



**OPTICHRON**

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**FOR IMMEDIATE RELEASE**

**Optichron's 16-bit Analog-to-Digital Converter Module  
Delivers Unparalleled Linearity and Signal-to-Noise Ratio  
Combination at 100 MSPS Sampling Rate**

*16-bit ADC Module Extends Turbolinear™ Technology Portfolio – Ideal for High-Speed and High-Performance Signal Processing in Communications and Industrial Applications*

**FREMONT, Calif. – June 26, 2006** – Optichron, Inc., a pioneer in advanced nonlinear signal processing, today introduced a 16-bit Analog-to-Digital Converter (ADC) module incorporating its proprietary Turbolinear™ technology, which reduces nonlinear distortion by more than 90 percent in high-speed pipelined data converters. The new OM1600M-100 ADC modules boast the industry's best Spurious-Free Dynamic Range (SFDR) of up to 95 dB and Signal-to-Noise Ratio (SNR) of 78 dB, while operating at a maximum of 100 Mega Samples per Second (MSPS) with input frequencies from baseband to 250 MHz. The industry's first 16-bit ADC module features Optichron's Linearizer IC with Turbolinear™ technology, which linearizes both of the main module components, a MAX19588 ADC and a SBB2089 buffer amplifier. The module occupies a compact BGA footprint that is one-half the size of Optichron's previous modules. The OM1600M-100 modules will benefit a wide variety of high-performance signal processing applications such as multi-channel/multi-mode receivers, base stations, software defined radios, and medical imaging equipment.

“Optichron's new 16-bit ADC modules offer system designers higher resolution and true 16-bit linearity, plus the benefits of reduced form factor, system cost and power dissipation,” said Roy Batruni, CEO of Optichron. “The combination of Turbolinear™ technology with 16-bit ADC

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performance results in very large benefits in applications with very high input frequencies. The new module offers users an enhanced Effective Number of Bits (ENOB) which allows significant benefits in system design that translate to higher data rates, more channels, and lower system cost.”

### **Linearized 16-bit Analog-to-Digital Converter Modules – Technical Details**

The OM1600M-100 ADC module includes an Optichron Linearizer IC based on Turbolinear™ technology, a MAX19588 16-bit ADC, and a SBB2089 buffer amplifier in a 1.7” x 0.78” 130-pin small-form-factor BGA hybrid package. The Linearizer removes the nonlinear distortion present in the ADC and amplifier, with an unparalleled improvement in SFDR – up to 25 dB over ADCs that are not powered by Turbolinear™ technology.

The module supports sample rates that range from 60 MSPS to 100 MSPS and has 16-bit resolution at 100 MSPS, SNR up to 78 dB, excellent input sensitivity of -14 dBm, and an SFDR of up to 95 dB for input frequencies spanning Nyquist zones 1-5. The module has a total power consumption of 3.125 W at 100 MSPS. Additional features include a single-ended, 50-ohm analog input buffer; selectable 2s complement or binary outputs; and output clock for data output latching.

### **Availability and Pricing**

The OM1600M-100 is currently available in sample quantities. Evaluation boards are available now. Production volumes of modules will be available in the third quarter of 2006.

Pricing for the OM1600M-100 is \$80.00 per unit at 10,000 units.

### **Turbolinear™ Signal Processing Technology**

Turbolinear™ signal processing technology is Optichron's proprietary approach to correcting nonlinear distortion that occurs in communications channels and mixed-signal environments. This innovation provides system design engineers with the ability to overcome nonlinear distortion — a naturally occurring phenomenon that degrades signal fidelity within signal paths

and results in suboptimal system performance. It is scalable, allowing engineers to enable or disable filter blocks to meet their specific design needs. It is also adaptive and optimizes filter parameters to track changes in the properties of the transmission medium. The technology can be applied to all types of nonlinear distortion (static, dynamic, continuous, discontinuous, distortion with memory effects) that degrade the performance of data conversion and communications system architectures. Turbolinear™ technology significantly improves the parameters for overall system design and, through reduced component count and more efficient operation, lowers cost and power consumption.

### **About Optichron**

Optichron is a fabless semiconductor company that leverages its pioneering advancements in nonlinear signal processing to offer high-performance mixed-signal and communications products. The company's Linearizer IC and Analog to Digital Converter (ADC) modules, based on the proprietary Turbolinear™ technology, correct for nonlinear distortion generated in high-speed analog-to-digital converters. The company is currently engaged in developing other high-performance nonlinear signal processing applications and products. For more information please visit [www.optichron.com](http://www.optichron.com).

Turbolinear is a trademark of Optichron, Inc.

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