



The Low Power Programmable Leader

Lattice Security Solutions

MARKET SEGMENT REQUIREMENTS

Advanced Security Features

- Hardware Root-of-Trust (RoT)
- Platform Firmware Resilience (PFR)
- Instant-on
- Integrated dual boot
- Post Quantum Cryptography (PQC)

**Compliant Security Solutions for
Every Market Segment**

Flexible I/Os & High Programmability

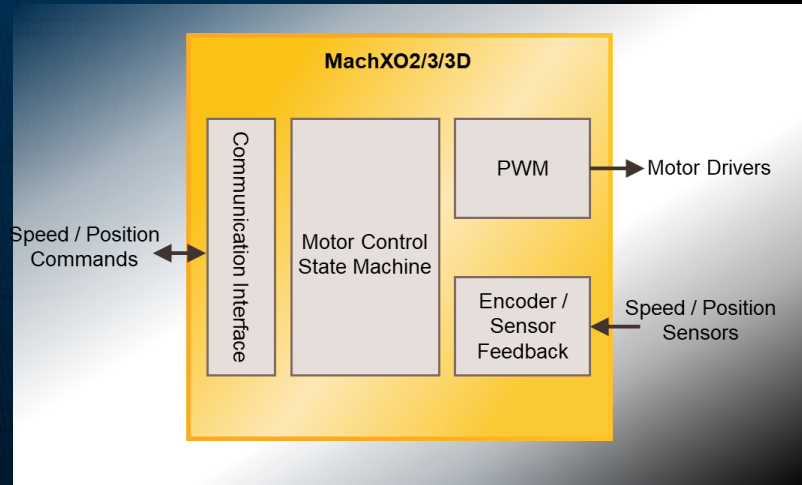
- High I/O count
- Various I/O voltage support
- Hot-socketing support

Low Power & Small Form Factor

- Simplify thermal design
- Long lasting performance
- As small as 3 x 3mm in size

Industrial & Automotive Applications

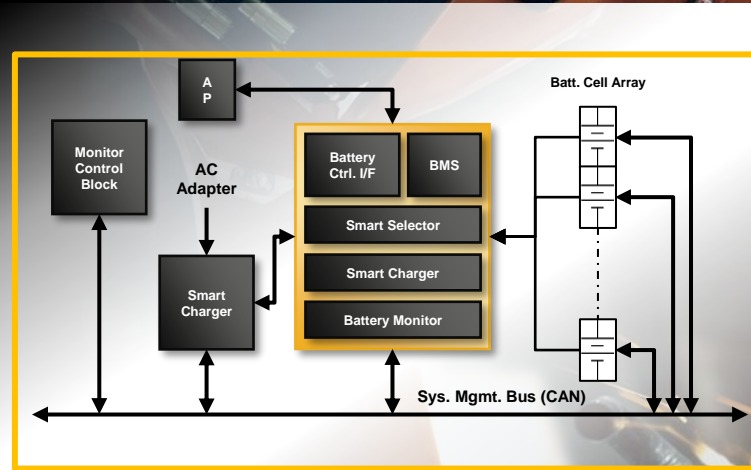
MOTOR CONTROL



Key Features

- Easy to use package
- Single-Chip FPGA

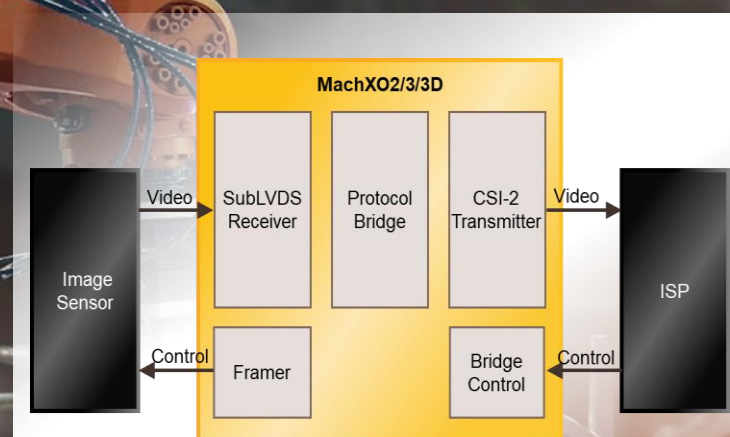
BATTERY MANAGEMENT CONTROL



Key Features

- Intelligent cell balancing for charge equalization per battery cell
- Control charge/ discharge process and real-time battery information

