NxGenComm Announces Development Initiative of CMOSS-Ready M5NS-JCP for Future Defense Interoperability

MORRISVILLE, NC, UNITED STATES, August 14, 2025 /EINPresswire.com/ -- NxGenComm (NXG) today announced the development initiative for a CMOSS-ready version of its proven M5NS-JCP (Joint Communications Platform), designed to align with C5ISR/EW Modular Open Suite of Standards architecture principles for future U.S. DOD applications. The platform architecture targets compatibility with CMOSS Mounted Form Factor requirements while maintaining the advanced functionality of the standard M5NS-JCP.

The CMOSS-ready M5NS-JCP represents NXG's commitment to supporting the Department of Defense's modular open systems architecture (MOSA) initiatives, with development focused on enabling future interoperability across diverse defense platforms.

Targeted Design Features:
• Open Architecture Design: Platform architected for alignment with CMOSS interface standards, targeting CMOSS Mounted Form Factor
• Security Framework: Designed to support post-quantum cryptographic capabilities and hardware security module (HSM) integration
• Modular Hardware Design: Architecture supports future DMEA (Defense Microelectronics Activity) compliance requirements
• Software Architecture: Development roadmap includes FACE (Future Airborne Capability Environment) aligned software design with containerized applications
Advanced Platform Capabilities:
• Multi-Mode Architecture: Designed to transition between 5G private network, MANET mesh, relay, RF sensing, other waveforms, and other modes based on mission requirements
• Target Performance: Architecture designed for low-latency performance suitable for mission-critical communications
• Multi-Waveform Support: Platform architecture supports simultaneous operation across wideband (5G, MANET, WiFi, select SATCOM) and narrowband protocols
• Phoenix Engine: AI-driven intent-based networking with reinforcement learning for autonomous network optimization
• RF Sensing Capabilities: Configurable RF environment sampling with neural network-based signal classification
• Electronic Warfare Protection: Architecture includes provisions for frequency hopping and dynamic interference mitigation

• Compact Form Factor: Target design will be smaller than NXG's current 6" x 4" form factor at low power

Development Approach: The CMOSS-ready M5NS-JCP development focuses on creating an architecture that can support rapid technology insertion and future upgrades while maintaining compatibility with existing defense communication ecosystems. The platform's software-defined architecture is being designed for deployment across mounted, dismounted, and unmanned aerial system configurations.

"The CMOSS-ready M5NS-JCP development represents our commitment to supporting the Department of Defense's open systems architecture vision," said David Gross, Director of Marketing at NxGenComm. "By designing our platform architecture to align with CMOSS principles from the ground up, we're positioning our customers to benefit from future interoperability standards while maintaining access to our platform's advanced capabilities."

NXG is actively engaging with defense integrators and industry partners to ensure the platform architecture aligns with evolving CMOSS standards and real-world implementation requirements.

Availability and Contact The CMOSS-ready M5NS-JCP platform is currently in early development. For more information about our development roadmap and partnership opportunities, please contact info@nxgencomm.com or visit www.nxgencomm.com.

About NxGenComm Based in the Research Triangle Park area in Morrisville, North Carolina, NxGenComm designs and develops end-to-end multi-standard, frequency band agnostic, wireless network solutions for multiple verticals. NXG provides high-performance network infrastructure solutions for demanding use cases that require unique architectures, incorporating tiered levels of autonomous capability and intelligence from the device to the cloud.

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