



# NVIDIA Launches World's First GPU-Accelerated Platform for Geospatial Intelligence Analysts

## GPU Accelerators Sift Through Mountains of Image, Video, Signal-Intelligence Data to Deliver Faster, Clearer, More Actionable Insights

SANTA CLARA, CA -- NVIDIA today launched the NVIDIA® GeoInt Accelerator™, the world's first GPU-accelerated geospatial intelligence platform to enable security analysts to find actionable insights quicker and more accurately than ever before from vast quantities of raw data, images and video.

The NVIDIA GeoInt Accelerator platform provides [defense and homeland security analysts](#) with tools that enable faster processing of high-resolution satellite imagery, facial recognition in surveillance video, combat mission planning using geographic information system (GIS) data, and object recognition in video collected by drones.

It offers a complete solution consisting of an [NVIDIA Tesla®](#) GPU accelerated system, software applications for geospatial intelligence analysis, and advanced application development libraries.

"Today's intelligence analyst needs information based on imagery, video, signals intelligence, human intelligence and other sources, in a geospatial context and 'at rate,'" said Nick Buck, CEO Buck Consulting Group and former IT executive with the NRO Ground Directorate. "The NVIDIA GeoInt Accelerator provides developers the opportunity to unleash the power of GPU computing to quickly combine the variety and volume of data sources at the speed needed for mission support, enabling new levels of performance with minimal investment."

Key applications in the NVIDIA GeoInt Accelerator platform include:

- **DigitalGlobe** - Processes more than three million square kilometers of high-resolution imagery collected daily by satellites for current intelligence on points of interest.
- **GeoWeb 3D** - Delivers native 3D GIS fusion -- including LIDAR remote sensing technology and full motion video -- without preprocessing.
- **Imagus** - Real-time facial recognition from video surveillance
- **IntuVision Panoptes** - Provides object detection and event-driven alerts by processing multiple real-time HD video streams.
- **LuciadLightspeed** - Provides situational awareness for mission planning by overlaying image, radar, sensor data for line-of-sight analysis.
- **NerVve Technologies** - Automatically detects objects in images and video streams.

Details of these applications are available at <http://www.nvidia.com/geoint>.

The NVIDIA GeoInt Accelerator platform also features a number of libraries and solutions that serve as building blocks for defense contractors and system integrators to build their own applications for GPU-accelerated image, video, and signal processing. These solutions and their contents include:

- **Accelereyes ArrayFire** - Image and signal-processing functions accelerated by GPUs.
- **DelCross Savant** - High-frequency ray tracing engine for antenna modeling.
- **MATLAB Image Processing Toolbox** - Algorithms, functions, and applications for image processing and algorithm development in MATLAB.
- [NVIDIA CUDA® FFT \(cuFFT\)](#) - For signal processing applications.
- [NVIDIA OptiX™](#) - Programmable ray tracing framework to model stealth designs.
- [NVIDIA Performance Primitives™ \(NPP\)](#) - Basic image-processing kernels and functions.
- **OpCoast SNEAK** - RF propagation analysis, ray tracing, and jamming analysis development kit.
- [OpenCV](#) - Computer-vision functions.

### Wide Use of GPU Accelerators in Defense

[NVIDIA GPU accelerators](#) are already widely used in the defense industry for imaging, video, and signal processing by customers such as Army Research Labs, BAE Systems, Boeing, SAIC, NATO, NAVAIR, Northrop Grumman, Onera, Raytheon, and Thales Group.

There are multiple deployment solutions available from embedded GPU accelerators from GE Intelligent Platforms and Curtis-Wright, and workstations and server cluster solutions from all the major OEMs, including Dell, HP, and IBM.

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