DEFENSE SOLUTIONS

Your Power Solutions Partner for Critical Missions

Mission-critical power solutions
when failure is not an option.



A strategic synergy



Engineered by Alpha Innovations, delivered by RIPEnergy

The union of Alpha Innovations and RIPEnergy within the CE+T Group creates a unique European powerhouse, combining Belgian engineering and Swiss precision to deliver unbreakable power solutions for the most demanding defense environments.

Alpha Innovations leads research and development: our power electronics experts design, prototype, qualify and industrialize the solutions in Belgium. **RIPEnergy**, acquired by Alpha Innovations in 2023, is your commercial contact: it markets and sells the defense range and supports you from quotation to after-sales service.

Our mission is simple

To deliver mission-critical power solutions when failure is not an option.

Why choose Alpha Innovations?

Local agility. Global strength.

Alpha Innovations is part of the CE+T Group, an international technology group specialized in energy conversion, power electronics, BESS, monitoring, and energy management solutions. Founded in Belgium in 1934, CE+T has become a recognized global player delivering innovative energy solutions across critical industries worldwide.

Today, the group combines decades of engineering expertise with a strong innovation culture driven by research and development.

- €99 million consolidated turnover
- Approximately 400 employees worldwide
- 7 R&D centers
- 6 production sites
- More than 90 active patents
- International presence across Europe, America, Asia, the Middle East, and Australia

The strength of the group

Being part of CE+T Group gives Alpha Innovations access to a powerful ecosystem of complementary technologies.

R&D by Alpha Innovations

Power electronics experts in Belgium design, prototype, qualify and industrialize defense power solutions, backed by 90+ group patents.

Sales by RIPEnergy

Swiss specialist in on-board energy conversion since 2004, RIPEnergy markets the defense range and supports you from quotation to after-sales.

Long-term partnership

Financial strength, manufacturing capacity, and worldwide support capabilities ensure sustainable customer relationships.

