

Drop-In Battery Solutions for Aerospace & Defense

Made-in-USA, NDAA Section 842 Compliant Lithium-Ion Cells, Modules, Packs, and Energy Storage Systems — from Watt-Hours to Megawatt-Hours, Across Land, Sea, Air, Space, Hypersonics, and Munitions.

PRESENTED BY

Sensible Micro Corporation

13520 Prestige Place, Tampa, FL 33635 · (813) 926-6700 · www.sensiblemicro.com

Authorized representative of Domestic Lithium Battery Manufacturer Corporation

Purpose of This White Paper

This document is intended for circulation by authorized representatives of Domestic Lithium Battery Manufacturer Corporation (DLBM) — including manufacturer representative firms and distribution partners — to engineering, program management, and supply chain leadership at aerospace, defense, and government contractors across the United States and Canada.

Its purpose is straightforward. Most program teams already understand that lithium-ion batteries are the dominant energy storage choice for modern systems. What they often do not have visibility into is which domestic manufacturers can deliver qualified, drop-in battery solutions that satisfy the simultaneous demands of NDAA FY26 Section 842 compliance, AS9100D quality, multi-domain mission profiles, and program schedules. This paper closes that gap.

Rather than reading as a cell-level technology brochure, this paper is structured around the question that program managers actually ask: "Can DLBM deliver a battery solution that drops into my system, meets my compliance requirements, survives my environment, and is supportable for the life of my program?" The answer — across nearly every aerospace and defense application from a watt-hour wearable to a megawatt-hour shipboard or directed-energy platform — is yes.

Who Should Read This

- Program managers and chief engineers evaluating power and energy subsystems on new or existing platforms.
- Supply chain and procurement leads responsible for NDAA Section 842 readiness and Buy American compliance.
- Mechanical, electrical, and systems engineers tasked with cell selection, pack design, or BMS integration.
- Business development and capture teams positioning offerings against domestic-content and FOCI requirements.
- Sustainment and logistics planners managing storage, shipment, and lifecycle of battery-powered systems.

Domestic Lithium Battery Manufacturer at a Glance

Domestic Lithium Battery Manufacturer Corporation (DLBM) was founded in 2006 and has grown into a U.S.-owned, vertically integrated designer and manufacturer of advanced lithium-ion cells, modules, packs, and energy storage systems. DLBM's mission — to electrify Earth and beyond — is executed entirely from a single 82,000 square-foot AS9100D-certified facility, where engineering, electrode manufacturing, cell assembly, formation and aging, abuse testing, pack integration, and quality control all take place under one roof.

DLBM's investment in domestic capability runs deep. The company's mega-line supports millions of cells per year today, with expansion to gigawatt-hour-class production now underway. DLBM has been awarded sustained funding from the U.S. Department of War (DoW), the U.S. Department of Energy (DOE), the California Energy Commission, and Space Force STRATFI to qualify domestic production, scale advanced silicon and lithium-iron-phosphate chemistries, and field zero-volt-tolerant cells in operational satellite missions.

Company Snapshot

Founded	2006
Ownership	U.S.-owned small business · No foreign ownership, control, or influence (FOCI)
Facility	82,000 sq ft — dry room, clean room, electrode and cell production, mega-line, abuse-test labs
Quality System	AS9100D certified · ISO 9001:2015 · ISO 13485 (pending audit)
Regulatory	ITAR registered · NDAA FY26 Section 842 compliant · UL 1642 · UN 38.3 · AIAA S-144
Patents	110+ issued U.S. and international patents — chemistry, cell, electrode, pack, and safety architecture
Production	Mega-line at multi-million-cell annual capacity · GWh-class scale-up in execution
Test Capability	2,000+ formation channels · UN 38.3 / UL 1642 abuse — overcharge, crush, impact, hot box, nail, external short
Programs	U.S. Space Force · U.S. Army (Project Manager Soldier Survivability and others) · U.S. Air Force · DOE · California Energy Commission
Customers & Partners	Lockheed Martin · Northrop Grumman · RTX · General Motors · magniX · Hera Systems · prime integrators across all services

Why This Matters to Your Program

DLBM's combination of single-site vertical integration, AS9100D certification, ITAR registration, FOCI-clean U.S. ownership, and active DoW/DOE/CEC contract performance means a program office working with DLBM through an authorized distributor receives a battery supplier that is already postured for defense and aerospace work. There is no offshore cell sourcing to qualify, no Section 842 exposure to remediate, and no single-point supply chain dependency on adversary-nation manufacturing.

