



Mercury Systems


IMAPS 2022

*Reshoring Advanced Packaging to Enable
Modernization Activities*

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VP/GM Microsystems Business*

State of the Microelectronics and Advanced Packaging

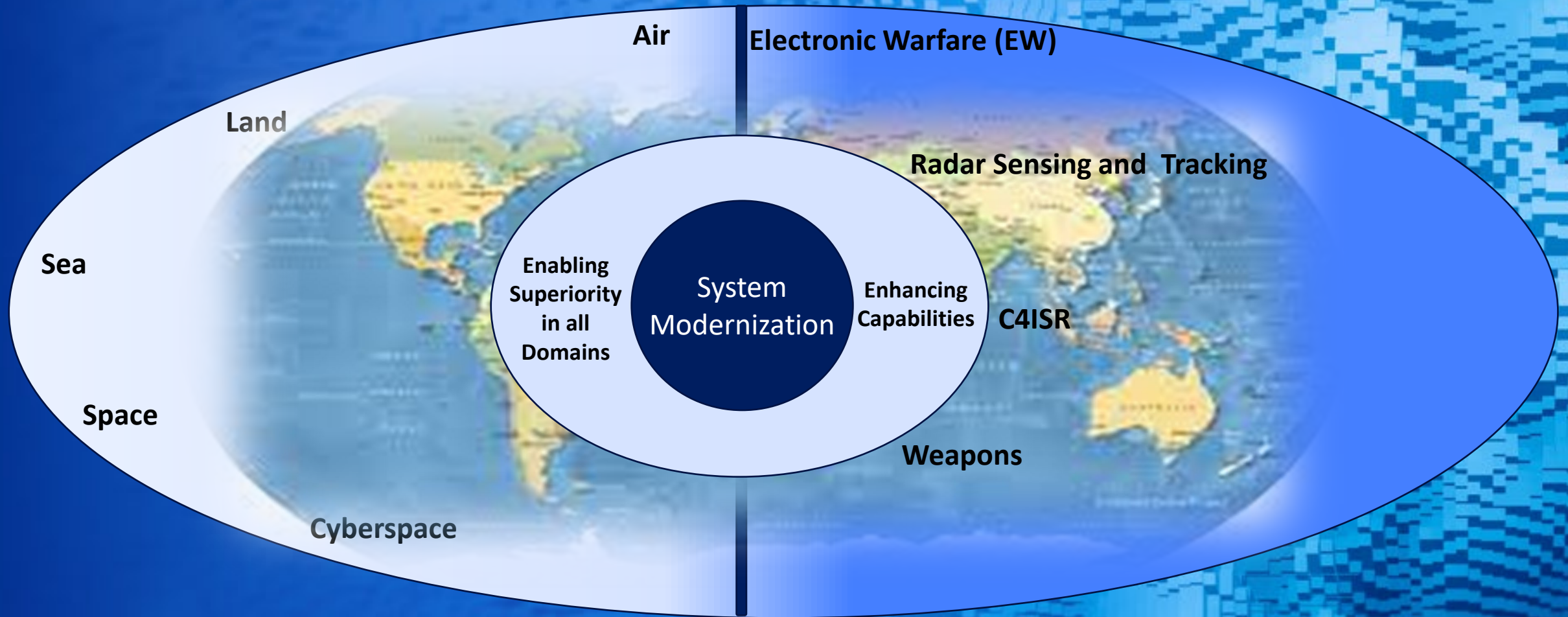
- Globalization has migrated Advanced Packaging to the Pacific Rim for decades
- Current geopolitics is driving instability in the region and increasing the risk of access to leading edge microelectronics and packaging capabilities
- This has created substantial risks to western countries as they strategically modernize
- At the same time, Advanced Packaging is more critical in solutions as we transition to Heterogeneous Integrated (HI) architectures enabling processing to move to the sensor edge



A sustainable and assured microelectronics supply chain is critical modernization activities

Mercury Systems is Focused on Reshoring Advanced Packaging for Critical Microelectronics

Defense systems are refocusing on modernization of capabilities across all domains



- Trusted, secure, and available advanced microsystems are critical in modernization efforts
- Reshoring is critical to assure access and delivering uncompromised

