

DISRUPTIVE POWER MANAGEMENT SOLUTIONS FOR ELECTRONICS AT THE CUTTING-EDGE

Polaris Semiconductor has developed, patented, and deployed disruptive DC voltage regulators with competitive advantages across virtually all electronics market segments

MARKET

\$1.5B+ High-Growth SAM

Touches all market sectors that involve low-noise electronics:

- ✦ Aerospace & Defense
- ✦ RF & Communications
- ✦ Data Centers & AI
- ✦ Automotive
- ✦ Biomedical
- ✦ Industrial IoT

COMPANY PROFILE

- ✦ 3 granted patents
- ✦ \$4.5M non-dilutive funding
- ✦ Shipped dozens of evaluation samples to potential customers
- ✦ First chip sales in August 2025
- ✦ Space flight heritage

INVESTMENT OPPORTUNITY

Round Size:

\$2M Pre-Seed

Goals:

- ✦ Strengthen Team
- ✦ Attain Quality Certification
- ✦ Bolster Manufacturing

Maximizing Your Impact:

Eligible to apply for TACFI 1:1 [federal cost match](#) for Air Force Phase II SBIR awardees, non-dilutive \$2M add-on.

CONTACT

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OPPORTUNITY

Electrical noise is a major obstacle in a vast range of critical electronic systems, ranging from RF systems on satellites to high-speed data interconnects in data centers. However, achieving ultra-low noise DC power in space-constrained, high-performance electronics creates unacceptable trade-offs between:

System size – matching next-gen tech's ever-shrinking form factor

Energy efficiency – essential to minimize heating and power consumption

Low output noise – critical for sensitive, cutting-edge applications

INNOVATION

Polaris Semiconductor's groundbreaking DC power management technology uniquely addresses this longstanding trilemma. Protected by three granted patents, our scalable approach leverages existing high-volume semiconductor processes, ensuring sustainable growth and market adaptability. Our innovation delivers an unmatched combination of attributes beyond the reach of incumbent technologies:

- ✦ Noise specs matching the best available regulators but with 1.2x-2x better efficiency
- ✦ The versatility and efficiency of switching regulators but with minimal noise and >2X lower bill of materials (BoM) and footprint

TEAM

Our founders are highly accomplished technologists with 25+ years of semiconductor expertise spanning national laboratories, leading universities, and innovative startups.

Dr. Matthew Lumb | CEO

Sole inventor; 5 patents, 100+ papers, 15+ yrs leading R&D in startups, academia, nat'l labs.

Dr. Kenneth Schmieder | CTO

Ex-NRL; ran \$3M+/yr power & microelectronics portfolio. Chaired 20-agency working group

TRACTION



Repeat sales to leading RF company. Major design win:
>50x fidelity increase with **60%** BoM savings



Customer memorandum signed by US Space Force's Chief Scientist at Space Systems Command



First space flight heritage mission aboard the International Space Station, launched in October 2025