 seconds. The sweep can be linear or logarithmic, single or dual slope. Sweeps can be triggered and paused from the front panel or the digital interface.

MODULATION

Frequency Shift Keying (FSK) and Phase Shift Keying (PSK) provide coherent switching between two selected values at a user defined rate. They can be triggered from the front panel or the digital interface, either continuously or in single steps.

- 1mHz to 5MHz function generator
- 1mVpp-10Vpp amplitude (into 50Ω) at 1mV resolution
- Dedicated sync output
- Intuitive touch screen operation
- Linear/logarithmic sweep with single or dual slope
- Sweep and FSK/PSK modulation
- Customisable display colours
- Compact footprint , aluminium case (213 x 230 x 98 mm (WxDxH))
- Kensington lock
- USB remote interface, SCPI compatible
- Free Test Bridge control software

TOUCH CONTROL

USB UNIVERSAL SERIAL BUS

TEST BRIDGE

REMOTE CONNECTIVITY

The A series comes equipt with SCPI compliant commands and plug and play USB connectivity. Full access to the Aim-TTi Test Bridge software is provided free wtih no additional hidden costs.

Aim-TTi Test Bridge PC software is available as free download from the Aim-TTi website, which can be used to control up to 4 instruments simultaneously.

www.aimtti.com/support


ATG1005 Rear

COMPACT FOOTPRINT

The A series is designed with your workspace in mind. The compact footprint (213 x 230 x 98 mm (WxDxH)) ensures they won't take up unnecessary space on your bench or shelf.

CUSTOMISEABLE COLOUR DISPLAY

With 6 different colour themes, the A Series can be set to simulate different channels with a visual cue or group together specific instruments, and for different working environments, light and dark themes are provided.

PREMIUM ALUMINIUM CASE

The premium aluminum case not only provides robust protection but also adds a touch of sophistication, elevating your testing capabilities with equipment that combines functionality, durability, and style.



ATG1005 Group

TECHNICAL SPECIFICATION

WAVEFORMS

SINE	
Range	1mHz to 5MHz
Resolution	1mHz or 9 digits
Accuracy	10ppm for 1 year; ±1mHz below 0.2Hz
Temperature Stability	Typically <1ppm /°C outside 18° to 28°C
Output Level	2mV to 20V pk-pk open circuit, (1mV to 10V pk-pk into 50Ω)
Amplitude flatness (1Vp-p relative to 1 kHz)	≤ 500kHz : ±0.2dB, ≤ 5MHz : ±1dB (Typically < ±0.5dB)
Harmonic distortion (1Vp-p)	≤ 500kHz : <-65dBc, ≤ 5MHz : <-50dBc (typically <-60dBc)
Total Harmonic Distortion. DC to 20kHz (typical):	0.05%
Non-harmonic Spurii	<-65dBc to 1MHz, <-65dBc + 6dB/octave 1MHz to 5MHz
SQUARE	
Range	1mHz to 5MHz
Resolution	1mHz or 9 digits
Symmetry	1.0% to 99.0% for full frequency range, 0.1% Resolution for full frequency range. Specifications only apply: ≤ 100kHz : 1.0% to 99.0%, ≤ 5MHz : 20.0% to 80.0%
Asymmetry	1% of period + 10ns
Accuracy	10ppm for 1 year; ±1mHz below 0.2Hz
Output level	2mV to 20V pk-pk open circuit, (1mV to 10V pk-pk into 50Ω)
Rise and Fall Times	<30ns
Aberrations	<5% + 2mV
TRIANGLE	
Range	1mHz to 500kHz
Resolution	1mHz or 9 digits
Accuracy	10ppm for 1 year; ±1mHz below 0.2Hz
Output level	2mV to 20V pk-pk open circuit, (1mV to 10V pk-pk into 50Ω)
Linearity Error	<5% to 100kHz
POSITIVE AND NEGATIVE PULSE	
Range	1mHz to 5MHz
Resolution	1mHz or 9 digits
Symmetry	1.0% to 99.0% for full frequency range, 0.1% Resolution for full frequency range. Specifications only apply: ≤ 100kHz : 1.0% to 99.0%, ≤ 5MHz : 20.0% to 80.0%
Asymmetry	1% of period + 10ns
Aberrations	<5% + 2mV
Rise and Fall Times	<30ns

Output level	2mV to 10V pk-pk open circuit, (1mV to 5V pk-pk into 50Ω) positive or negative only pulses with respect to the DC offset baseline

OPERATING MODES

CONTINUOUS

Continuous cycles of the selected waveform are output at the programmed frequency

SWEEP

Carrier Waveforms	All
Sweep Mode	Linear or logarithmic Trigger: single or continuous Slope: single or dual
Sweep Width	From 0.1Hz to 5MHz in one range. Phase continuous. Independent setting of the start and stop frequency. 0.1Hz Resolution. Square / Pulse Symmetry specifications only apply: When both start and stop frequencies ≤ 100kHz : 1.0% to 99.0% If either start or stop frequencies > 100kHz : 20.0% to 80.0%
Sweep Time	100ms to 999s (10ms resolution)
Trigger Source	The sweep may be free run or triggered from the front panel TRIGGER key

FREQUENCY SHIFT KEYING (FSK)