CAMERA/DISPLAY BRIDGING

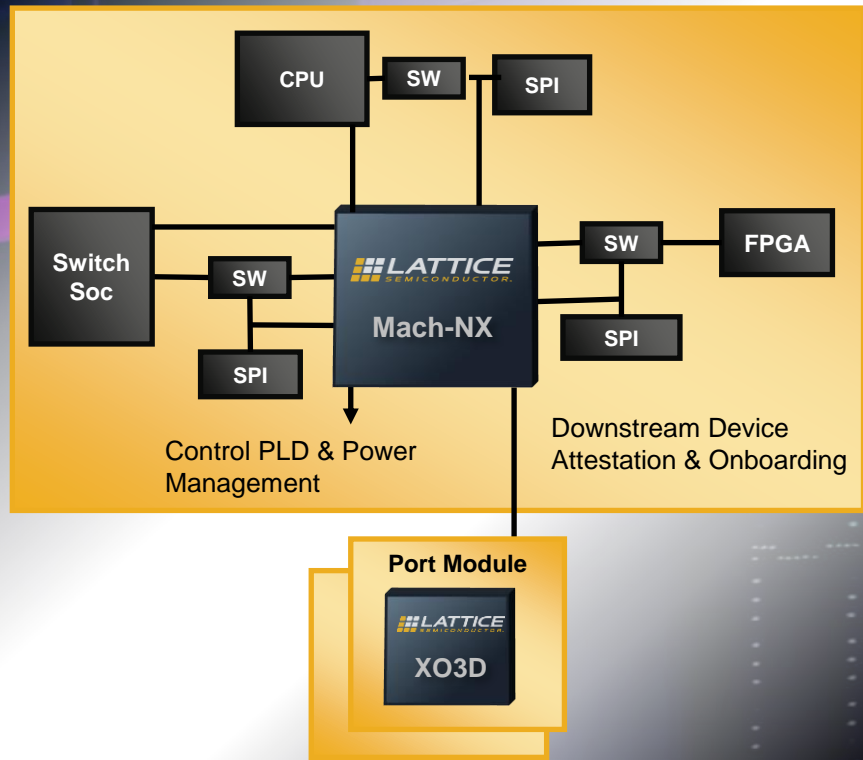


Key Features

- Fast I/O (900 Mbps in XO3)
- Small Footprint Packages

Server Compute and Communications Applications

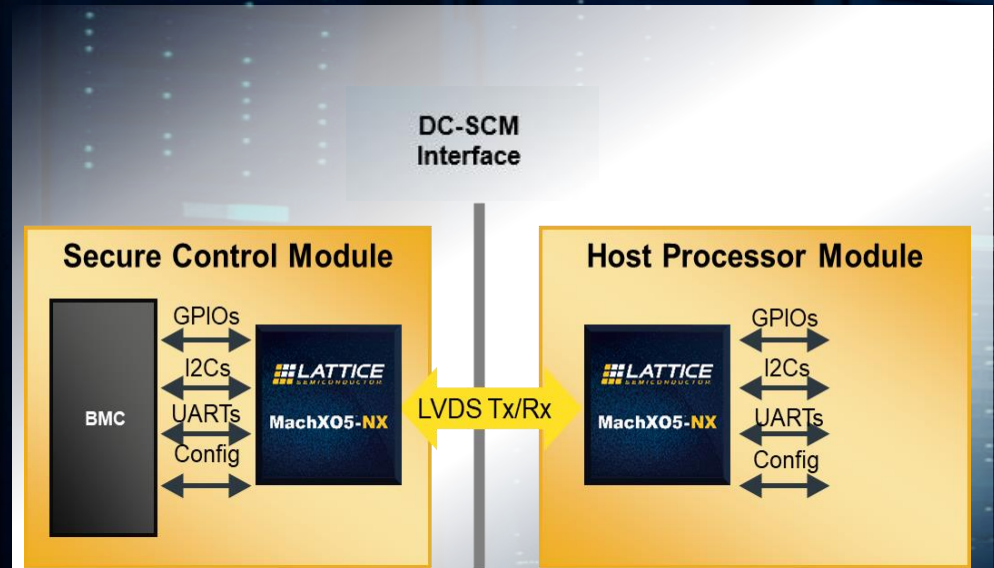
NETWORK SWITCH



Key Features

- Scalable PFR
- End-to-End Security

SECURE CONTROL MODULE



Key Features

- Modular design for dis-aggregated control logic
- Supports LVDS Tunneling Protocol & Interface (LTPI) to aggregate low-speed serial interfaces

FPGAs With Hardware Root Of Trust



Key value

- More Voltage Options
- Low power
- Instant On

Application

- Microprocessor Interface Expansion
- Hardware Acceleration

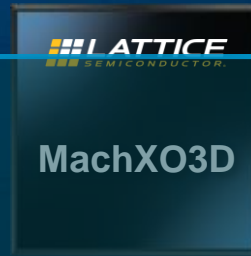


Key value

- Extended Temperature Range
- Instant on
- Small Package

Application

- Motor Control Interface
- Platform control and Management



Key value

- Security
- Dual Boot Flash
- Platform Firmware Resilience (PFR)

Application

- NIST Compliant PFR
- Secure Server
- Platform Management & Control



Key value

- Security
- High I/O Count
- Platform Firmware Resiliency (PFR)

Application

- NIST Compliant PFR
- Tektagon XFR Platform RoT



Key value

- Security
- PCIe Gen2
- Large User Flash Memory

Application

- Network Switch
- LVDS Tunneling Protocol

FPGAs With Hardware Root Of Trust



MachXO3D

Key value

- Security
- Dual Boot Flash
- Platform Firmware Resilience (PFR)

Application

- NIST Compliant PFR
- Secure Server
- Platform Management & Control



MachX™-NX

Key value

- Security
- High I/O Count
- Platform Firmware Resiliency (PFR)

