

Sandia National Laboratories' ViArray structured Application Specific Integrated Circuit (ASIC) provides a radiation-hardened, metal-via configurable platform with ASIC-like performance. Structured ASICs enable rapid turn-around, lower Non-Recurring Engineering (NRE) and development costs. Pre-qualified base arrays reduce development risk, while open architecture minimizes Diminishing Manufacturing Sources (DMS) issues. ViArray enables safe, secure, user-defined trusted hardware, and enhances verifiability of trusted parts.



- Metal-via configurable, fabric-like structure.
- Four Power-Quadrants with specialized interface circuits that allow up to four independent power supplies for power sequencing and redundancy operations.
- Unused transistors and circuits are isolated from power and ground to minimize power consumption, static current and photocurrent.
- On-package decoupling capacitors.



- Command & Control
- Instrumentation
- Sensor Monitoring
- Obsolescent Parts & FPGA Emulation
- Rad-hard environment operations
- High-Reliability Systems





Sandia National Laboratories is a multimission laboratory managed and operated by National Technology & Engineering Solutions of Sandia, LLC, a wholly owned subsidiary of Honeywell International Inc., for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-NA0003525 SAND2023-06389M

Sandia National Laboratories has historically focused on high-reliability custom solutions for **high-consequence applications.** Today Sandia is a Defense Microelectronics Activity (DMEA) Category 1A Accredited Supplier of both "trusted design and foundry services" with an efficient and disciplined ISO 9001 certified process optimized for high-mix low-volume custom radiationhardened, digital, analog and mixed-signal ASICs. With in-house capabilities in packaging, test, failure analysis and reliability, Sandia offers a total supply-chain solution for high-reliability custom microelectronics for expanding national security applications.



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