

SWATPACK

SILENT WATCH VEHICLE BATTERY MODULE

Galvion's Symbasys **SWATPACK™** is a modular Li-Ion battery designed as a configurable energy system for Silent Watch on tactical wheeled vehicles. Galvion's Li-ion chemistry and structure provide the ideal balance of life-cycle, safety and energy density for military vehicles in even the harshest battlefield conditions.



ELECTRICAL SPECIFICATIONS FOR SINGLE MODULE	
NOMINAL CAPACITY	160 Ah
ENERGY	4000 Wh
VOLTAGE	<ul style="list-style-type: none"> • MIN: 20V • NOMINAL: 25V • MAX: 30V
MAX CHARGE CURRENT	• CONTINUOUS: 57A
MAX DISCHARGE CURRENT	<ul style="list-style-type: none"> • CONTINUOUS: 57A • PULSE (30S): 110A
LIFE CYCLE	6500 cycles to 70% of initial capacity / EOL

MECHANICAL CHARACTERISTICS FOR SINGLE MODULE	
MECHANICAL CHARACTERISTICS	L 549 mm, W 106 mm, H 266 mm / L 21.6 in, W 4.2 in, H 10.5 in
WEIGHT	29 kg / 64 lbs
ENERGY DENSITY	140 Wh/kg
MAINTENANCE-FREE STORAGE	Up to 5 years

OPERATING CONDITIONS	
CHARGE TEMP	-46°C to 49°C / -40°F to 120.2°F
TRANSPORTATION	<ul style="list-style-type: none"> • UN transportation approved • Class 9
APPLICABLE STANDARDS	<ul style="list-style-type: none"> • MIL-STD-1275E • UN 38.3 • MIL-STD-810G • UL-1642 (for cells)

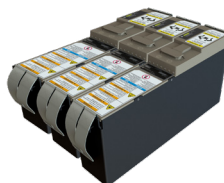
GALVION'S SYMBASYS SWATPACK – PROVIDES A CONFIGURABLE MIL-1275E COMPLIANT MILITARY VEHICLE BATTERY MODULE THAT CAN BE SCALED UP FOR ANY APPLICATION.



Single Module



2 x Swatpack



3 x Swatpack



10 x Swatpack
1,600 Ah, 40kWh in a ballistic case

FEATURES & BENEFITS

- Designed exclusively for silent watch loads that required long-duration sustained use of power over time for critical on-board electronics and power-hungry vehicle variants
- Modular system that can be scaled up or down to meet unique vehicle power and silent watch requirements
- Fuel and engine maintenance savings - reduces engine run times saving fuel and saving the vehicle batteries for engine starting
- Reduces thermal and acoustic signatures to increases stealth and protect vehicle occupants from detection
- Bolted electrical connections to maximize capacity and resistance to vibration, shock and increase reliability
- Each Swatpack has a 10-year lifecycle (6500 cycles at 70% End of Life (EOL))

SWATPACK SILENT WATCH VEHICLE BATTERY MODULE

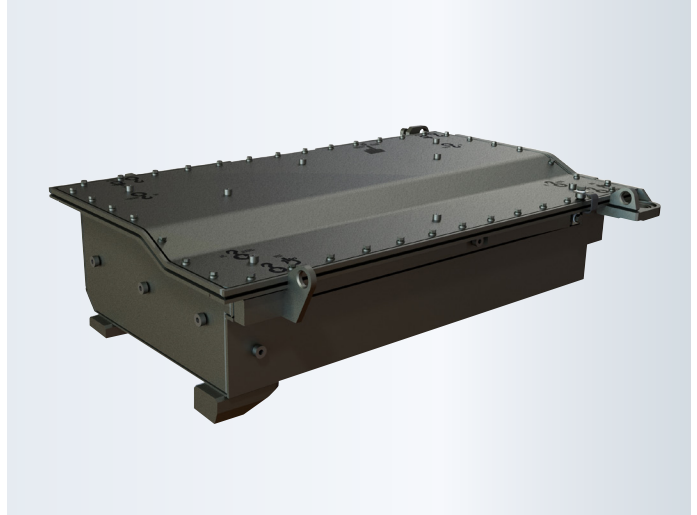
Swatpack is a modular lithium battery system specifically designed for the needs of silent watch on military vehicles. This modular battery system can be adapted to fit a wide variety of vehicle platforms.

Each Swatpack is based on a custom manufactured and specially blended lithium battery chemistry that is optimized for silent watch use. Galvion's proprietary lithium chemistry has been customized to provide the ideal combination of very high cycle life and high energy density in a safe and reliable module.

The Swatpack is designed to meet industry safety requirements (UL 2580) and military standards (MIL-STD 1275D, MIL-STD 810). Multiple modules may be connected together to meet total energy requirements.



The General Dynamics Land Systems (GDLS) Stryker Command Variant (CV) vehicle utilizing the Silent Watch Battery Pack comprised of 10 Swatpack batteries.



Galvion's 10 module Silent Watch System (seen on page 1) in customized enclosure.