For programs in the proposal, design, qualification, or sustainment phase, this dramatically shortens the supplier qualification path — and removes the most common reasons a battery vendor gets disqualified late in the program cycle.

The Drop-In Battery Solution Model

DLBM does not sell cells. DLBM sells outcomes — qualified, drop-in battery solutions sized to a program's energy, power, environmental, and certification requirements, delivered with the documentation needed to integrate into a regulated end product.

This is an important distinction. A program that buys raw cells inherits the burden of cell selection, pack design, BMS development, thermal management, abuse testing, and certification. DLBM's customers — and the engineering teams supported by authorized DLBM distribution partners — buy a finished system: cells matched to mission, modules engineered for the form factor, packs integrated with battery management and thermal control, and certification packages aligned with the platform's regulatory environment.

What "Drop-In" Means in Practice

Cell Design	Module Engineering	Pack Integration	BMS & Thermal	Certification
Chemistry, format, and electrode formulation matched to the mission profile — energy-dominant for endurance, power-dominant for pulsed loads, hybrid for mixed profiles.	Mechanical, electrical, and thermal architecture of the module-level building block, including cell-to-cell isolation and propagation containment.	Series/parallel assembly into the program's required voltage and capacity, with structural housing, connectors, and serviceability designed in.	Battery management system co-designed with the cells, including state-of-health monitoring, balancing, protection, and active or passive thermal control.	Documentation and test data to support MIL-STD-810, MIL-PRF-32565, DO-311A, AIAA S-144, UL 1642, UN 38.3, and platform-specific airworthiness or safety releases.

How This Reduces Program Risk

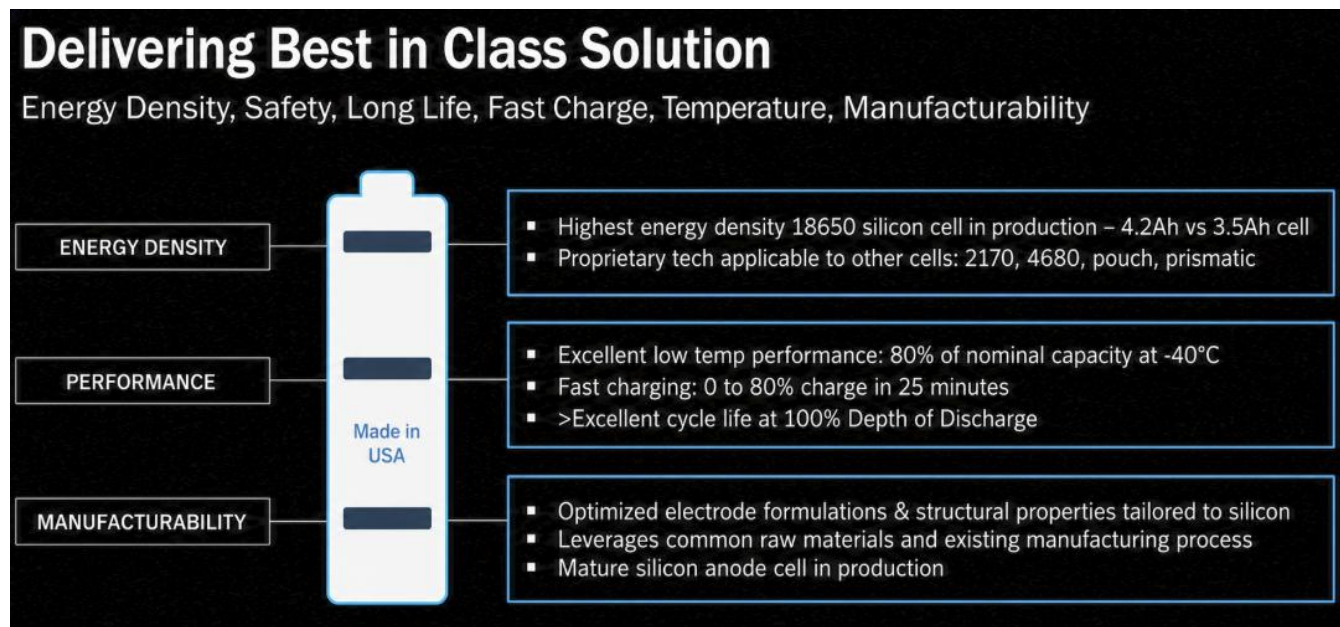
- One supplier accountable for the entire energy storage subsystem — no integration mismatch between cell vendor, pack vendor, and BMS vendor.
- No foreign cell qualification. NDAA Section 842 compliance is built in from raw material sourcing forward.
- Documentation packages designed for U.S. defense acquisition workflows — not retrofitted from consumer electronics paperwork.
- Engineering samples available before production tooling is committed, so cell selection decisions can be validated against the actual mission profile early in the program.
- Direct technical exchange with DLBM's engineering team — not just a salesperson — at every stage from concept through sustainment.

