Press release

New Space: PYXALIS Launches a New Range of High-Performance Space Imaging Modules and Cameras, Designed and Assembled in France.

With the PYXCAM 4600, PYXALIS offers New Space players a new range of high-performance, standardized and modular space imaging solutions operating across the visible and near-infrared spectrum. Based on its proprietary GIGAPYX sensor technology, this new offering aims to facilitate the integration of high-resolution cameras into satellite constellations, while strengthening French and European sovereignty and industrial capabilities



Moirans, France, November 16, 2026 – PYXALIS, a French SME specializing in the development of high-performance CMOS image sensors and solutions, announces the launch of PYXCAM 4600, a new range of space imaging modules and camera cores designed for New Space players.

Developed around PYXALIS' proprietary radiation-tolerant GIGAPYX 4600 Space Grade (SG) image sensor, this product range combines high resolution, high speed and high sensitivity to meet the demanding requirements of space applications, particularly Earth Observation, Space Situational Awareness (SSA) and scientific missions. With this new standardized and modular offering, PYXALIS aims to ease the integration of advanced imaging technologies into satellite payloads, while contributing to the development of the French and European space industry.

French Technology Supporting European Space Sovereignty

With more than ten years of experience in the space sector, PYXALIS has contributed to several projects alongside industrial partners and space agencies, including the French Space Agency (CNES) and the European Space Agency (ESA). The company is a recognized expert in the design of advanced, radiation-harderned CMOS image sensors, particularly for visible and multispectral imaging. It also has extensive expertise in Time Delay Integration (TDI) imaging technologies, including CCD-on-CMOS architectures tailored to the requirements of very high-resolution Earth Observation. Building on this expertise, PYXALIS is taking another step forward with the launch of a new range of space imaging modules and camera cores based on its proprietary GIGAPYX technology.

With PYXCAM 4600, PYXALIS aims to strengthen European industrial sovereignty in a strategic sector. All products in this range are ITAR-free. The image sensor is manufactured at a French semiconductor foundry, while the design, assembly and testing of the imaging solutions are carried out at the company's facilities in France.

"In this New Space booming economy, the performance of imaging systems has become a major priority for satellite constellation operators. With PYXCAM 4600, our ambition is to make high-resolution imaging technologies accessible to New Space players through standardized and modular solutions. By maintaining control over the full design of our technologies and their assembly in Europe, we also aim to strengthen the French and European space industry. Against a backdrop of growing hybrid threats, this industrial expertise represents a major strategic asset for high-revisit Earth Observation and space surveillance," **stated Philippe Rommeveaux, President and CEO of PYXALIS.**

High-Performance Imaging Technology Tailored to the Demands of New Space

The PYXCAM product range is built around the GIGAPYX 4600 SG sensor, **highlighting full PYXALIS' expertise. It features the only radiation-tolerant, space-ready** visible CMOS areascan image sensor on the market, combining high resolution (46 MP), very high frame rate (up to 200 fps in 8K, 12-bit) and high sensitivity (full-well capacity > 50 ke$^-$, low readout noise of 1.6 e$^-$ rms, HDR up to 90 dB, peak QE ~ 80% @ 445 nm).

PYXCAM 4600 addresses the fast-expanding New Space market, driven by the deployment of commercial satellite constellations by private operators, public organizations and consortiums, reshaping traditional satellite development and manufacturing models.

The New Space sector is characterized by strong cost reduction objectives and increased pressure to shorten time-to-orbit. Consequently, there is a growing need to accelerate the qualification and integration of payload components.

The PYXCAM range has been designed to address these challenges. This standardized and modular solution offers three levels of integration:

- **PYXCAM 4600 Proxy:** The image sensor with its proximity electronics board.
- **PYXCAM 4600 Module:** A module combining the image sensor and its proximity electronics board, a flexible cable (flex), and a housing integrating a sensor processing unit and an interface board. It embeds advanced acquisition and processing modes.
- **PYXCAM 4600 Camera Core:** A fully integrated, ready-to-use solution housed in a single compact enclosure.

