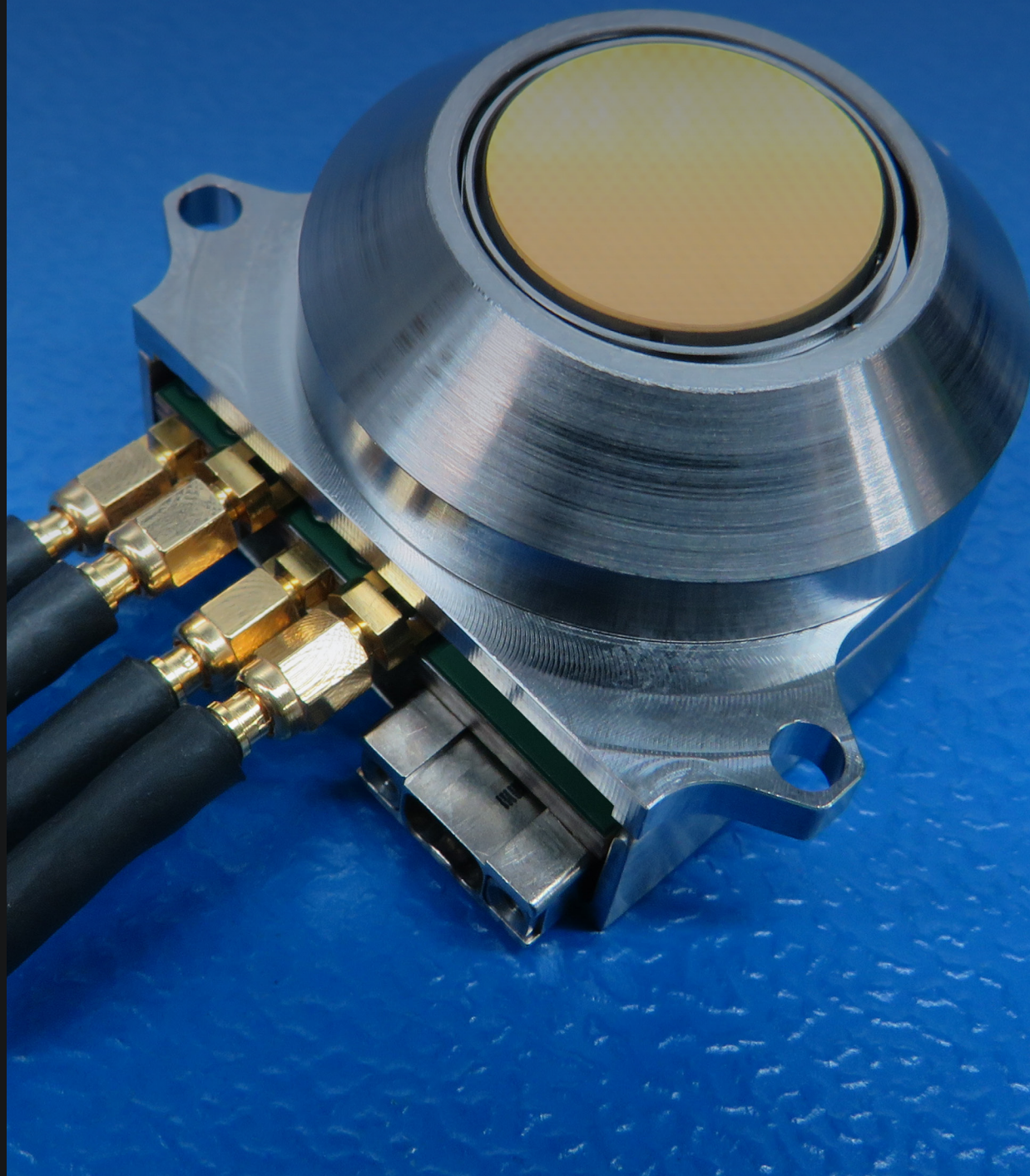


# FSM

FAST STEERING  
MIRRORS



AV's FSMs deliver low-jitter pointing accuracy for imaging, laser communications, and directed energy systems. AV has lab-grade FSM controllers at low cost and short lead time. Fully customizable and space-qualified FSM controllers are also available.

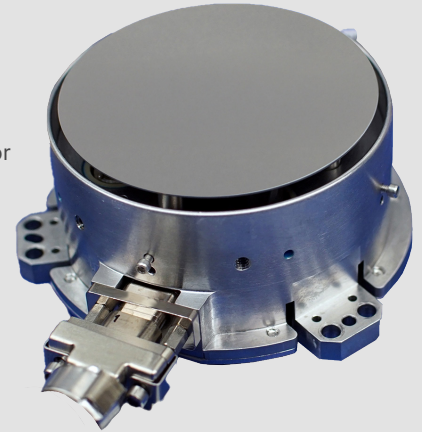
## \_High quality, high performance FSM technology for:

- > Space
  - Laser Communications
  - Optical Imaging
  - Scanning Systems
- > Air/Land/Sea
  - High Energy Laser Directed Energy Weapons



## \_FSMs Feature:

- > High acceleration
- > High bandwidth
- > Extremely low jitter
- > Multiple options for mirror material:
  - Silicon carbide
  - Single-crystal silicon
  - Aluminum
  - Beryllium
  - Custom



## \_Specifications for AV's FSM

	SMALL	MEDIUM	LARGE AND CUSTOM	
<b>[OPTICAL]</b>				
MIRROR SIZE	15 mm	32 mm	55 mm	Custom circular and elliptical mirrors available up to 300 mm
OPTICAL QUALITY	32 nm RMS	20 nm RMS	32 nm RMS	Custom options available as good as 10 nm RMS
REFLECTIVITY	Variety of coatings available including protected metal, dielectric, ect			
<b>[PERFORMANCE]</b>				
ANGULAR RANGE	± 17.5 mrad	± 17.5 mrad	± 5 mrad	Up to ± 3 degrees with lower bandwidth and acceleration
ACCELERATION	>5000 rad/s <sup>2</sup>	>3000 rad/s <sup>2</sup>	>2000 rad/s <sup>2</sup>	
BANDWIDTH (CLOSED LOOP -3DB)	>1 kHz	>800 Hz	>750 Hz	Custom solutions available with bandwidth up to 5 kHz
JITTER (1 HZ TO 1 KHZ)	<1 µrad RMS	<1 µrad RMS	<1 µrad RMS	Custom solutions with jitter <100nrad for larger size mirrors
ACCURACY	Can be calibrated to 5 µrad/mrad accuracy			
<b>[ENVIRONMENTAL]</b>				
OPERATING TEMPERATURE	-20 to +50°C	-20 to +50°C	-20 to +50°C	
SURVIVAL TEMPERATURE	-30 to +60°C	-30 to +60°C	-30 to +60°C	Contact AV to discuss environmental conditions
VIBRATION (SURVIVAL)	12 grms	12 grms	12 grms	
VIBRATION (OPERATIONAL)	Designed for ground, aircraft, or space applications			

Specifications subject to change without notice.