What the Distributor Brings

Authorized DLBM distributors and manufacturer representatives — the firms that deliver this paper — bring decades of OEM relationships, technical sales expertise, and regional presence across aerospace and defense customers. Their role is to identify the program fit, facilitate the technical exchange between the program team and DLBM engineering, and shepherd the engagement from initial requirement through purchase order. The cells, modules, packs, BMS, and qualification work are DLBM's. The customer relationship and program insight are the distributors. Together, the model delivers a battery solution faster and at lower risk than either party could deliver alone.

DLBM Technology — Best in Class

DLBM's competitive position is defined by the convergence of six mutually reinforcing capabilities — energy density, safety, performance, manufacturability, domestic sourcing, and certification. The graphic below summarizes how DLBM's patented technology stack delivers a categorical, not incremental, advance for the program engineering team evaluating energy storage options.



What This Means for Aerospace and Defense Programs

The bullets above are the cell-level technology story. The program-level translation is what matters in a capability briefing or supplier source-selection conversation:

Capability	Program-Level Outcome
Higher Energy Density	Longer mission endurance for the same pack mass, or the same endurance at lower pack mass — payload capacity, range, and loiter improve directly.
Wide Temperature Operation (-60 °C to +60 °C)	Mission readiness across arctic, desert, near-space, and orbital environments without thermal conditioning that adds mass and complexity.
Fast Charge with Cycle Life	Sustained operational tempo without sacrificing cell life — relevant to silent watch, ISR, and high-cadence unmanned operations.
AS9100D-Certified Domestic Manufacturing	Audit-ready quality system, complete traceability from raw materials to finished pack, and zero exposure to FOCI-restricted supply chains.

Application Coverage Across Every Operational Domain

DLBM's technology applies to every operational domain in modern defense and aerospace — from a watt-hour wearable carried by a dismounted soldier, to a megawatt-hour energy reserve aboard a destroyer or feeding a directed-energy weapon. The same fundamental cell-level advantages — high energy density, high power capability, intrinsic safety, and wide temperature operation — apply across all of them. Below, we map DLBM's portfolio against each domain, with representative use cases drawn from current and emerging defense programs.

Energy Spectrum at a Glance

DLBM's product range spans seven orders of magnitude in energy delivered per pack:

Class	Energy Range	Representative Applications
Watt-Hour Class	Wh	Wearables, dismounted soldier power, smart munitions, fuzes, expendable sensors, IoT and unattended ground sensors.
Hundred-Watt-Hour Class	100 Wh – 1 kWh	Handheld radios, portable comms, ISR sensors, conformal soldier batteries, small UAS, missile guidance and seeker electronics.
Kilowatt-Hour Class	1 – 10 kWh	Tactical UAS, small satellite buses, vehicle silent-watch packs, payload power for ISR drones and hypersonic test vehicles, directed-energy capacitor charging.
Tens-of-Kilowatt-Hour Class	10 – 100 kWh	Group 3+ UAS, eVTOL, ground-vehicle hybrid drives, MIL-PRF-32565 6T packs, satellite high-power buses, autonomous surface and undersea vehicles.
Hundred-Kilowatt-Hour Class	100 kWh – 1 MWh	Manned electric aircraft, hybrid-electric propulsion, mobile microgrids, forward operating base power, expeditionary energy reserves.
Megawatt-Hour Class	1 MWh +	Shipboard energy reserves, directed-energy weapon pulse buffers, ground-based laser and radar systems, large-scale stationary energy storage.

Cell-Level Portfolio Reference

DLBM's drop-in pack and battery solutions are built on a published portfolio of qualified lithium-ion cells. The cells listed below are the building blocks; the DLBM engineering team selects, configures, and integrates them based on the program's mission profile. Distribution partners and program teams should treat this as a reference — not a menu — and expect DLBM to recommend the optimal configuration based on a technical exchange.

Cell Form Factors

DLBM designs and manufactures three primary cell form factors, each available in multiple chemistries and capacities. All DLBM cells are domestically produced under AS9100D quality control with full traceability.

