



EM Photonics is a leader in accelerating computationally intense algorithms with commodity hardware for embedded, desktop, and data-center applications. We leverage our size to quickly deliver high-value embedded solutions to our clients.

# Application Areas



## Super Resolution:

- » Image-processing algorithm that increases image size in under-samples videos
- » Imaging in size, weight and power (SWaP) constrained environments such as Air platforms, UAVs, underwater vehicles, and missile interceptors
- » Non-optical imaging enhancement
- » Security / intelligence operations

## Long Range Imaging:

- » Signal-Processing algorithms that remove atmospheric blurring when imaging over long ranges (1-60 km)
- » Missile/Rocket launch tracking
- » Air traffic monitoring
- » Remote site monitoring
- » Intelligence Surveillance and Reconnaissance (ISR)

# Core Competencies

## Hardware design

- » Field Programmable Gate Arrays (FPGAs)
- » Graphical Processing Units (GPUs)
- » Cell Processor

## Software design

- » Multicore processors
- » GUI
- » Driver development

## Algorithms

- » Image enhancement
- » Modeling and Simulation
- » Filtering and classification
- » Neural networks



# Company Profile

Founded in 2001, EM Photonics is a privately held organization headquartered in Newark, Delaware. Using hardware based platforms, such as FPGAs and GPUs, we accelerate applications for a variety of industries, including scientific computing and image processing. These alternative hardware platforms provide a number of advantages over microprocessors, including massive parallelization and optimized computational pipelines. EM Photonics has ongoing research partnerships with Lawrence Livermore National Laboratory and the University of Delaware. The company has personnel with security clearances as well as a secure facility.

## Other Application Areas

- » High-speed collision avoidance in UAVs
- » Target detection in hyperspectral imagery
- » Large-scale electromagnetic simulation
- » CFD simulations of UAV flight envelopes
- » Acceleration of linear algebra solvers
- » GPU computing
- » Raytracing acceleration



## Customers

Partial Customer List:



## CONTACT INFORMATION

PHONE: (302) 456-9003

FAX: (302) 456-9004

WEB: [www.emphotonics.com](http://www.emphotonics.com)

EMAIL: [info@emphotonics.com](mailto:info@emphotonics.com)

ADDRESS: EM Photonics  
51 East Main Street  
Suite 203  
Newark, DE 19711