Mercury Systems at-a-glance



Founded in
1981



Business model at
the intersection
of high-tech and defense




One of the largest commercial
companies providing secure
sensor and mission processing
to the Defense industry



PURPOSE-BUILT
Solutions purpose-built for all
Aerospace & Defense customers



Making commercial technology
profoundly more accessible



NASDAQ: MRCY
Publicly traded company
since 1998



Our world-wide secure design, manufacturing and integration facilities



Includes sales sites



Our trusted U.S. focused, secure design, manufacturing and integration facilities



Advanced Microelectronics Manufacturing Center (Phoenix AZ)

- 350+ Employees (All US citizen)
- Full ITAR, DFARS, and classified capabilities
- Over 100K sqft of cleanrooms (Ability to double manufacturing)
- Delivering High Reliability Trusted Microelectronics to:

Critical Infrastructure, Aerospace, Defense, and Space Customers

Innovation That Matters

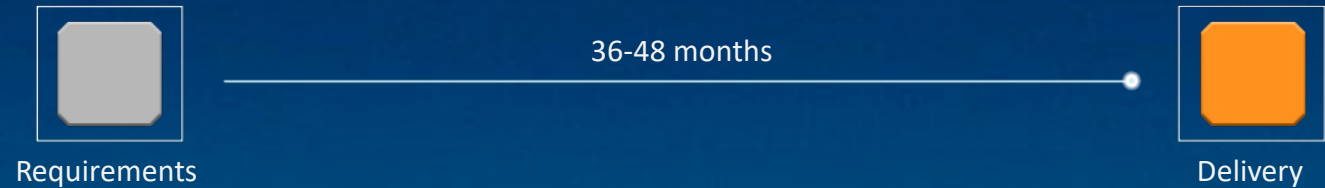


Chiplet Technology –Bringing System Scale Down To Chip Scale

Mercury is uniquely positioned to lead the technology transfer from Silicon Valley to Aerospace and Defense because of our close collaboration with leading companies in the semiconductor industry.

We are a leading innovator in game-changing chiplet technology, expanding our trusted microelectronics capabilities to bring open systems architectures down to chip scale to push processing to the edge.

