

LISRD

Light Intelligence, Surveillance,
and Reconnaissance Distribution



LISRD: HIGH-PERFORMANCE, RUGGEDIZED, LOW-SWAP EDGE COMPUTE

The Challenge: Modern ground forces generate vast volumes of data, yet much of it must still be transmitted upstream to centralized systems for processing. This creates delays and operational risk when communications are degraded, denied, intermittent, or limited (DDIL). Reliance on remote infrastructure prevents frontline units from processing data, running mission applications, and sustaining digital operations directly at the tactical edge—slowing their ability to sense, understand, and act.

The Solution: LISRD is a software-defined tactical edge compute node that delivers AI-enabled sensor data processing and mission applications directly to the operator. It enables soldiers and vehicles to process sensor data, run AI models, and deliver geospatial services locally without reliance on centralized infrastructure. LISRD transforms the battlefield by enabling distributed ground forces to sustain mission-critical digital operations, shared situational awareness, and decision advantage in DDIL environments.

CAPABILITY	OPERATIONAL ADVANTAGE
Software-Defined Mission Node	Runs mission applications, geospatial services, and AI workloads at the edge, enabling real-time distributed intelligence at the point of need.
Disconnected & Resilient Operations	Ensures mission continuity, situational awareness, and decision advantage in DDIL environments without reliance on centralized infrastructure.
Open Systems Integration	Integrates with in-service radios, power systems, EUDs, sensors, and mission software, while enabling rapid deployment of new capabilities.
Dual Deployment Form Factor	Extends mission-critical compute to soldier-borne and vehicle-mounted environments, enabling persistent distributed operations across the battlefield.
Tactical SWaP-Optimized Design	Delivers high-performance edge compute in a compact, low-power, ruggedized form factor optimized for demanding field operations.

From Connected Dependency To Distributed Autonomy: LISRD defines a new category of distributed intelligence that shifts compute, applications, and decision-making from centralized infrastructure to the tactical edge, enabling soldiers and vehicles to sense, understand, and act on mission data locally in DDIL environments.

SPECIFICATIONS

PHYSICAL

DIMENSIONS 216 x 102 x 53mm (8.5 x 4.0 x 2.0in)

WEIGHT 1.3kg (2.9 lbs)

ENVIRONMENTAL

OPERATING/STORAGE TEMPERATURE -32°C to +40°C (worn), -32°C to +50°C (vehicle) / -40°C to +71°C

HUMIDITY Up to 95% noncondensing

POWER DISSIPATION Dismounted = 25W total
Vehicle Mounted = 65W total

PROCESSING

MODULE Jetson AGX Orin

CPU 8-Core Arm® Cortex®-A78AE v8.2
64-bit CPU

GPU 1792-core NVIDIA Ampere c GPU with
56 Tensor Cores

RAM 64Gb LPDDR5

STORAGE 256Gb NVMe SSD (1Tb optional)

INTERFACES

ETHERNET 1 x GbE and 1x 10GbE

USB 1 x USB 2.0 (Device + PWR), 1 x USB 2.0 (Host), Up to 2 x USB 3.1

WI-FI / BLUETOOTH CELLULAR Wi-Fi 6E, Bluetooth 5.4, LTE (5G optional)

POWER

DISMOUNTED / VEHICLE MOUNTED 12V DC Nett Warrior or NATO STANAG 4695/ MIL DTL 1275E (10-33VDC) Vehicle Power

EXPANSION (CUSTOM OPTIONS)

VIDEO 1 x Display Port (optional)

CAN Up to 2 x CAN 2.0b

SENSOR INPUTS Up to 16 lane MIPI CSI-2

MICRO SD Micro SD options available

ETHERNET Added Ports (4 total) with internal switching

FEATURE EXPANSION OPTIONS

Significant expansion and I/O options based on program requirements are available upon request (subject to NRE costs):

- Video output (HDMI)
- Image sensor inputs (MIPI CSI-2)
- Additional Ethernet ports (up to 4 total) and switching.
- GPIO, Audio, SPI, RTC, and Battery options
- PTP, NTP, or CAN bus precision synchronization

INPUTS AND OUTPUTS



ORDERING INFORMATION

Please contact TACTIQL for configuration and customization options to tailor LISRD to your mission requirements.

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