"*Our PYXCAM range is ready for deployment across a wide variety of visible and near-infrared (VNIR) space missions, including high-resolution and high-revisit Earth Observation (enabling frequent imaging of the same area several times per day), Space Situational Awareness (SSA) and space science missions,* **" said Céline Semecas, Strategic Marketing Manager at Pyxalis.**

Multi-spectral integrated filters are available on-demand. Built using a combination of screened COTS and radiation-tolerant components (TID tested up to 30 krad and SEL tested up to 43 MeV·cm²/mg), the solution is space-qualified and available in different quality grades (New Space and Mid Space).

Availability

The PYXCAM 4600 range will be unveiled at Space Tech Expo Europe, taking place in Bremen, Germany, from November 17 to 19, 2026 (Booth U21 – French Pavilion). Information regarding initial availability, configuration options and evaluation terms can be obtained upon request.

Technical Details of the Product Range

The PYXCAM 4600 range is built around the GIGAPYX 4600 SG sensor, offering the following key benefits:

- High resolution: 46 MP
- Very high frame rate: up to 200 fps in 8K, 12-bit
- High sensitivity: full-well capacity > 50 ke$^-$, low readout noise of 1.6 e$^-$ rms, HDR up to 90 dB, peak QE ~ 80% @ 445 nm

All products in this range are **ITAR-free**, **and are therefore not subject to the export control regulations of the United States International Traffic in Arms Regulations (ITAR)**

PYXCAM 4600 Proxy: Image Sensor with Proximity Electronics Board

Ready to be integrated with the customer's Data Processing Unit (DPU). Very compact and ergonomic, it provides a simplified interface between the sensor and the processing board. It supports full sensor performance and functionality, with 8 to 128 LVDS data lanes.

PYXCAM 4600 Module: A Module Combining the Image Sensor, Proximity Electronics Board, a Flexible Cable and a Housing Integrating a Sensor Processing Unit and an Interface Board

Designed for flexible mechanical integration into any payload architecture, it simplifies thermal management through thermal decoupling. Custom flex cable lengths are available upon request.

PYXCAM 4600 Camera Core: A Fully Integrated, Ready-to-Use Solution

A single, compact assembly designed for simplified integration, faster time-to-launch and reduced integration risks. An integrated plug-and-play solution.

For PYXCAM 4600 Module and PYXCAM 4600 Camera Core

Two image-processing options (including HDR) are available: snapshot/video mode or configurable digital TDI mode for pushbroom multispectral imaging. Ready for fast integration thanks to standard SpaceWire or CoaXPress over Fiber interfaces. These solutions are compatible with different imaging modes: video, step-and-stare, pushframe and pushbroom.

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About PYXALIS

PYXALIS is a French SME that designs, develops and manufactures advanced CMOS image sensors and integrated imaging solutions, including sensor proximity electronics and imaging modules. The company serves industrial vision, medical, scientific, defense and space markets. On this last one, its technologies are used in Earth Observation, space surveillance, astronomy, star trackers and space exploration missions. For more information, visit www.pyxalis.com.

About the Earth Observation Market

The Earth Observation market, valued at €3.5 billion in 2024, is expected to reach €7.9 billion by 2034 (EUSPA). This growth is primarily driven by sectors such as agriculture, climate monitoring, urban development, finance, insurance (particularly natural disaster management), energy, defense and security, which are increasingly relying on high-resolution satellite imagery.

About the Space Situational Awareness (SSA) Market

The Space Situational Awareness (SSA) market is an emerging but critical sector, driven by the exponential increase in space debris and satellite traffic in Low Earth Orbit (LEO), the orbital region closest to Earth, where satellites generally operate at altitudes ranging from approximately 300 to 2,000 km. With more than 1.5 million pieces of space debris measuring between 1 and 10 cm and approximately 17,561 active payloads currently in LEO (Space Environment Report), SSA solutions are essential to prevent collisions, track space debris and ensure the long-term sustainability and safety of Space operations. Although the market is still emerging and no standardized solution has yet been established, SSA is poised for rapid expansion, with governments and commercial operators investing heavily in detection technologies, including ground-based telescopes and space-based sensors. While current SSA operations rely on dedicated ground-based and space-based systems, the market is moving towards integrating SSA capabilities as a standard feature on satellites, provided that the additional costs can be optimized.