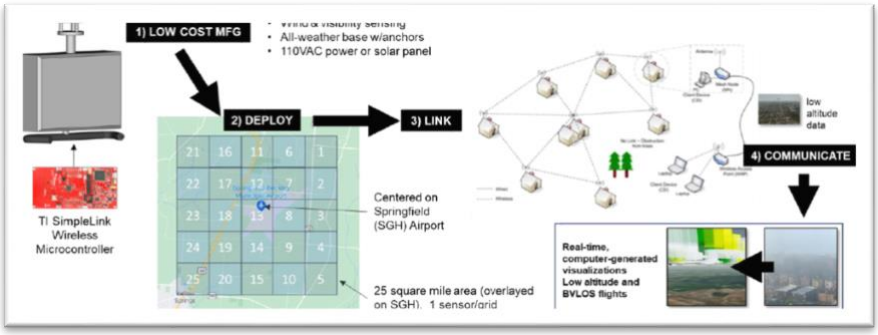
Round 5 Projects Overview

502 Low Altitude Weather Network (LAWN)



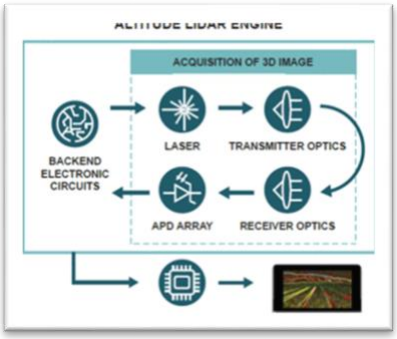
Project Team: Flightprofiler (Lead), Ohio University, The Ohio State University CDME

https://www.ohiofrn.org/projects/lawn-low-altitude-weather-network

Executive Summary: The project will produce, install & network 25 weather sensors to deliver a fully operational, mid-sized, low-altitude weather service for VTOL/UAS ops at Springfield UAS Test Ctr, providing a stepping-stone to federal contracts and DOT growth.

Value Proposition: Provides low cost, low altitude aviation weather data not delivered by other sources; does not require additional aircraft hardware.

507 Affordable LIDAR Technologies for IntegraTion and Unmanned Deployment (ALTITUDE)



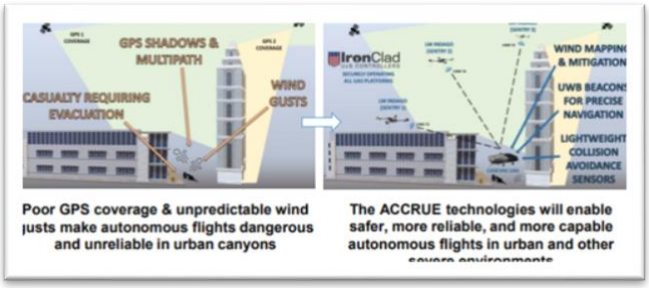
Project Team: The Ohio State University (Lead), University of Dayton, Sinclair Community College, SK Infrared, L3Harris

https://www.ohiofrn.org/projects/altitude-affordable-lidar-technologies-integration-and-unmanned-deployment

Executive Summary: ALTITUDE will develop LIDAR technology operating at 1-2 microns that increases detector sensitivity, reduces C-SWaP, and enables high volume manufacturability.

Value Proposition: ALTITUDE offers unique technology that enables Flash LIDAR technologies to meet requirements for military and commercial sensing application

528 Autonomous Capabilities for CASEVAC and Resupply in Urban Environments



Project Team: Asymmetric Technologies (Lead), The Ohio State University, Ohio University, Lockheed Martin Procerus

https://www.ohiofrn.org/projects/autonomous-capabilities-casevac-and-resupply-urban-environments-accrue

Executive Summary: Will enable safer, more capable, and more reliable autonomous flights in congested urban and other hard-to-reach areas

Value Proposition: ACCRUE will enable future autonomous urban resupply and CASEVAC and MEDEVAC missions.

529 Electronically Dimmable Protective Eyewear

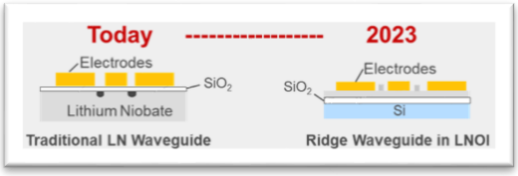
Project Team: AlphaMicron (Lead), Bowling Green State University, Kent State University, Miami University, Case Western Reserve University

https://www.ohiofrn.org/projects/electronically-dimmable-protective-eyewear

Executive Summary: Project will improve performance of liquid crystal (LC) light control films by refining material components and manufacturing methods, advancing the eyewear MRL and enter LRIP for laser protection films

Value Proposition: Will rapidly protect eyes and sensors from lasers.

542 Thin-film Crystals for High-speed Optical Modulation



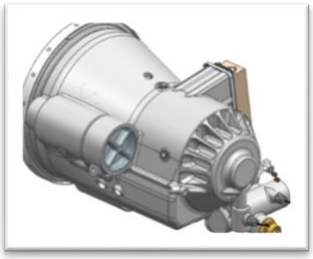
Project Team: The Ohio State University (Lead), Gooch & Housego (G&H), University of Dayton

https://www.ohiofrn.org/projects/thin-film-crystals-high-speed-optical-modulation

Executive Summary: Developing thin-film lithium niobate (LN) on insulator (LNOI) technology for 100 GHz optical modulation will impact future telecom and DoD applications. A successful project outcome will be for G&H to become the US supplier of LNOI wafers and a producer of commercial grade 100 GHz modulators. This upgrade to commercial modulation technology will impact the telecommunications infrastructure and be an enabler for 5G/6G data capacity. This modulator will also serve the needs of our military. These outcomes translate to high-tech Ohio jobs as well as students educated in microwave photonics and optical materials.

Value Proposition: Facilitate the only U.S. option for thin-film lithium niobate on insulator technology. Commercial sale of 100 GHz optical modulators.

550 Advanced High Voltage DC Generator System for Aerospace with Rapid Dynamic Response



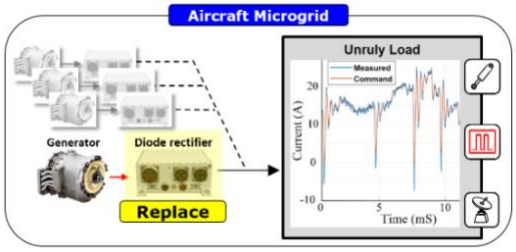
Project Team: Safran USA (Lead), The Ohio State University, Youngstown State University, Youngstown Business Incubator

https://www.ohiofrn.org/projects/advanced-high-voltage-dc-generator-system-aerospace-rapid-dynamic-response

Executive Summary: High Voltage (270 – 800) direct current electrical power generation system providing high power density, dynamic response, and increased system reliability

Value Proposition: Will decrease development timeline and provides a head start for technology development for multiple strategic military and commercial aerospace platforms.

552 High Reliability, Low EMI, Wide Bandgap (WBG) Power Conversion for Air & Space



Project Team: Miami University (Lead), Air Force Research Labs, GE Aerospace Power, PC Krause and Associates, The Ohio State University

https://www.ohiofrn.org/projects/high-reliability-low-emi-wide-bandgap-power-conversion-air-space-applications

Executive Summary: Provide a light-weight (potential of 100 – 200 lbs weight savings) soft-switching, active rectifier with Silicon Carbide (SiC) metal-oxide-semiconductor field effect transistor.

Value Proposition: Provides reliable, low-electromagnetic interreference (EMI), wide-band gap (WBG) hardware that applicable to multiple ground and aerospace applications.