Phase coherent switching between two selected frequencies at a rate defined by the switching signal source	
Carrier frequency	From 0.1Hz to 5MHz. 0.1Hz Resolution. Square / Pulse Symmetry specifications only apply: When both frequencies ≤ 100kHz : 1.0% to 99.0% If either frequency > 100kHz : 20.0% to 80.0%
Carrier waveforms	All
Switch repetition rate	DC to 10kHz (internal trigger)
Switching signal source	Manual (front panel TRIGGER key) or internal trigger generator

PHASE SHIFT KEYING (BINARY PSK)

Phase	0.0° to 360.0°
Carrier frequency	From 1mHz to 5MHz.
Carrier waveforms	All
Switch repetition rate	DC to 10kHz (internal trigger)
Switching signal source	Manual (front panel TRIGGER key) or internal trigger generator

OUTPUTS

MAIN OUTPUTS

Output Impedance	50Ω
Amplitude	2mV to 20V pk-pk open circuit, (1mV to 10V pk-pk into 50Ω) Note that in positive or negative Pulse modes the amplitude range is 2mV to 10V pk-pk open circuit.
Accuracy	±3% ±1mV at 1kHz into 50Ω
DC offset range	±10V from 50Ω. Clipping warning when DC offset plus signal peak exceeds ±10V. Accuracy ±3% ±15mV
Resolution	1mV for both amplitude and offset

SYNC OUTPUT

Waveform Sync	A square wave at the main waveform frequency. Symmetry ≈ 50% for sine and triangle waves at MAIN OUT; for square waves symmetry is the same as that of the waveform at MAIN OUT
FSK Sync	Outputs the FSK switching frequency
PSK Sync	Outputs the PSK switching frequency
Signal Levels	Output impedance 50Ω nominal. Logic levels of <0.8V & >3V

INTERFACES

USB	Full digital remote control facilities are available through the USB interface. Standard USB 2.0 hardware connection. Implemented as virtual-COM port. SCPI compatible.

GENERAL

Display	2.8” IPS TFT (320x240) Backlit
Data Entry	Resistive touch screen user interface navigation, value entry direct by numeric keys or by rotary control
Stored Settings	Up to 6 complete instrument set-ups may be stored in non-volatile memory
Size and Weight	213.3 x 230 x 98.2 mm (WxDxH) 1.2kg
Power	110-240VAC ±10% 50/60Hz; 30VA max. Installation Category II
Operating Range	+5°C to 40°C, 20-80% RH
Storage Range	-20°C to + 60°C
Environmental	Indoor use at altitudes up to 2000m, Pollution Degree 2
Safety & EMC	Complies with EN61010-1 & EN61326-1
Security	Kensington Lock

General specifications apply for the temperature range 5°C to 40°C. Accuracy specifications apply for the temperature range 18°C to 28°C after 30 minutes warm-up, at maximum output into 50Ω. Typical specifications are determined by design and are not guaranteed.

BENCH TOP INSTRUMENTS

POWER SUPPLY

FX Series
DC Power supply

- Dual or triple output.
- Digital control.
- Tracking.
- Multi on/off.



NEW SERIES · 42V VOLTAGE · SELV · 6A CURRENT · TOUCH CONTROL · 246W POWER · TEST BRIDGE · OUTPUT <2mV NOISE

WAVEFORM GENERATOR

ATG1005
Function Generator

- Single output.
- Dedicated sync output.
- Linear/logarithmic sweep with single or dual slope.
- FSK and PSK modulation.



NEW MODEL · 1mHz TO 5MHz · TOUCH CONTROL · TEST BRIDGE · TEST BRIDGE WFM

PRECISION MEASUREMENT

ADM1055
Digital multimeter

- Ax+B, limits, % deviation and power.
- 0.02% basic accuracy.
- Analogue style bar chart, histogram and statistics.



COMING SOON · 600V DC · 10A CURRENT · TOUCH CONTROL · 5½ DIGIT · TEST BRIDGE · 2 WIRE

PRECISION MEASUREMENT

ALD1120
Electronic Load

- Variable slew rate.
- High and low pulse.
- Linear/logarithmic sweep
- Battery discharge and capacity measurements.



COMING SOON · HIGHER 120V VOLTAGE · HIGHER 24A CURRENT · TOUCH CONTROL · 120W POWER · TEST BRIDGE · CC CR CV CP

EXCELLENCE THROUGH EXPERIENCE

Aim-TTi is the trading name of Thurlby Thandar Instruments Ltd. (TTi), one of Europe's leading manufacturers of test and measurement instruments.

The company has wide experience in the design and manufacture of advanced test instruments and power supplies built up over more than thirty years.

The company is based in the United Kingdom, and all products are built at the main facility in Huntingdon, close to the famous university city of Cambridge.

TRACEABLE QUALITY SYSTEMS

TTi is an ISO9001 registered company operating fully traceable quality systems for all processes from design through to final calibration.

ISO9001:2015

Certificate number FM 20695

WHERE TO BUY AIM-TTI PRODUCTS

Aim-TTi products are widely available from a network of distributors and agents in more than sixty countries across the world.

To find your local distributor, please visit our website which provides full contact details.

www.aimtti.com

DESIGNED IN THE UK · MANUFACTURED IN THE UK ·

Designed and built in Europe by:

Thurlby Thandar Instruments Ltd.
Glebe Road, Huntingdon, Cambridgeshire.
PE29 7DR United Kingdom
Tel: +44 (0)1480 412451 Fax: +44 (0)1480 450409
Email: sales@aimtti.com Web: www.aimtti.com

82100-1630 01