Dual 0.3 to 300 MHz Direct Digital RF Synthesizer is first to offer PSK, FSK and triggered quadrature sweep on single PCI board

Orinda, CA, August 1, 2005, Furaxa Inc. today announced the first Dual 300 kHz - 300 MHz frequency synthesizer board with triggered sweep and modulation capabilities on a single $2495 PCI board. The Synth300-TRIG PCI dual-channel Direct Digital Synthesizers (DDS) card incorporates two independent DDSs synchronized at 1GHz, each separately programmable for frequencies between 300 KHz and 300 MHz in 0.233 Hz increments. In addition to single or dual tone RF generation (500mV into 50 ohms), the SYNTH300-TRIG can generate advanced RF signals such as triggered dwell/sweep/dwell quadrature swept signaling useful in RADAR, RF ATE, and other advanced applications. Additionally, by utilizing the 4 independent user-defined frequency/phase profiles associated with each synthesizer, frequency and/or phase modulated waveforms (4-FSK, 4-PSK) can be easily generated and controlled via software or external TTL inputs. In addition to its two sine-wave RF outputs, the Synth300-TRIG also includes an LVDS port, allowing the user to create a programmable digital clock with precise frequency and phase adjustment capability. It can be ordered with up to 2 such ports (model: Synth300-TRIG-LVDSX2), and will accept an external clock if desired. Software provided includes a simple-to-use GUI to quickly configure most applications, as well as example C code to allow programming of advanced applications.

Each DDS-based synthesizer holds up to 4 independent frequency/phase profiles. Profile switching can be accomplished via host system software control or by external TTL frequency/phase profile switching inputs, allowing phase and/or frequency to be changed in as little as 8 nanoseconds, for applications in which the time uncertainty of software controlled frequency/phase selection is not acceptable.

Designed for low jitter operation in communications, industrial, military/aerospace and scientific applications, the Synth300-TRIG finds applications in areas such as:

- Advanced RF system development and implementation in RADAR and SIGINT applications
- RF component test such as verification of phase/frequency detection device operation.
- ADC/DAC data acquisition systems in which a programmable timebase is required.
- Time vernier generation in which a static phase or low frequency offset between two synchronized RF sources is required.
- Simulation of oscillator drift on a circuit or system during design and testing.
- Examination of spectral response of circuits, devices, or materials
- Low cost manufacturing test/QA instrumentation using multiple synthesizers in a host computer

The Synth300-TRIG operates under Windows 2000™ and XP™. Most synthesis applications can be easily configured by means of the GUI provided. For more complex applications, example C programs may be easily edited and recompiled using common C compilers to create a dedicated executable. A library of C-coded functions and driver are also included for use on Linux platforms.

The Synth300-TRIG provides the functionality of much more expensive test equipment in a much smaller form factor (single-height PCI board). The Synth300-TRIG is priced at $2495 each, and delivery is from stock. Quantity discounts are available.

More detailed specifications can be found at: http://www.furaxa.com/Documents/Synth300-TRIG/Synth300-TRIG_Product_Specification_and_Manual-v1.02.DOC
PDF and Word versions of this document and graphics files are located at:
http://www.furaxa.com/Documents/Synth300-TRIG/Synth300TRIG_news_release.doc.

The graphics are on the next pages.

