

Teledyne e2v, pSemi and GaN Systems unveil industry's fastest HiRel GaN power solution at Satellite 2018

GaN Power solution features GaN FET and half-bridge driver for high-reliability applications

MILIPITAS, CA – March 5, 2018 – [Teledyne e2v](#) is launching a complete GaN power solution based on technology from [pSemi](#) (formerly Peregrine Semiconductor) and [GaN Systems](#). The solution features GaN FETs and the industry's first rad-tolerant, half-bridge power driver for GaN high-reliability applications. The technology will be demonstrated at [Satellite 2018](#) March 12-15 in the Teledyne Defense Electronics booth (**#619**).

Gallium nitride devices have revolutionized power conversion in other industries and are now available as radiation tolerant, space-qualified devices. The release of these GaN FETs and the industry's fastest half-bridge GaN driver finally provide the efficiency, size, and power-density benefits required in satellite systems' critical power applications. The device prototypes are now available for purchase. For more information, [visit our webpage](#).

Teledyne's ceramic TDG100E15 100V 15A FET and TDG100E30 100V 30A FET both utilize GaN Systems' patented Island Technology® which is a scalable, vertical charge dissipating system that gives the power transistor ultra-low thermal losses, high power density, no-charge storage, and very high switching speeds. The use of industry standard SMD 0.5 ceramic packaging allows very high frequency switching, excellent thermal characteristics, and a reduced time-to-market.

The second part of the GaN solution is the industry's fastest half-bridge GaN Driver based on pSemi's UltraCMOS® technology. The Teledyne TD99101 25 MHz GaN Driver features a ruggedized design and is qualified for operation in harsh environments, including space. The device contains both high-side and low-side GaN drivers capable of sourcing 1A and sinking 2A of current. In addition, it is designed to work with the very low latency and high switching speeds required for GaN system-based Teledyne parts. The TD99101 is the only driver capable of extracting the highest performance and speed benefits of Teledyne's TDG100E GaN FETs.

To facilitate implementation of GaN technology from Teledyne, the TD99101-x00 evaluation kit is available, and it features both the TD99101 GaN Driver and TDG100E15 100V, 15A GaN FET. The evaluation kit operates at frequencies up to 13 MHz and allows customer to evaluate Teledyne's GaN parts quickly.

Both devices are radiation tolerant, suitable for space applications, and have ceramic-packaged prototypes available now. They are manufactured on a MIL-PRF-38535 Class V-like flow.

"Teledyne e2v has a proud heritage of space products, and we are excited to bring the unprecedented efficiency of GaN power to our customers," said Mont Taylor, VP of Business Development for Teledyne e2v. "The wide range of capabilities of these devices enable design engineers to create highly efficient power supply and motor control applications which can function in radiation environments."

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Teledyne e2v's GaN Driver and GaN Power E-HEMTs

About Teledyne e2v, Inc.

Teledyne e2v innovations lead developments in space, transportation, defense, and industrial markets. Teledyne e2v's unique approach involves listening to the market and application challenges of customers and partnering with them to provide innovative standard, semi-custom or fully-custom solutions, bringing increased value to their systems. For more information, visit www.teledyne-e2v.com.

About pSemi

pSemi Corporation is a Murata company driving semiconductor integration. pSemi builds on Peregrine Semiconductor's 30-year legacy of technology advancements and strong IP portfolio but with a new mission: to enhance Murata's world-class capabilities with high-performance RF, analog, mixed-signal, and optical solutions. With a strong foundation in RF integration, pSemi's product portfolio now spans power management, connected sensors, optical transceivers antenna tuning, and RF frontends. These intelligent and efficient semiconductors enable advanced modules for smartphones, base stations, personal computers, electric vehicles, data centers, IoT devices, and healthcare. From headquarters in San Diego and offices around the world, pSemi's team explores new ways to make electronics for the connected world smaller, thinner, faster, and better. To view pSemi's semiconductor advancements or to join the pSemi team, visit www.psemi.com.

About GaN Systems

GaN Systems is the global leader in GaN power semiconductors with the largest portfolio of transistors that uniquely address the needs of today's most demanding industries including data center servers, renewable energy systems, automotive, industrial motors, and consumer electronics. As a market-leading innovator, GaN Systems makes possible the design of smaller, lower cost, more efficient power systems. The company's award-winning products provide system design opportunities free from the limitations of yesterday's silicon. By changing the rules of transistor performance, GaN Systems is enabling power conversion companies to revolutionize their industries and transform the world. For more information, please visit: www.gansystems.com or follow GaN Systems on [Facebook](#), [Twitter](#) and [LinkedIn](#).

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