Traditional Monolithic Chip Delivery Cycle

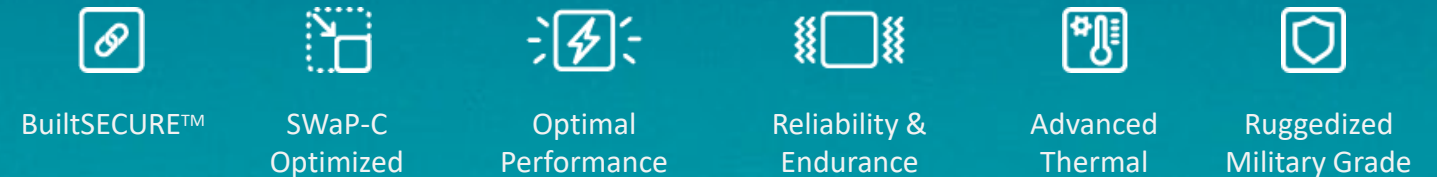


New Accelerated Delivery Cycle

Chiplets enable multiple product updates in the same timeframe



Additional Benefits



Our capabilities

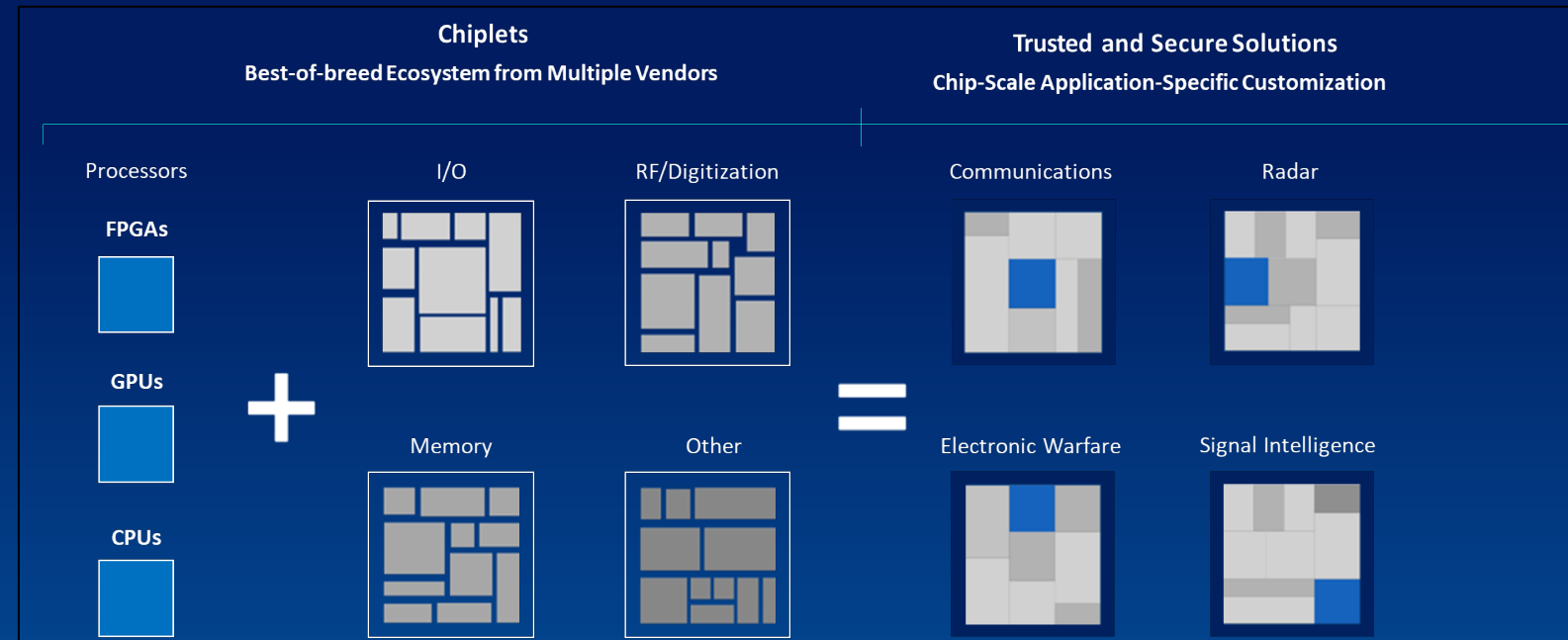
This game-changing capability will enable new applications at a rapid pace

Defense Microelectronics is trending with:

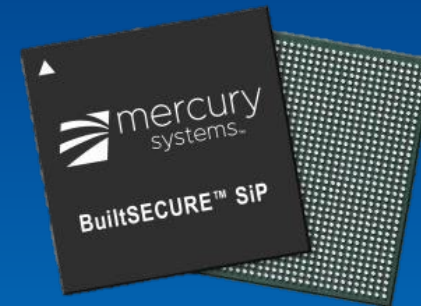
- High frequency analog processing moving to semiconductor technologies
- Much higher signal processing & compute density
- Reduction in overall power required
- Trusted manufacturing increasing in importance
- Heterogeneous solution with many high-value chiplet/die partners
- Reduced time to system fielding
- Less overall program spend

Mercury Microsystems is driving thought leadership in defense:

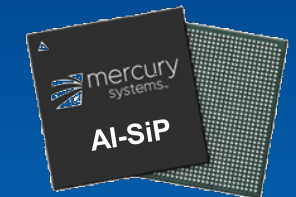
- Innovating 2/2.5/3D capabilities with compelling advantage over traditional methods
- Maturing strong relationships with semiconductor partners
- Increasing the value chain for fully integrated sensor edge processing solutions



