



## LYNX MOSA.ic™ - Accelerating Mission Success RTOS for Safety Critical Applications

### Why Choose Lynx?

- **Safety & Security Built-In** - Designed from the ground up to meet stringent aerospace, defense, automotive, and healthcare standards.
- **Multicore Performance Optimized** - Integrates CPU and GPU technologies for superior real-time processing and edge AI capabilities.
- **Extensive Ecosystem Flexibility** - Supports a wide array of operating systems and industry standards for versatile, future-proof solutions.
- **Efficient Development to Deployment** - Speeds time to market with streamlined certification and reduced operational costs.
- **Leaders in Digital Transformation** - Advances digital transformation in system design, certification, and management for optimal edge control.
- **Proven, Trusted Expertise** - Decades of leadership in safety-critical systems, backed by industry-leading service.
- **Scalable Solutions** - Adaptable business models that grow with your technological and organizational needs.

### Lynx Software Technologies Product Information

#### Built for Mission Success

From defense ISR platforms to commercial urban air mobility, Lynx provides the tools and expertise to meet the most demanding standards while delivering reliable, certifiable results.

- **Defense Applications:** Accelerate ISR development and mission computer upgrades with modular tools.
- **Commercial Aerospace:** Streamline avionics certification with adaptable open standards.
- **Secure Operations:** Protect critical systems with strong isolation and lifecycle vulnerability management.
- **Edge Computing:** Enable secure, real-time processing for critical infrastructure systems.

#### Engineered for Safety-Critical Applications

MOSA.ic was purpose-built from the ground up to tackle the toughest challenges in mission-critical systems and include seamless support of modern multicore platforms: certification, modularity, and interoperability.

#### Key Benefits:

- **Reduce Program Risk:** Accelerate timelines while minimizing complexity.
- **Build Secure, Scalable Systems:** Ensure safety-critical reliability on multi-core architectures.
- **Seamlessly Transition:** Move between Linux and real-time OS platforms with ease

## **Built for the Mission-Critical Edge**

### **Your Modular Open Systems Approach (MOSA) Framework**

MOSA.ic is more than a platform; it's your pathway to building secure, scalable, and adaptable systems for the most demanding environments. Designed for flexibility and speed, MOSA.ic supports real-time operating systems, multi-core optimization, and open standards compliance.

#### **Key Features**

- **Multi-OS Support:** Compatible with LynxOS-178®, Linux, Windows, and more.
- **Hardware Flexibility:** Optimized for x86, Arm, and PowerPC processors.
- **Standards-Driven:** Built to meet DO-178C, FACE®, POSIX PSE 54, and ARINC standards.

### **Secure by Design**

#### **Built-In Security Features:**

- **LynxSecure Hypervisor:** Built on the top of Separation Kernel provides robust isolation for maximum security and safe mixed-criticality systems.
- **Immutable Boot:** Protects against unauthorized code execution.
- **CVE Management:** Automated vulnerability tracking and remediation through Lynx's MOSA.ic Software Composition Analysis.

#### **Performance Metrics:**

- **35x Compute Improvement:** High-performance compute capabilities with Vulkan APIs.
- **Seamless Integration:** Pre-integrated solutions for faster deployment.

### **Accelerating Certification Timelines**

Accelerate safety certification with pre-certified MOSA.ic components while ensuring interoperability through FACE™ and ARINC standards. Our reusable software artifacts, such as FAA RSC-certified components, reduce the time and complexity required to achieve DO-178C compliance. With a modular approach, you can focus on the unique aspects of your application while reusing proven building blocks. MOSA.ic enables faster certification without compromising safety or quality, saving time and lowering program risk.

#### **Statistics:**

- 50% Faster
- Time saved on certification processes
- 100% Reusable
- Certified components reduce recertification efforts.
- FAA Approved
- RSC-certified software ready for reuse.

## Success Stories

**Lockheed Martin F-35** In partnership with Lockheed Martin, LYNX MOSA.ic powers the Panoramic Cockpit Display (PCD) and Integrated Core Processor (ICP) avionics platforms. By streamlining software migration from Linux to the LynxOS-178™ real-time operating system, we helped achieve F-35 SEAL Level 1 certification — equivalent to DO-178C DAL A standards.



**Collins Aerospace** Perigon Mission Computer LynxSecure™, the foundational separation kernel in LYNX MOSA.ic, enabled Collins Aerospace to enhance safety and scalability by supporting bare-metal applications across three processor architectures. Together, we've delivered unmatched flexibility for mission-critical systems.

### Flexible configurability for a range of applications

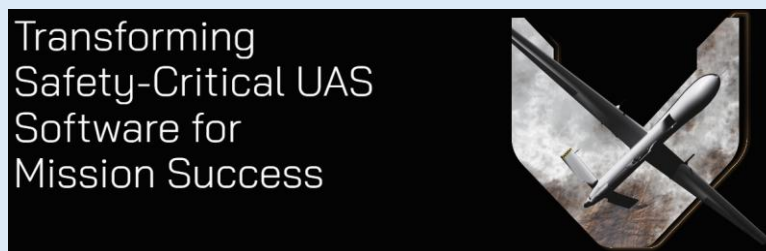
Depending on the customer's needs, Perigon can be configured as simplex, duplex or triplex redundant. It will be FAA certifiable to facilitate aircraft level certification, available for commercial or military rotary and fixed wing platforms.

"From air transport, to sixth-gen fighters, to the U.S. Army's Future Vertical Lift program, to aerial firefighting and beyond, we see broad opportunities for Perigon across the aerospace and defense industry," said Kinsley.

Perigon is supported by the [LYNX MOSA.ic for Avionics product](#) and AdaCore's QGen TQL-1 qualifiable autocode generator for Simulink®/Stateflow® models.



**General Atomics** Gray Eagle Extended Range UAS LYNX MOSA.ic transformed a mixed-criticality system (Linux and LynxOS-178™) from a monolithic stack into a streamlined, scalable architecture. Collaborating with General Atomics, we leveraged our modular approach to achieve significant improvements in performance and integration for their Arm-based (Xilinx MPSoC) system.



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詳細はメール( <mailto:sales.t@tptech.co.jp> )でのお問い合わせ、

もしくはホームページ( <http://www.tptech.co.jp> )をご参照ください。

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