NxGenComm Announces M5NS-JCP Expansion: New Terminal for Distributed Intelligence, Multi-modal Sensor Fusion, and AI

Single Modular Architecture Delivers Multi-Modal Sensor Fusion, 50 TOPs Edge AI, and Revolutionary 4”×2” Terminal from Division to Deployed Effects

MORRISVILLE, NC, UNITED STATES, October 20, 2025 /EINPresswire.com/ -- NxGenComm (NXG) today announced major capability expansions across its M5NS-JCP (Multi-Modal Neural System - Joint Communications Platform) product line, including advanced multi-modal sensor fusion, enhanced RF scanning (70 MHz - 12 GHz), 50 TOPs edge AI processing, and the M5NS-JCP Terminal---a 4"×2" platform for mass deployment in launched effects and squad operations. The platform's software-defined architecture supports multiple datalinks (5G, MANET, CDL, SINCGARS) and integrated electronic warfare capabilities (RF sensing and jamming) across all variants, all coordinated through the Phoenix Engine autonomous battlefield AI.

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>
> *David Gross, Director of Marketing at NxGenComm*

Senior leadership of the Army G-6 recently framed the service's challenge: "As NGC2 and data becomes really our ammunition, the question is, is there an organization designed to oversee data across the United States Army?" NXG's M5NS-JCP answers that challenge by embedding autonomous, AI-driven data management directly into every operational node---making data formations a distributed capability rather than a centralized structure.
Three Variants, One Software Baseline

NXG's M5NS-JCP uses a single NGC2-compliant software baseline and Phoenix Engine autonomous AI across all variants, enabling multiple datalinks, integrated electronic warfare (RF sensing and jamming), and multi-modal sensor fusion from optical/video, audio, LIDAR, acoustic, radar, and environmental sensors.

M5NS-JCP Enterprise -- Division/brigade command intelligence hub with 50 TOPs edge AI, multi-modal sensor fusion, wideband RF scanning (70 MHz - 12 GHz), electronic warfare, autonomous

asset control, software-defined multiple datalinks (4G/5G, MANET, CDL, SINCGARS), TAK support, and post-quantum encryption (ML-KEM 1024).

M5NS-JCP Tactical -- 6" x 4" brigade/battalion mobile system maintaining full Enterprise capability including multiple datalinks, electronic warfare, and multi-modal sensor fusion in rugged, vehicle-mounted profile.

M5NS-JCP Terminal -- Revolutionary 4"×2", 10W device delivering complete multi-domain capability for soldier systems, small UAS, and launched effects. Includes 50 TOPs edge AI, multi-modal sensor fusion, RF scanning (70 MHz - 12 GHz), electronic warfare, autonomous asset control, software-defined multiple datalinks, TAK, and post-quantum encryption.

Phoenix Engine: Autonomous Battlefield AI

NXG's Phoenix Engine interprets the commander's intent and autonomously executes appropriate tactical responses, performing multi-modal sensor fusion synthesizing RF signatures, optical/video feeds, audio inputs, LIDAR data, acoustic signatures, radar data, network traffic, environmental conditions, and position location into unified battlespace awareness. The system coordinates multiple datalinks through its software-defined architecture while managing electronic warfare operations.

Commanders provide high-level mission objectives that Phoenix Engine interprets and executes through coordinated multi-domain responses without detailed human micromanagement. The system autonomously standardizes data for NGC2 compatibility while performing AI-driven threat detection. Real-time waveform adaptation enables seamless switching between multiple datalinks, while integrated electronic warfare coordination enables sub-second response cycles. The 50 TOPs edge processing executes sophisticated AI models entirely at the tactical edge.

Enhanced Capabilities

NXG's M5NS-JCP platform's software-defined architecture enables multiple datalinks with seamless waveform switching. Multi-modal sensor fusion provides real-time synthesis of RF spectrum analyzers, optical/video sensors, audio inputs, LIDAR, acoustic sensors, radar systems, and environmental sensors, creating unified battlespace awareness. Extended RF scanning offers wideband spectrum monitoring from 70 MHz to 6 GHz with optional 12 GHz extended range. Electronic warfare capabilities integrate RF sensing and jamming coordinated through Phoenix Engine's autonomous control. All AI processing, decision-making, and electronic warfare operations execute locally for sub-second tactical responses.

Battlefield Impact

NXG's M5NS-JCP enables distributed intelligence with Phoenix Engine in every deployed asset, creating resilient networks across multiple datalinks. The software-defined architecture allows seamless switching between waveforms while maintaining continuous sensor fusion. The architecture supports mass deployment of electronic warfare capabilities and sensor fusion with rapid technology insertion through over-the-air updates.

Operational Scenarios

Autonomous Jammer Hunt: Squad deploys twelve Terminal-equipped launched effects that detect hostile jamming through RF sensing, correlate with optical/video and LIDAR data to identify jammer location, and autonomously coordinate electronic warfare responses while switching between available datalinks.

Counter-UAS Defense: Tactical systems detect hostile UAS swarm through multi-modal sensor fusion, interpret commander's intent ("Neutralize hostile UAS"), and autonomously coordinate jamming operations and friendly UAS interception in seconds.

Distributed Intelligence Network: Division deploys 200+ Terminal units establishing resilient links with automatic datalink switching, enabling Phoenix Engine to aggregate multi-modal intelligence and propagate intent-based commands to every tactical edge node.

Convoy EW Protection: Vehicle-mounted Tactical systems perform continuous RF sensing while coordinating communications, autonomously executing jamming responses and waveform adaptation to maintain communications through contested corridors.

Squad Multi-Domain Ops: Soldiers with Terminal devices receive intent-based command ("Clear building"), automatically coordinating UAS reconnaissance and sharing fused RF, optical, acoustic, and environmental intelligence via a resilient network.

Army Modernization Integration

NXG's M5NS-JCP's software-defined design supports the Army's 30-month C2 modernization sprint with over-the-air updates aligned to the Ivy Sting six-week iteration model. The platform's CMOSS-compliant and NGC2-certified architecture enables immediate integration into Project Convergence and Artillery Execution Suite programs.

Leadership Perspective

"The expansion of our M5NS-JCP platform represents a fundamental shift in how battlefield intelligence is deployed," said David Gross, Director of Marketing at NXG. "Our software-defined architecture enables each platform---from enterprise systems to 4x2-inch terminals---to provide multiple datalinks, integrated electronic warfare with RF sensing and jamming, and sensor fusion from optical/video, audio, LIDAR, acoustic, and environmental sensors, all coordinated through Phoenix Engine."

Availability

NXG's M5NS-JCP Enterprise and Tactical variants are available now for immediate demonstration and deployment. The M5NS-JCP Terminal is in advanced development with demonstration units available for evaluation and integration planning. For more information, 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 multi-standard, frequency band agnostic wireless network solutions. NXG specializes in tactical edge computing, electromagnetic resilience, and autonomous systems, enabling data-centric operations that scale from command centers to the tactical edge.

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