

INCERASOLUTION

High-performance Fast Steering Mirrors for space, defense, and advanced industries.

Key Technologies

High Precision Motion Control

Sub-microradian accuracy achieved through a flexure-based structure, eliminating backlash and enhancing stability.

Ultra-Fast Response Time

Real-time tracking and beam control under dynamic conditions.

Exceptional Durability

Designed to endure shock, vibration, and temperature extremes.

Compact and Lightweight Design

Optimized for SWaP(Size, Weight, and Power)-constrained platforms.

Applications



Space Optical Communication

Accurate beam steering for laser communication in orbit.



Advanced Laser-Based Defense Systems

Fast, precise beam control for DEWs (Direct Energy Weapons) and tracking systems.



Industrial Metrology & Manufacturing

Fine laser beam control for alignment and inspection tasks.



INCERASOLUTION
STEERING THE FUTURE

INCERASOLUTION is a cutting-edge technology company specializing in the development and manufacturing of Fast and Fine Steering Mirrors(FSMs)-critical components for space optical communication systems and advanced defense applications.



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About us

INCERASOLUTION is a technology startup specializing in the development of high-performance Fast Steering Mirrors (FSMs). Our FSMs are engineered to deliver exceptional precision, ultra-fast responsiveness, and robust durability, tailored for mission-critical applications in space, defense, and advanced industrial systems.

Why INCERASOLUTION?

Tailored Engineering

Customized FSMs for specific mission needs.

Vertical Integration

In-house design, simulation, and assembly.

Proven Performance

Environment (shock & vibration) test performed
Qualification in space scheduled
for the 1st half of 2026.

High-precision FSM



- Actuator type 2DAPA*
- Angular stroke ± 5 mrad
- Accuracy ~ 0.1 mrad
- Resonance frequency > 2 kHz
- Control Bandwidth ~ 1 kHz



- Actuator type 2DAPA
- Angular stroke ± 5 mrad
- Accuracy ~ 0.1 mrad
- Resonance frequency > 2 kHz
- Control Bandwidth ~ 500 Hz

* 2DAPA : 2 Dim. Amplified Piezo Actuator

Wide-range FSM



- Actuator type VCTA*
- Angular stroke $\pm 3.5^\circ (\pm 63 \text{ mrad})$
- Accuracy ~ 1 mrad
- Resonance frequency > 1.5 kHz
- Control Bandwidth ~ 1 kHz



- Actuator type VCTA
- Angular stroke $\pm 3.5^\circ (\pm 63 \text{ mrad})$
- Accuracy ~ 1 mrad
- Resonance frequency > 1.5 kHz
- Control Bandwidth ~ 500 Hz

* VCTA : Voice-coil Torque Actuator

Controller for 2DAPA



- 4 Ch. Voltage Driver & Controller
- Output $-20 \sim 120$ V, < 0.5 A
- PID or H-infinity Closed-loop Control
- Control BW < 2 kHz

Controller for VCTA



- 2 Ch. Current Driver & Controller
- Output 2 A, < 15 V
- PID or H-infinity Closed-loop Control
- Control BW < 2 kHz