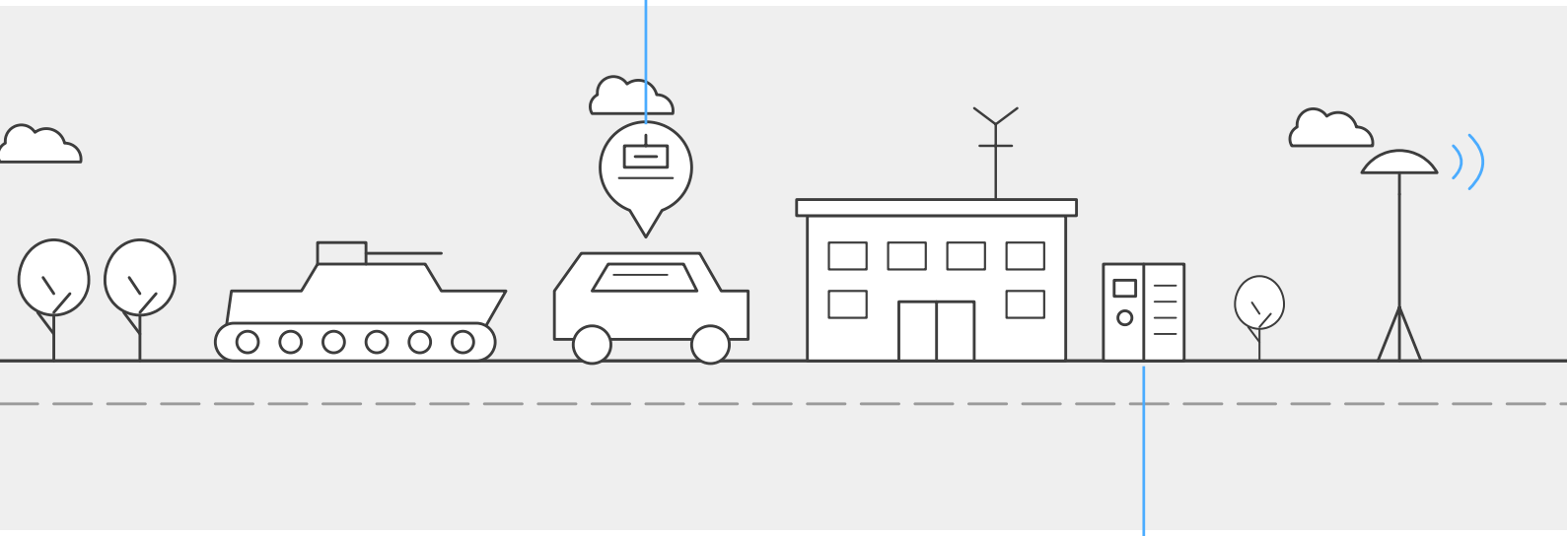
One ecosystem

The combined expertise of CE+T Power, JEMA, RIPEnergy, CE+T America, and Alpha Innovations enables the delivery of complete solutions from energy conversion to advanced monitoring and control.

Solutions for defense critical power

– Embedded power for vehicles

High-reliability converters, inverters and chargers for tracked and wheeled vehicles, built to withstand dust, vibration and extreme temperatures.

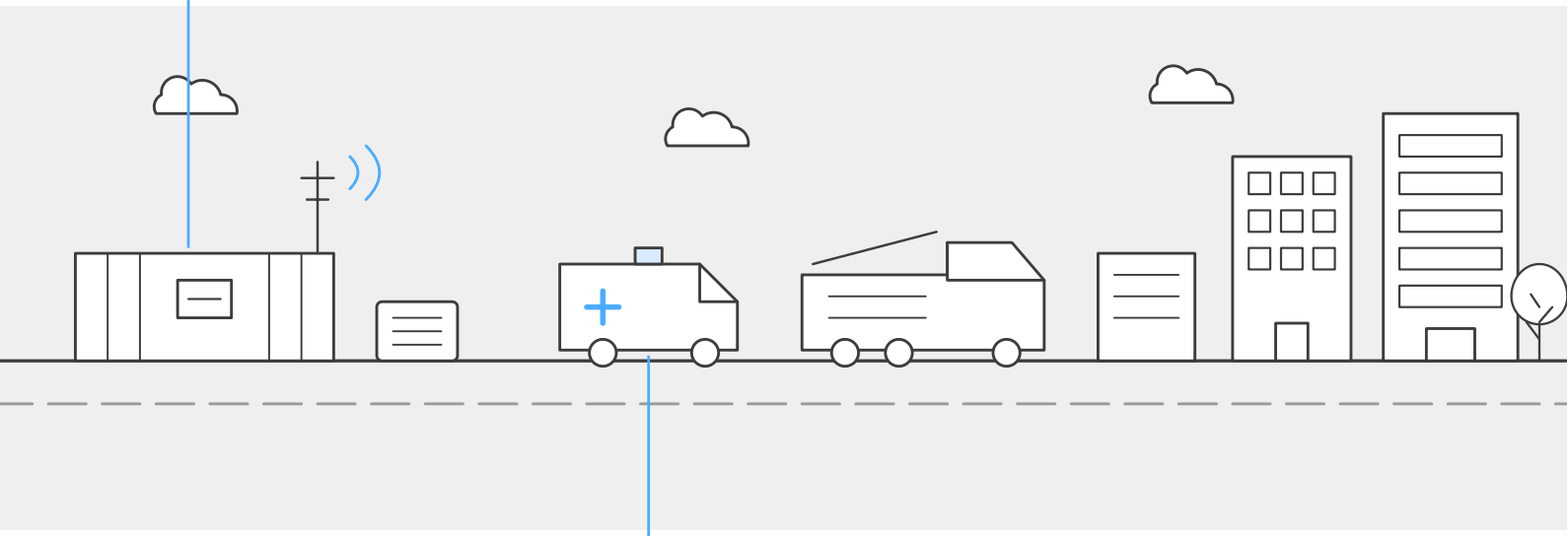


Backup power for critical sites

Autonomous, redundant architectures for command and control centers, emergency operation rooms and defense infrastructure, from grid failure to full blackout.

Deployable shelters & containers

Scalable, fanless power systems for shelters and containers, with silent, maintenance-free operation in the field.



