Special Operations Forces
Editorial from Rear Admiral Laurent ISNARD, Général Commandant les Opérations Spéciales (Commander French Special Operations Command CDR FR SOCCOM)

Special Operations Forces (SOF) are the concrete expression of military ambition and political will, as their engagement is aimed at achieving specific strategic objectives. To do so, the Special Operations Command must gain and maintain the best possible situational awareness of the environment they will be operating in, plan future missions leveraging their imaginative and innovative approach and by integrating (or integrating with) an array of key national and international partners. In this context, the Special Operations Command is particularly sensitive to the development of its capability to anticipate (future equipment and engagements) and its ability to innovate (retain technological advantage). It is the continuous and relentless pursuit of excellence and strategic in a complex and rapidly changing operating environment. After reflection comes the time for engagement and action, where professionalism, technical precision of the operators and flawless execution will ensure the success of the mission.

Special Operations Forces are not designed to conduct conventional operations with less means. The effort of the Command is focused on anticipation and sharing with the intelligence services and conventional and unconventional effectors. Force generation for Special Operations will come from the commando units of the various components (Navy, Air Force and Army) and will also be supported by dedicated Special Operations Helicopter units and fixed wing transport squadrons. But beyond this first layer, it is all the components of the armies, departments and services that contribute to our operations.

Without any long-range Air Force drones, without the support of the Army’s electronic warfare specialists, without specialized medical support and/or without marine patrol aircraft the conduct of swift and precise Special Operations Missions would be impossible. Superiority in the field is maintained by both the quality of the recruitment and the training of the operators, but also by the permanent monitoring of technological innovations and knowhow. Making best use of the resourcefulness and toughness of the combatants is necessary but not sufficient. Nothing can replace a specific weapons system that gives an indisputable local tactical and technical advantage - this may be either the sniper’s thermal weapon sight or the mini-submarine or individual tactical drone. The agility and inter-connectivity of the network and the information flow rates intra and inter theatre within a Joint Interagency and Multinational framework will provide robust command and control capabilities for the conduct of Special Operations as well as enabling other key players.

Finally, the Special Operations command can be characterized as a capability integrator implementing an "SOF system" which ensures the consistency of the use of its resources and those that are entrusted to it. In accordance with the capability requirements expressed below, the GICAT, via the expertise available through its network of companies, can offer support in this ambitious project to acquire and to improve the "Special Operations Forces" capability of our armies. Identifying new capability fields and defining them in an applicable expression of needs remain for us a major challenge which we are particularly interested to enable us to retain our technological advantage.

Rear ADMIRAL LAURENT ISNARD • FRENCH SOCCOM CDR
Special Operations Forces capabilities

Special Forces operate within the full spectrum of operations, namely: prevention, intervention and stabilization. In an increasingly complex environment, they must adapt the scale and scope of their actions. Hence, they are rapidly becoming the backbone of a highly integrated system of forces, comprising an increasing number and variety of technical and human assets. This operational integrated system is designed to allow the planning and execution of kinetic as well as non-kinetic operations, in the three dimensions. The French Special Forces Command specifically rely on the following capacities:

ICTS and Command

This ICTS and Command capabilities ensure the command and support of special operations components in the fields, generally coordinating several Task Units, possibly deployed within a national or multinational operation. The Task Forces must be able to operate simultaneously on several theaters of operations, on strategic, operative, tactical as well as logistical levels. These highly sophisticated, though robust, and redundant communication tools have become pivotal to the conduct of special operations, allowing real-time transmission of orders, situational awareness and reporting, to or from the military authorities. ICTS and Command assets must be redundant, autonomous, secure and mobile, hence guaranteeing permanent connections. The equipment and programs should therefore, at all time, satisfactorily address the requirements of the several key principles, namely: continuity, uniqueness, integration, and subsidiarity.

