

News Release

Ace unitech introduces high performance cost-effective jitter injectors

Product leverages technology from Japan's Artek, Inc., providing high frequency jitter injection in small cost-effective package

Santa Clara, California, Tuesday February 1st 2011 - Ace unitech, Inc., will be introduced the **RJI-6000** jitter injector for high-speed data stress tests. **RJI-6000** is built by Japan's Artek, Inc., based on unique analog and mixed signal technology corroborated by advanced signal processing theories.

RJI-6000 is designed for RX characterization and Quality Assurance for high-speed serial data interface device and components such as **USB3, PCI Express 2 & 1, SATA 3 & 2& 1** and any other NRZ differential signal up to **6Gbps**. Multiple stress items are supported for elaborate test environment as Random Jitter, Sinusoidal Jitter, Inter-pair skew and swing level, etc. The **unique architecture**, Jitter-injector onto receiving data stream, enables cost effective loop-back test configurations.

"With the ever-increasing speeds of digital communications, the cost of test and measurement equipment for high speed digital signals has also been high and increasing. Superior and special techniques in analog and mixed signal processing developed by Artek, Inc. based on a novel and unique approach, are incorporated in **RJI-6000** jitter injector for providing a very cost-competitive solution." said Mr. Kiyoshi Sone, the owner (2nd generation) and president of Artek, Inc.

For additional information about Ace unitech's **RJI-6000** Jitter Injector and related products, including specifications, please visit www.aceunitech.com.

About Ace unitech

Ace unitech, Inc. was founded in April 2009 with a mission to identify and market cost-effective Test & Measurement solutions based on novel methods developed by leading analog and mixed signal design experts, and to challenge the paradigm of "very expensive Test & Measurement world" by providing high performance but cost-effective alternative solutions. We currently represent Artek, Inc.

About Artek

Artek, Inc., was founded in 1967 in Japan as a custom engineering company for electronic devices. Advancing analog and mixed signal technologies for over 40 years, they have finally decided to announce their own products, based on their novel and unique approach, for test and measurement equipment for high speed digital communications.

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Random & Sinusoidal Jitter Injector

RJI-6000 -Jitter Stress Injector for RX Characterization & Quality Assurance-

- ▶ PCI-Express 2/1
- ▶ SATA 3/2/1
- ▶ USB 3



developed by
ARTEK INC.

▶ Features

Data Rate up to 6 Gbps

Adjustable Random Jitter

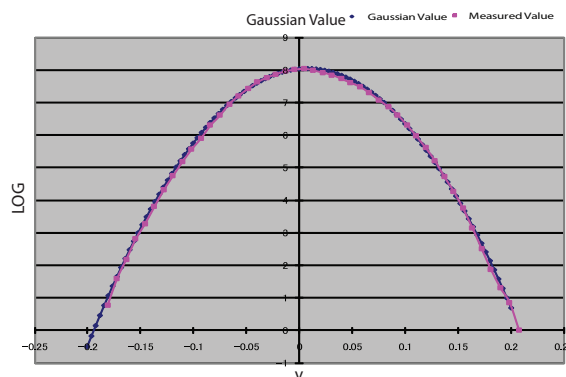
Programmable Sinusoidal Jitter

Output Swing Level Control

De-emphasis Control

Intra-Pair-Skew Control

RJI-6000 is the jitter injector for RX Characterization and Quality Assurance for high-speed serial data interface device and components such as USB 3, PCI Express 2 & 1, SATA 3 & 2 & 1 and any other NRZ differential signal up to 6 Gbps. Multiple stress test items are supported for elaborate test environment as Random Jitter, Sinusoidal jitter, Intra-Pair Skew and Swing level, etc. The unique architecture, jitter-injection onto receiving data stream, enables cost effective loop-back test configurations.



ARTEK Random Jitter Generator Long Years of experience has finally realized jitter generator "ARTEK" whose characteristics comes very close to Gaussian characteristics. RJI-6000 has this ARTEK engine integrated.