Rescue & emergency vehicles

Embedded power for rescue and ambulance vehicles, keeping on-board equipment powered when every second counts.

From research & development to the field

Defense power systems must keep communications, sensors, command platforms, medical devices and safety equipment running in the harshest conditions. Behind every RIPEnergy defense product stands the research and development of Alpha Innovations: our power electronics engineers in Belgium design, test and industrialize solutions built around the realities of the field.



Our R&D enables customers to :

- Get power architectures designed for their mission
- Validate efficiency, thermal behavior and EMC
- Withstand shocks, vibration and extreme temperatures
- Integrate CAN bus, BMS and FPGA control
- Upgrade legacy fleets without full replacement
- Keep quality and value chain in Europe

A complete development cycle

From need analysis and feasibility to co-design, prototyping, qualification and series production, our engineering teams keep full control of every step.

DESIGN | PROTOTYPE | QUALIFY | INDUSTRIALIZE

Custom engineering

Need analysis, feasibility and co-design sessions in which your team keeps control of key decisions.

Testing & qualification

Prototypes tested for efficiency, thermal behavior and EMC, 100% functional testing and optional factory acceptance tests.

Retrofit & integration

Power supplies for fleet retrofitting and third-party converter integration, without full platform replacement.

Shaping tomorrow's tactical energy

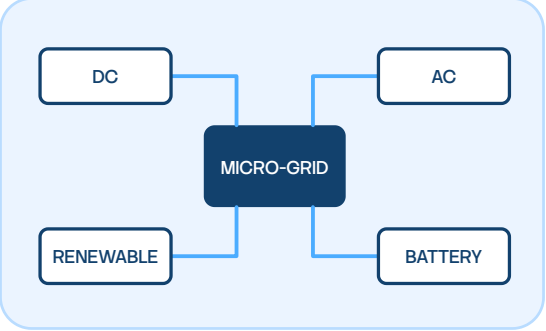
Deployed forces depend on fuel-hungry generators and heavy logistics to produce energy in the field. SENTINEL (Sustainable Energy Network Technologies Innovative Next-generation Energy Levels), funded under the European Defence Fund 2024, aims to change how energy is produced and distributed in military operations, with hybrid and intelligent systems.

Alpha Innovations, strategic R&D partner

Within the programme, **Alpha Innovations** supplies **distributed power conversion systems** that connect DC, AC, intermittent renewable and battery sources into a unified local micro-grid.

PRODUCE | STORE | CONVERT | DISTRIBUTE

The project prototypes and qualifies 17 key energy capabilities, tested in realistic military scenarios across diverse climates. It covers advanced energy production and storage, transportable energy systems, digital consumption management and tactical smart-grid integration. The goal: strengthen the security of supply and strategic autonomy of European armed forces, reduce their logistical burden and dependence on fossil fuels, and support decarbonized defense.

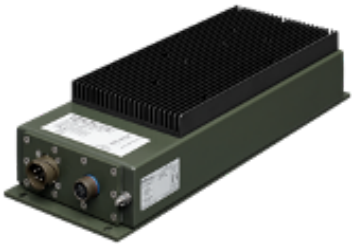


€56.9M	42	17	17
total programme budget	strategic partners	participating European countries	energy capabilities to qualify

Tactical product catalog

Sine wave inverters & battery chargers

Engineered in Switzerland and at our development centre in Belgium · Sold and supported by RIPEnergy



RSW400-MIL

Proven technology, simple and efficient.

Field of application: Mobile ground units, tracked/wheeled, container.
Technology: Fanless (silent) & maintenance-free.
Key features: For smaller power needs that are just as important for the success of the operation.



COMBO S/V/RSX

Proven technology, designed for maximum resistance.

Field of application: Mobile ground units, tracked/wheeled, container, shelter.
Technology: Fanless (silent) & maintenance-free.
Key features: Ruggedized 5-stage, intelligent charging with high inrush capability.



MPI-1600

Can perform multiple tasks and be configured accordingly.

