

The Amphion v2 update eliminates and alleviates obsolescence by replacing outdated hardware, firmware, and software. Each component included in the update is fully approved for use on NOV Amphion™ control systems and provides the latest functionality and security. Components have been carefully selected to ensure seamless integration with other NOV control products.

Security Updates

System Hardening:

- **USB Media Control:** Auto-mounting of USB media is disabled; access is restricted to administrator accounts.
- **Network Segregation:** Enhanced isolation of critical system components.
- Whitelisting: Applied where applicable for added protection.
- **Anti-malware:** Active protection on DMZ-facing Windows nodes.
- User Management: Improved via HMI upgrades.
- Access Control: Privileged accounts with enforced password policies and auto-logout after inactivity.
- Auto-login Disabled: For SBCs, HMIs, DataVault, eHawk, and Saga.

MOXA Networking

- Gigabit speed with 10x throughput.
- Supports Ethernet/IP, Modbus TCP, and PROFINET protocols.
- Enables data mirroring and aggregation for network monitoring.
- Features physical port locking and MAC address-based access control.

HMI Update

- Replaces obsolete, outdated, and smaller HMIs.
- Supports privilege-based access: login banner and individual accounts for Operator, Engineering, and Administrator roles.
- Incorporates the latest NOV Amphion standardized operator screens.

SBCs

• Upgraded to the latest Amphion SBC with multiple communication platform support.

NOV Data Center Enhancements

- Supports hardware for eHawk and DataVault.
- NOV DataVault is a purpose-built, engineered solution for data logging and delivery in drilling rigs and NOV control systems.
- Provides both historical and real-time data across multiple sources.
- Scalable for high-volume logging and future data expansion.

Optional: Hardware upgrades available to support added services, such as:

- Security services
- · Rig data sharing services

• NOV Automation services