Form Factor	Description
18650 Cylindrical	Heritage form factor with the broadest qualification base. Available in nano-silicon, NMC, LCO, and LFP chemistries from approximately 3 Ah to 3.5 Ah.
21700 Cylindrical	Higher-capacity cylindrical platform from 5 Ah to 5.5 Ah. Increased capacity per cell reduces parallel count in pack configurations, simplifying BMS architecture and improving energy density at the pack level.

Representative Cell Specifications

The table below summarizes representative DLBM cells from current product datasheets. Detailed datasheets, qualification packages, and chemistry-specific recommendations are available on request through your authorized DLBM distribution partner.

Model	Format	Chemistry	Capacity	Voltage	Highlights
18650NMC3500	18650	NMC	3.5 Ah	3.65 V	10.5 A continuous discharge, 17.5 A pulse
18650NMC3000	18650	NMC	3.0 Ah	3.7 V	5C continuous, 10C pulse — power-dominant cell
21700NMC5500	21700	NMC	5.5 Ah	3.7 V	16.5 A continuous, 27.5 A pulse
21700NMC5000	21700	NMC	5.0 Ah	3.7 V	15 A continuous, 25 A pulse, -40 °C operation

Specifications shown are representative and drawn from published DLBM datasheets. DLBM supports custom cell development under NRE-funded programs, including chemistry adjustments, mechanical envelope changes, and BMS integration tailored to a specific platform.

Compliance and Quality Posture

Battery suppliers fail aerospace and defense source-selection most often not on technical performance, but on compliance and quality posture. DLBM has been designed from the ground up to clear the compliance bar that defense acquisition imposes on cell-and-pack suppliers.

NDAA FY26 Section 842 Compliance

Section 842 of the National Defense Authorization Act for Fiscal Year 2026 prohibits the Department of War from procuring advanced batteries from foreign entities of concern (FEOCs), with phased compliance deadlines in 2028, 2029, and 2031. DLBM's domestic ownership, U.S.-based production, and qualified domestic supply chain mean that programs procuring through DLBM are already aligned with the Section 842 timeline — not racing to remediate exposure.

DLBM's specific qualified domestic supplier names are intentionally withheld from public-facing documents and are available under separate disclosure agreement. What is publicly representable: DLBM has redundant domestic vendors qualified across the cathode, anode, electrolyte, separator, and current-collector positions, and supports full chain-of-custody documentation for programs that require it.

Quality and Regulatory Stack

AS9100D	Aerospace quality management system — certified. Audit-ready quality records, traceability, configuration management, and corrective-action processes.
ISO 9001:2015	General quality management system — certified.
ISO 13485	Medical device quality management system — pending audit. Supports defense medical and dual-use opportunities.
ITAR Registered	International Traffic in Arms Regulations registered. Supports defense-controlled work and technical data handling.
NDAA FY26 Section 842	Compliant. Domestic ownership, U.S. production, and qualified domestic supply chain across all phased deadlines (2028, 2029, 2031).
UN 38.3 / UL 1642	All cells passed transport-test and cell-level safety qualification — thermal, vibration, shock, external short, impact, overcharge, hot-box, and forced-discharge.
DO-311A	Aircraft rechargeable lithium battery safety standard — DLBM supports the certification documentation pathway for airborne integration.
MIL-STD-810	Environmental engineering test standard — DLBM supports the qualification campaign for shock, vibration, temperature, altitude, and humidity.

Strategic Partnerships

DLBM's compliance and quality posture is reinforced by sustained investment from federal partners. Active and recent partnerships include the U.S. Department of War (formerly DoD), Department of Energy, U.S. Space Force, U.S. Army, U.S. Air Force, California Energy Commission (Zero-Emission Transportation Manufacturing Program — \$10.2M for 18650 production scale-up), and prime integrators including Lockheed Martin Space, Northrop Grumman, RTX, General Motors, magniX, and Hera Systems.

NEXT STEP

Start the Conversation

If your program is evaluating energy storage — whether for a watt-hour wearable, a megawatt-hour shipboard reserve, or anything in between — the next step is a discovery conversation. Reach out through the distribution partner that delivered this paper.

DISTRIBUTION PARTNER

Sensible Micro Corporation

Willie Geter

VP of Business Development Leader

wgeter@sensiblemicro.com

(813) 926-6700

www.sensiblemicro.com

Authorized representative for DLBM products

Domestic Lithium Battery Manufacturer Corporation · *Electrifying Earth and Beyond*