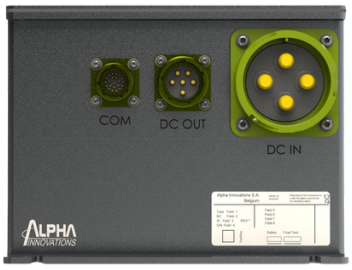
Field of application: Mobile ground units, tracked/wheeled, container.
Technology: Fanless (silent) & maintenance-free.
Key features: Uninterrupted switching with the highest requirements on voltage and frequency.

- Power range from 100 W to 10 kW, stable AC or DC power to the load
- Fanless (silent) and maintenance-free designs
- IP64-rated RSW sine wave inverters, programmable via RS-485 or CAN bus
- Built for high-vibration, high-EMI environments

Tactical product catalog

DC/DC converters & chargers

Engineered in Switzerland and at our development centre in Belgium · Sold and supported by RIPEnergy



MPC-3000

High-efficiency isolated DC/DC converter.

Field of application: Mobile ground units, tracked/wheeled.
Technology: FPGA control, CAN bus & BMS integration.
Key features: 30 kW (10 s) for engine start.



PRISMA

For demanding projects with high energy requirements.

Field of application: Shelter, container.
Technology: Fanless (silent) & maintenance-free.
Key features: Self-organising scalable system in various configurations.



DC-EQUALIZER

Perfectly balances 24 V battery systems made of two 12 V batteries.

Field of application: Mobile ground units, tracked/wheeled, container.
Technology: Fanless (silent) & maintenance-free.
Key features: Energy balance between batteries.

Ready to power your next mission?

RIPEnergy is your commercial contact for the whole defense range: quotations, orders, datasheets and after-sales service.

CONTACT RIPENERGY ›

info@ripenergy.ch · www.ripenergy.ch

Defense power expertise

On the field with European defense

Alpha Innovations and RIPEnergy jointly exhibited at **BEDEX 2026**, the first defense exhibition held in Belgium, and at **Eurosatory 2026** in Paris, both on the Wallonia Export & Investment Agency (AWEX) pavilion. Rather than focusing on catalogs, our teams discussed visitors' operational challenges and presented a combined offering of four product families: DC/DC converters for C4ISR vehicles, sine wave inverters, battery chargers and equalizers, and power supplies for fleet retrofitting.

✓100 W–10 kW
power range of our on-board solutions

✓4
product families for defense applications

✓Since 2004
RIPEnergy expertise in on-board energy conversion

Bespoke power for critical applications

Ultra-rugged mobile power solutions

European value chain & sovereignty

Long-term after-sales support

Three pillars of our defense alliance

- **Reliability**

Bespoke, redundant power architectures that minimize downtime for critical applications and deployable tactical networks.

- **Agility**

Ultra-rugged power solutions for mobile and secure military use, with Swiss precision.

- **Sovereignty**

Quality control and value chain kept in Europe, from R&D in Belgium to production and support.

Defense news & certifications

NEWS · JUNE 2026

Eurosatory 2026

Alpha Innovations and RIPEnergy jointly exhibited in Paris on the AWEX pavilion, presenting four defense product families, from C4ISR DC/DC converters to fleet retrofit power supplies.

EVENTS

NEWS · MARCH 2026

BEDEX 2026

At the first defense exhibition in Belgium, our teams discussed operational challenges around three themes: reliability, agility and European sovereignty.

EVENTS

NEWS · MARCH 2026

Strategic partner in SENTINEL

Alpha Innovations joins the €56.9M European Defence Fund 2024 programme with 42 partners from 17 countries, supplying distributed power conversion for tactical micro-grids.

R&D

NEWS · JUNE 2023

Alpha Innovations acquires RIPEnergy

Founded in 2004 in Switzerland, RIPEnergy designs on-board energy conversion products from 100 W to 10 kW for industrial, railway and defense customers.

COMPANY NEWS

CERTIFICATIONS & LABELS

Quality you can rely on

ISO 9001 certified · REACH & RoHS compliant · Factory of the Future label · EcoVadis Silver (top 15%, June 2025)



ALPHA INNOVATIONS × RIPEENERGY
The Power Conversion Company

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