

### Exagan selects AIX G5+ C for production ramp of GaN-on-Si power-switching devices

AIXTRON and Exagan partner to accelerate GaN-on-Si power HEMT manufacturing technology on 200 mm silicon substrates

**Herzogenrath/Germany, Grenoble/France, February 29, 2016** – AIXTRON SE (FSE: AIXA; NASDAQ: AIXG), a worldwide leading provider of deposition equipment to the semiconductor industry, has shipped an AIX G5+ C system to French start-up company Exagan, a producer of advanced materials and high-efficiency gallium nitride (GaN) power switches that significantly increase the performance and efficiency of electrical converters. The company is a spin-off from Soitec, a global leader in innovative semiconductor materials, and CEA-Leti, a leading European research center focused on micro- and nanotechnologies. Exagan will use AIXTRON's deposition tool in beginning volume production of gallium nitride on silicon (GaN-on-Si) materials for power-switching devices.

The AIX G5+ C Planetary Reactor system is an advanced epitaxy production platform. It comes in a 5x200 mm configuration with single-wafer rotation and is equipped with full cassette-to-cassette wafer loading as well as AIXTRON's in-situ reactor cleaning feature for high-volume manufacturing.

Exagan, in collaboration with its R&D partner CEA-Leti, selected the AIX G5+ C epitaxial deposition tool after evaluating its effectiveness in achieving tight uniformity control and high throughput using Exagan's proprietary G-Stack<sup>™</sup> process technology. This technology is used in creating a unique stack of GaN-based materials that enables the fabrication of Exagan's G-FET<sup>™</sup> high-power, very-high-efficiency transistors. Along with Soitec's industrial facility and expertise and CEA-Leti's best-in-class 200 mm equipment and characterization tools, AIXTRON's equipment adds to Exagan's supply chain as it ramps up its material production facility in Grenoble.

This equipment installation is a major step in Exagan's and CEA-Leti's strategic partnership\_to accelerate Exagan's GaN-on-Si integration roadmap. The partnership is supported by the "G-drive+" R&D project, funded by Bpifrance through the Investissements d'Avenir.

Fabrice Letertre, COO and Co-Founder of Exagan, comments: "AIXTRON and our parent company CEA-Leti have enjoyed a long and successful R&D relationship developing GaN-on-Si technology. Now Exagan is partnering with AIXTRON to deliver on our industrial roadmap by using epi to reach our cost milestones. By implementing an efficient GaN-on-Si manufacturing process on 200 mm silicon substrates, we are aligning GaN technology with silicon manufacturing standards. This makes our G-FET products the most cost-efficient wide-bandgap solution for the solar, IT electronics, connectivity and automotive markets."

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## **PRESS RELEASE**



"Our AIX G5+ C is the only system to date offering full automation of GaN-on-Si MOCVD processes as commonly encountered in the silicon industry. The system achieves the highest on-wafer layer uniformity in a batch multi-wafer configuration for maximum throughput and yield. We are pleased to work with the Exagan team on volume production of 200 mm GaN-on-Si materials for efficient power electronics applications," says Dr. Frank Wischmeyer, Vice President Power Electronics at AIXTRON SE.

#### About AIXTRON

AIXTRON SE is a worldwide leading provider of deposition equipment to the semiconductor industry. The Company was founded in 1983 and is headquartered in Herzogenrath (near Aachen), Germany, with subsidiaries and sales offices in Asia, United States and in Europe. AIXTRON's technology solutions are used by a diverse range of customers worldwide to build advanced components for electronic and opto-electronic applications based on compound, silicon, or organic semiconductor materials. Such components are used in a broad range of innovative applications, technologies and industries. These include LED applications, display technologies, data storage, data transmission, energy management and conversion, communication, signaling and lighting as well as a range of other leading-edge technologies.

Our registered trademarks: AIXACT<sup>®</sup>, AIXTRON<sup>®</sup>, Atomic Level SolutionS<sup>®</sup>, Close Coupled Showerhead<sup>®</sup>, CRIUS<sup>®</sup>, Gas Foil Rotation<sup>®</sup>, OVPD<sup>®</sup>, Planetary Reactor<sup>®</sup>, PVPD<sup>®</sup>, TriJet<sup>®</sup>, Optacap<sup>™</sup>

For further information on AIXTRON (FSE: AIXA, ISIN DE000A0WMPJ6; NASDAQ: AIXG, ISIN US0096061041) please visit our website at: <u>www.aixtron.com</u>.

#### About Exagan

Exagan was created in 2014 with support from CEA-Leti and <u>Soitec</u> to accelerate the power-electronics industry's transition from silicon-based technology to smaller and more efficient electrical converters based on GaN-on-silicon technology. Its GaN power switches are designed for full compatibility with standard 200-mm silicon foundries to deliver high-performance, high-reliability products through a robust supply chain. The company's G-FET platforms offer very high power-switching performance with extremely low conduction losses, enabling unprecedented power integration and efficiency levels in solar, automotive and IT electronics converters. Exagan is based in Grenoble, France, and has a branch office in Toulouse. G-Stack and G-FET are trademarks of Exagan.

For further information on Exagan, please visit: <u>www.exagan.com</u>.

#### About Leti

As one of three advanced-research institutes within the CEA Technological Research Division, Leti serves as a bridge between basic research and production of micro- and nanotechnologies that improve the lives of people around the world. It is committed to creating innovation and transferring it to industry. Backed by its portfolio of 2,800 patents, Leti partners with large industrials, SMEs and startups to tailor advanced solutions that strengthen their competitive positions. It has launched 54 startups. Its 8,500m<sup>2</sup> of new-generation cleanroom space feature 200mm and 300mm wafer processing of micro and nano solutions for applications ranging from space to smart devices. With a staff of more than 1,800, Leti is based in Grenoble, France, and has offices in Silicon Valley, Calif., and Tokyo.

For further information on Leti, please visit: <u>www.leti.fr</u>.

For further information please contact Corporate Communications

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