Supporting multiple data rate, RJ1-6000 works with **USB 3, PCI Express 2 & 1, SATA 3 & 2 & 1** and any other standards with NRZ differential signal up to **6 Gbps**.

The **unique architecture**, Jitter injection onto receiving data stream enables **RX Loop-back** test configurations.

Internal Artek **Random Jitter** engine generates beautiful Gaussian curve, individually adjustable for two bandwidth (10k-1.5MHz and 1M-500MHz) up to 10ps(rms) at 0.1ps resolution. **Sinusoidal Jitter** is fully programmable up to 220ps at 1ps resolution for 100k-100MHz at 1KHZ resolution. The built-in **External jitter** connector allows user defined jitter input, available as 1ps at 1mV up to 500MHz.

Multiple stress test items are integrated such as, **Output Swing Level** is adjustable in the range of 230mVpp to 1Vpp differential. **De-emphasis** is controllable up to -6dB at 0.1dB resolution. **Intra-Pair Skew** is adjustable between 0 +/- 120ps at 1ps resolution.

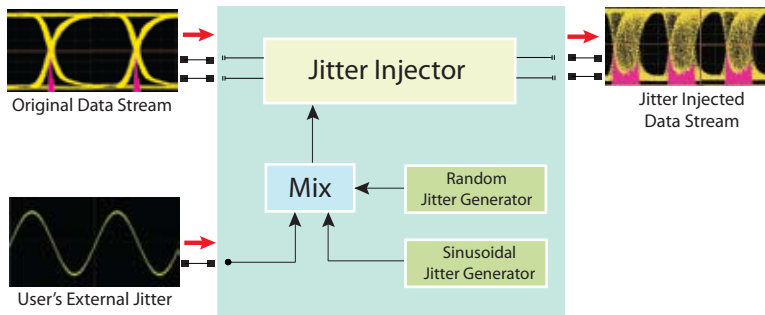
Other beneficial functions are also supported. Internal relay switch is integrated between "pass-through" mode and "jitter" mode for **OOB & LFPS** operation. DC Characteristics is available for simple connection verifications. **SSC** with input signal is passed through to Output.

PC control software is provided for full control and **Preset** programming via USB. Preset selection switch is built-in for stand-alone operation.

► Specifications

| | | |
|-----------------------|-----------------------|--|
| Signal Level & Format | Signal Format | Differential NRZ, 2xSMA for Input, 2xSMA for Output |
| | Input Level | 200mVpp-1.2Vpp differential, AC coupled |
| | Output Level | 230mV-1.0Vpp differential AC coupled, adjustable at 1mV resolution |
| | Bite Rate | 1G-6Gbps (USB3, PCI Express 2 & 1, SATA 3 & 2 & 1) |
| Jitter | Random Jitter | 0-10ps(rms) for 10k-1.5MHz / 1M-500MHz, adjustable at 0.1ps(rms) resolution. Crest Factor: 14pp Filter Order:7 |
| | Sinusoidal Jitter | 0-22ps for 0.1-100MHz, adjustable at 1ps /1KHz resolution |
| | External Jitter Input | 1ps/mV up to 500mMHZ, 1xSMA single-end |
| De-emphasis | | 1 Tap FIR, 0-6dB adjustable at 0.1dB resolution |
| Intra-Pair Skew | | 0+/- 120ps adjustable at 1ps resolution |
| Other Functions | OOB / LFPS mode | Switch between "through-pass" mode and "Jitter Injection" mode 100us switching period |
| | DC Characteristics | max 8 ohm single-end |
| | SSC | Pass-through (Input SSC will be passed through to output) |
| Control | Front Panel | Preset selection only for stand-alone use |
| | via USB | All parameter set up, including preset programming |
| General | Dimensions | 15"(w) x 4"(d) x 9"(h) excl. connectors |
| | Weight | Approx. 9lbs |

► Block Diagram



The specifications are subject to changes and improvements without notice.