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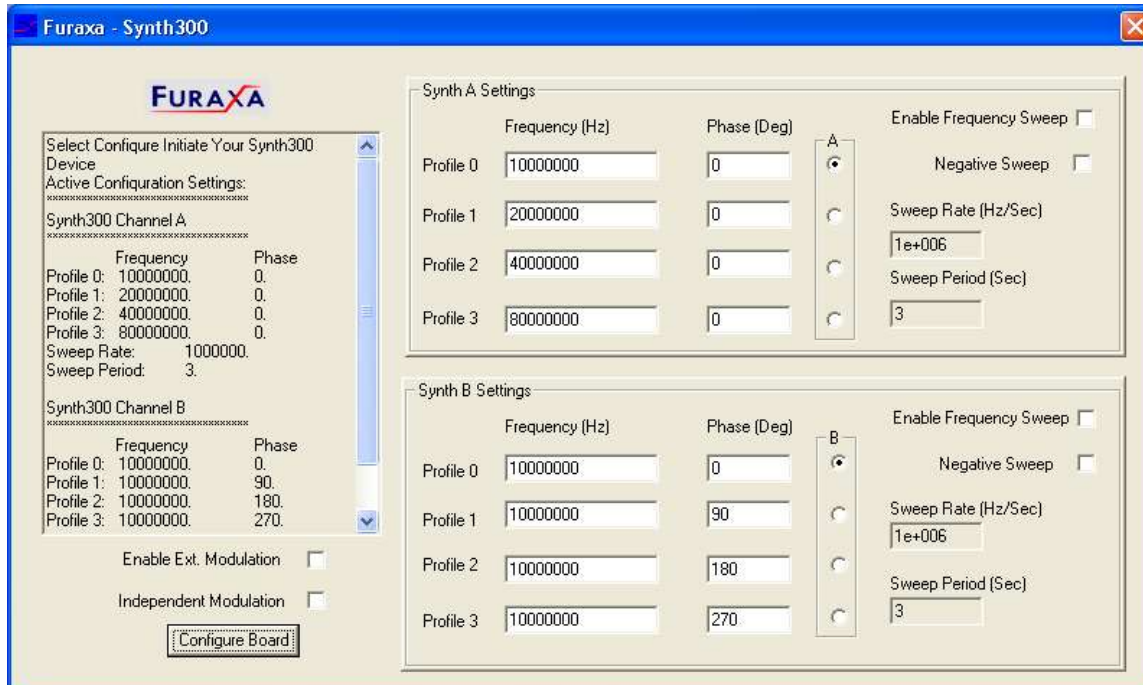34 Canyon View Dr.
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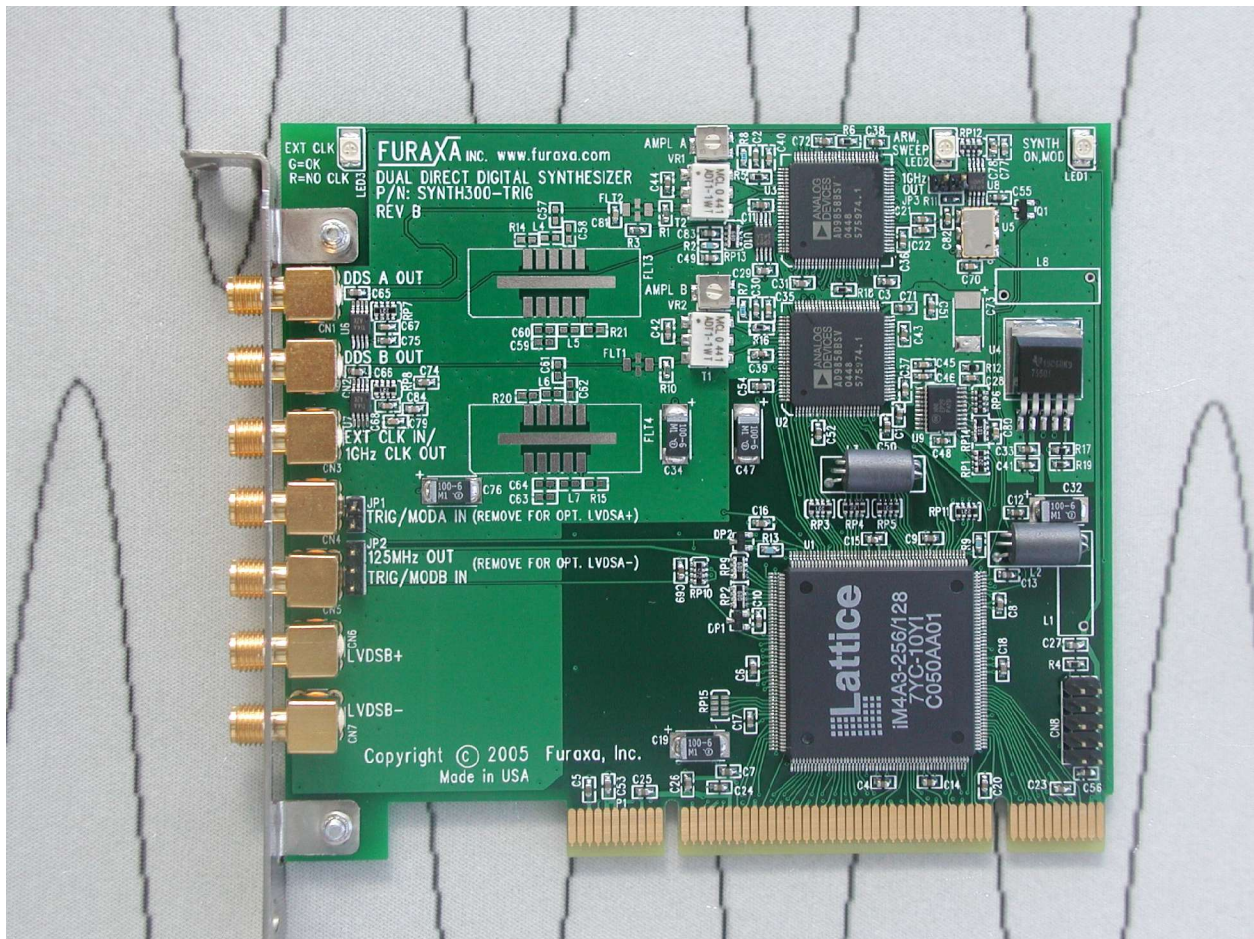
This graphic is called **SYNTH300-TRIG** and it is stored in jpg format.

Furaxa - Synth300

FURAXA

Select Configure Initiate Your Synth300
Device
Active Configuration Settings:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
Synth300 Channel A
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
         Frequency   Phase
Profile 0: 10000000.   0.
Profile 1: 20000000.   0.
Profile 2: 40000000.   0.
Profile 3: 80000000.   0.
Sweep Rate: 1000000.
Sweep Period: 3.

Synth300 Channel B
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
         Frequency   Phase
Profile 0: 10000000.   0.
Profile 1: 10000000.   90.
Profile 2: 10000000.   180.
Profile 3: 10000000.   270.

Enable Ext. Modulation ☐

Independent Modulation ☐

[Configure Board]

Synth A Settings

	Frequency (Hz)	Phase (Deg)	A	Enable Frequency Sweep ☐
Profile 0	10000000	0	◉	Negative Sweep ☐
Profile 1	20000000	0	○	Sweep Rate (Hz/Sec)
Profile 2	40000000	0	○	1e+006
Profile 3	80000000	0	○	Sweep Period (Sec)
				3

Synth B Settings

	Frequency (Hz)	Phase (Deg)	B	Enable Frequency Sweep ☐
Profile 0	10000000	0	◉	Negative Sweep ☐
Profile 1	10000000	90	○	Sweep Rate (Hz/Sec)
Profile 2	10000000	180	○	1e+006
Profile 3	10000000	270	○	Sweep Period (Sec)
				3

This graphic is called **SYNTH300-GUI** and it is stored in jpg format.