



# Research and Development ADVANCED MICROCIRCUIT EMULATION (AME)



Program Info

Program Manager: William J. Johnson  
✉ William.J.Johnson@dla.mil

## DLA'S TRANSFORMATION IMPERATIVES

Build Organization Agility Through Our People and Culture

Calibrate Resilient And Responsive Logistics Solutions On Support Of Military Readiness

Enhance Support To Integration Deterrence Across The Continuum Of Conflict In Contested Logistics Environments

Lead Logistics Interoperability Across The Department, Allies, Whole Of Government, And Industrial Base

## OBJECTIVE

The Advanced Microcircuit Emulation (AME) program develops continuing technical capability for providing Military Specification (MIL-SPEC) form, fit and function equivalent IC's to mitigate electronic obsolescence in new and existing weapons systems. That technical capability is transitioned to DLA Land and Maritime's Generalized Emulation of Microcircuits (GEM) Program for implementation as a production capability.

## INNOVATION & TECHNOLOGY

- Continued development of emulation capability for more complex IC's as they become commercially obsolete.
- Improvements in IC design and processing and expansion of capability for providing replacements for Linear/Analog ICs.



## STRATEGIC THRUSTS



Develop Microcircuit  
Emulation Capability



Ensure Microcircuit  
Case Supply



# Research & Development AME



## THE CHALLENGE

Microcircuit obsolescence has been a significant maintenance cost-driver within DoD for several years. As Industry introduces increasingly higher performance microcircuits, earlier product offerings become unprofitable and are discontinued. used in the manufacture of electronic systems beginning in the 1960s. Most of them are no longer in production and DLA Land & Maritime has identified increasing difficulty in procuring residual inventories of product which can be authenticated. The purpose of the project is to reverse that trend by establishing a continuing source of supply for those items.



## WARFIGHTER READINESS

### THE BENEFITS



The primary benefit of the program is to increase operational readiness by providing a continuing source of microcircuit spare parts. The secondary benefit is to reduce the need for costly redesign or replacement of systems and subsystems due to the lack of spares.

## INDUSTRY AND WHOLE OF GOVERNMENT PARTNERSHIPS

- **DLA LAND & MARITIME**
- **GENERALIZED EMULATION OF MICROCIRCUITS PROGRAM**
- **OSD DEFENSE MICROELECTRONICS CROSS-FUNCTIONAL TEAM**



<https://www.dla.mil/Information-Operations/Research-And-Development/>

## ACCOMPLISHMENTS & ONGOING EFFORTS

- ✓ Complex application specific integrated circuits (ASIC's).
- ✓ 20-Volt Analog/Linear devices.
- ✓ Digital Logic and Memory from the 1970s, 80s and 90s.
- ✓ Military specification MIL-PRF-38535 (QML) parts.