



CRANE

Innovation Infosheet

Downloaded May 23, 2022

Photonic Analog-To-Digital Converter

Track Code: CRANE-84005

Categories:

- Electrical Engineering
- NSWC Crane

Keywords:

- Circuits
- Converter
- Crane
- Electrical Engineering
- Lasers

An analog-to-digital converter is a device that converts a voltage to a digital number. A variety of analog-to-digital converters has evolved recently, but there is a strong demand for faster converter devices.

Naval Surface Warfare Center, Crane Division (NSWC Crane), has developed and patented a photonic analog-to-digital converter that transforms a continuous physical quantity (voltage) to a digital number that represents the quantity's amplitude. This technology provides higher sampling rates, allowing conversion of higher frequency analog signals using a larger bandwidth and a technique for incorporating the architecture in electronic devices.

Advantages:

- Provides higher sampling rates
- Converts higher frequency analog signals at a high speed

Potential Applications:

- Music recordings
- Digital signal processing
- Scientific instruments

People:

- Kellar, Kevin K. (Project leader)

Intellectual Property:

Application Date: December 24, 2002

Type: Utility Patent

Country of Filing: United States

Patent Number: 6,700,517

Issue Date: March 2, 2004

Contact OTC:

Purdue Office of Technology Commercialization

The Convergence Center

101 Foundry Drive, Suite 2500

West Lafayette, IN 47906

Phone: (765) 588-3475

Fax: (765) 463-3486

Email: otcip@prf.org