Signal Processing at Sensor Edge



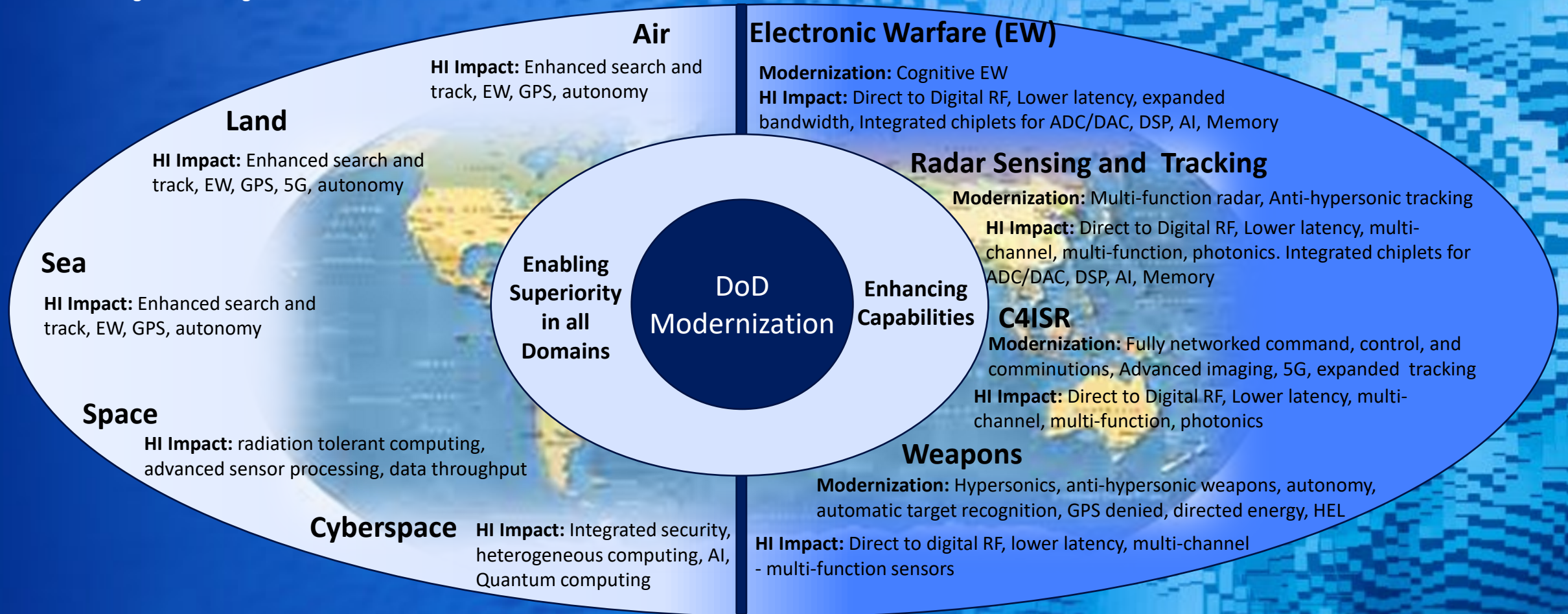
Secure Processing at the Sensor Edge



Artificial Intelligence at the Sensor Edge

To Compete, the Department of Defense is refocusing on modernization

*HI = Heterogeneous Integration



- Trusted, secure, and available advanced microsystems are critical in the modernization efforts
- Advanced HI packaging solutions are a key enabler for modernization activities

Mercury Capabilities

- Trusted, on-shore manufacturing
 - AS9100, DMEA, Proven experience focused on A&D
 - Cleared facility and workforce
- On-site engineering for technology agility and acceleration
 - Full design including signal and power integrity engineering for high-density integration
 - Mechanical, thermal and process engineering
 - Custom-designed silicon interposer substrate
 - Ideal for harsh environments from gun-hardening to space
- Full solution and lifecycle support

The Mercury difference: Trusted, Secure, Performance

Mercury has built the most trusted, proven, contemporary portfolio of product solutions and subsystems that are purpose-built to meet or exceed our customers most-pressing high-tech needs.

The Mercury difference driven by 3 key factors

TRUSTED:

A trusted partner to Aerospace & Defense, delivering the most advanced and secure solutions to address accelerating global security threats and challenges.

SECURE:

Advanced embedded security capabilities – built in, not bolted on – delivering uncompromised solutions in the face of growing cyber threats. And manufactured in Mercury facilities with superior ratings in all aspects of industrial security.

PERFORMANCE:

Solutions that are the highest performing available and optimized to meet the most rigorous demands of defense and commercial customers.