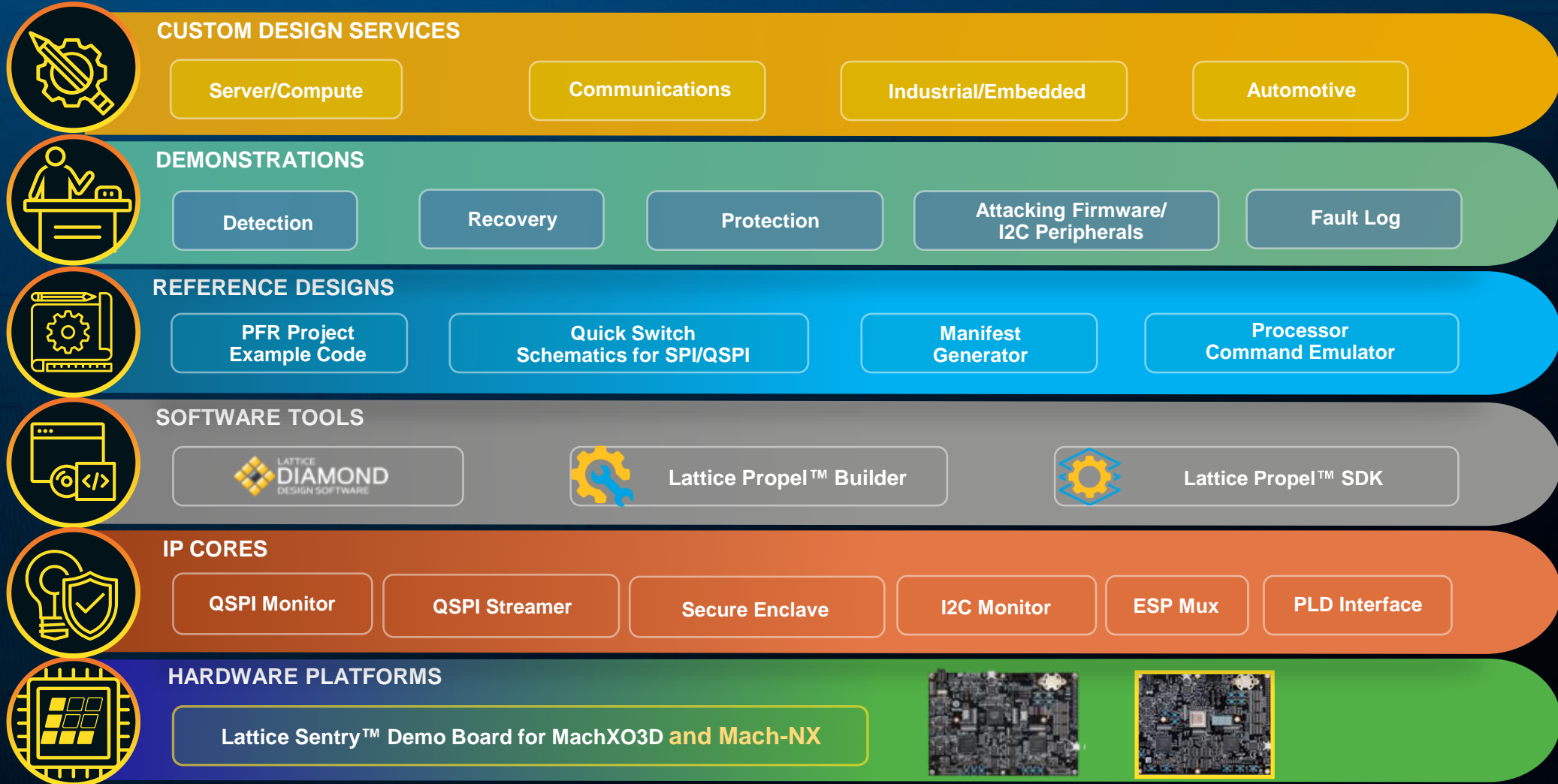
Application

- NIST Compliant PFR
- Tektagon XFR Platform RoT

Features		Mach-NX	Other FPGAs	MCUs & BMC
	DETECT Firmware Authentication*	< 5 seconds	15-30 seconds	10-20 seconds
	PROTECT Real-time SPI Monitoring	Nanoseconds	Nanoseconds	Not Supported
	RECOVER Firmware Recovery	5 Microseconds	100s ms – minutes	100s ms – minutes

*Authenticating 64MB flash image @ 33MHz

Lattice Sentry™ Solution Stack – Cyber Resilience Pioneer



Complete Solution Toolkit – CPU Agnostics

LATTICE
SupplyGuard

LEADING SUPPLY CHAIN PROTECTIONS

MANUFACTURING



TRANSIT



INSTALLATION



SYSTEM OPERATION



END OF LIFE



Lattice Security Solution Value Proposition



PRODUCT LINE



- Advanced Security Features
- Flexible I/Os and Highly Programmable
- Low Power & High Reliability

SOLUTION STACKS



- CPU Agnostic PFR/Cyber Resilience
- Complete Solution Toolkit
- Strong Ecosystem Partner Network

SECURITY SERVICE



- Locked Parts from Lattice to Manufacturers
- Enable Device Tracking through Supply Chain

More Resources Available

[Sales Resources](#)



- Sales Toolbox – Presentations by marketing team for customers
- Channel Partners – Resources for Distribution Channel

[Lattice Insights On-demand Trainings](#)



- Control & Security Product Line Overview (1 Hr 13 Min)
- Developing with Lattice FPGA: Advanced Security Features for Configuration (25 Min)
- Security Overview: Introduction to Lattice Sentry Solution & SupplyGuard (52 Min)
- Developing with Lattice Sentry Solution (25 Mins)



[MachXO5-NX](#)



- Reference Design
- Example Use Cases
- Documentation

[Mach-NX](#)



- Reference Design
- Example Use Cases
- Documentation

[MachXO3D](#)



- Reference Design
- Example Use Cases
- Documentation

