Measurably better value

Information for distributors and agents

New product briefing note: -

TGP3100 Series

Advanced Pulse and Universal Generators

Background to Pulse Generators

Historically the pulse generator was one of the basic instruments to be found in most electronic laboratories.

Pulse generators performed a role that function generators could not, namely the creation of fast edge rectangular waveforms with pulse widths settable independently of the repetition period, and an ability to trigger pulses with negligible delay jitter.

As digital generators replaced analog ones, DDS based function generators were able to replicate some of the functionality of a pulse generator. However, these generators still could not offer some important features of a traditional pulse generator.

The Digital Pulse Generator

Until quite recently, the heart of a true pulse generator remained analog, incorporating digitally controlled high speed monostables to generate pulse width and period.

Only recently have solutions emerged that enable pulse widths to be controlled to high resolution, and trigger jitter removed using all-digital techniques.

Despite the change in technology, prices for true pulse generators have remained high, typically starting at around $5,000 US for a single channel model of modest frequency capability.

Pulse and Universal Generators

The complex architecture of a digital pulse generator enables it to provide features that analog pulse generators never could.

These include complex modulations of the pulse waveforms using internal or external sources, and pattern generation.

In addition, the internal architecture can be re-configured to provide the same capabilities as a DDS function and arbitrary generator.

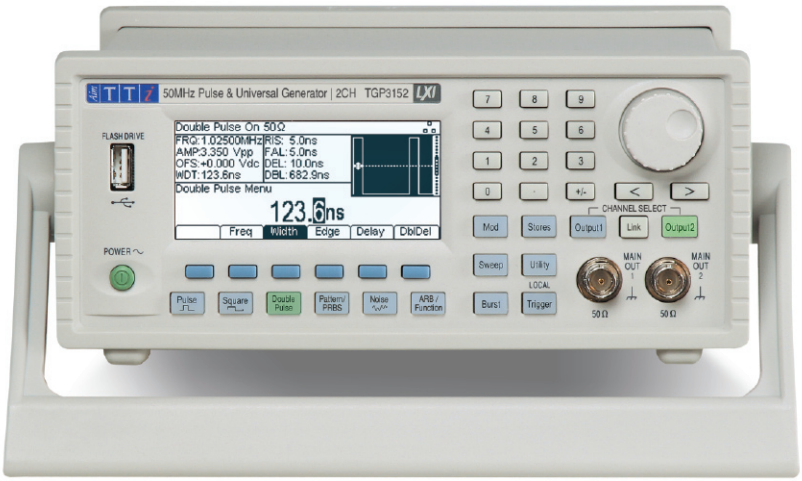
These multi-function generators are described differently by each manufacturer, but Aim-TTi has chosen the term Pulse & Universal generator to encompass the ability to replicate true pulse, function, arbitrary and noise generation functions in one instrument.

The TGP3100 Series

The TGP3100 series was conceived as a product that could replace a true pulse generator at a dramatically lower price point.

Relatively few manufacturers currently offer a true pulse generator for general purpose applications. Those that do include BK Precision, Tabor and, most notably, Agilent/ Keysight.

With an Fmax of 50MHz, the TGP3100 competes against the lower end of the Keysight product range. However, the price point is less than one third of the Keysight base product (the 81101A).



Key Product Features

» Pulses down to 10ns with 100ps setting resolution
» Delay from 0ns to 1000 seconds, 100ps resolution
» Single pulse or burst/gated with defined trigger delay and low jitter
» External width mode for pulse reconstruction with low jitter
» Variable rise and fall times (independent) from 5ns to 800 seconds
» 20 volts peak-peak amplitude into 50 Ohm load
» Double Pulse, PRBS, User-defined Pulse Patterns
» Pulse-width modulation, pulse delay modulation and double pulse delay modulation using internal, external or second channel sources
» Edge jitter simulation using noise or waveform modulations
» AM, FM, PM, FSK, SUM and Sweep of pulse waveforms
» Noise generation with definable distribution and full variable bandwidth
» Standard waveform generation (Sine, Ramp, Sinc, Exponential etc.)
» Arbitrary waveform generation at 800MS/s
» Very low pricing in comparison to other true pulse generators

Model Range

Four models will be available:

Model	Frequency/Channels	Approximate Pricing
TGP3121	25MHz, Single Channel	£1,075 / €1,400 / $1,650
TGP3151	50MHz, Single Channel	£1,225 / €1,625 / $1,900
TGP3122	25MHz, Dual Channel	£1,475 / €1,950 / $2,300
TGP3152	50MHz, Dual Channel	£1,745 / €2,300 / $2,750

All models will have USB, GPIB and LXI compliant LAN interfaces as standard.

Launch Date

Proposed launch date is April 2016, with first products shipping to customers in May.

Product Promotion

The TGP3100 series will be strongly promoted on the Aim-TTi web site and in press releases and adverts.

A web information tour will available along with a comprehensive data sheet/ brochure.

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