Mobility (Land, Air Mobility, Tactical Airlift, Aquatic, Sub-aquatic)

Usually deployed far from their rear operational and logistical bases, the French Special Forces must be able to meet the challenges of swift projections over long distances, at any times, and any environment (land, air, sea). Furthermore, despite their light footprint, the necessary autonomy of Special Forces units in the field require a heavy logistical effort, for which dedicated personnel and freight transport capacities are pivotal, along with the appropriate level of force protection. Finally, be they dedicated to transportation or fire support, the SOF mobility capacities will increasingly need to counter and defeat enemy's "anti-access/area denial" capabilities.

Action

The French Special Forces have become an integrated system of strengths and capabilities, deploying autonomous units in the field that are likely to operate along aggressive rules of engagement. The scope of their missions ranges from seizing or neutralizing key infrastructures, rescuing hostages, rescuing and evacuating nationals abroad, capturing or neutralizing individuals of significant value. In order to address at the highest level of expertise and professionalism the challenges met in the field (notably IEDs and sniping), a particular effort is placed on individual and collective equipment. For instance, a wide array of weapons remains a determining factor in most SOF operations, along with light but highly resistant passive and active protective gear.

Intelligence

The enemy and environment situational awareness remain, more than ever, paramount to the success of any military operation. Although basic intelligence functions remain largely unchanged: search, detect, intercept, identify, analyze, monitor… (through FMV, long-range UAVs, integrated multi-sensor platforms, etc.), technical capabilities and assets are rapidly evolving, hence requiring a high degree of technological vigilance et constant adjustments. A harsher context of international and national security threat has considerably reinforced the need for discretion and stealth, along with real-time intelligence and contracted decision-making processes.

Medical support

Given the high level of risk attached to SOF operations, the French Special Operations Command is particularly eager to provide its operators with the highest level of field medical and surgical capabilities. This is ensured by the deployment of sophisticated medical and surgical assets, as well as highly skilled, and regularly trained, medical personnel.

OMA

In a bid to anticipate, prevent or mitigate international instability, the French SODCOM is regularly involved in operations of "military assistance" abroad, assisting, training, monitoring and sometimes accompanying foreign armed forces. A significant number of extensively trained operators therefore participate in the effort of sharing a wide range of skills and expertise with foreign partners.
AERACCESS is the French expert in Intelligence Airborne Solutions operating in harsh environment

All weather HAWKER Q800X

The Hawker Q800X has been designed with the help of military forces from the UK and France. Built for harsh weather conditions, designed to fly in heavy rain and strong winds up to 70kph, it has a unique performance unmatched on the market. The modular aspect makes this platform an ideal solution for ISR (Intelligence, Surveillance and Reconnaissance). The Q800X provides up to 1 hour flight time with 1kg payload, and is assembled in a couple of minutes on the field whatever the weather. Packed in a backpack to access remote places, the Hawker Q800X is an intuitive and easy solution developed as a Special Forces rugged tool.

Modular payloads according to mission requirements

The Q800X provides one of the largest range of sensors, with a plug and play system. EOIR, IMSI/IMEI, NOCTURN, SWIR/LWIR, Laser Range Finders: mission objectives are maximized by choosing the right sensor.

AERACCESS solutions also integrate very special sensors, like the PHOTONIS EBCMOS for digital night vision applications, SWIR sensors from NIT, AERACCESS also develops customized payloads bringing innovative solutions to meet dedicated requests for special missions.

Sparrow Hawk: the unique counter-terror indoor UAV already in use with several Special Forces around the World

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AERONET
Specialized in equipment for air transport solutions, our different systems allow the transport of material under aeronautical safety conditions. Aeronet also offers a large range of technological and tactical solutions that meet the requirements of operational deployment by air.

Supplier of a global and polyvalent system for landing and extraction from the ground of commandos by helicopter

The SAP program is fully qualified by DGA to make sure you succeed in your special and complete missions for air infiltration or extraction.

Manufacture composite platforms used for air delivery systems from most tactical aircrafts when other ways of access are difficult.

A complete range of air pallets, nets, straps and fittings to ensure your air transport mission ensuring the best level of security.

For special applications we also develop complete dedicated systems.

AIR-LYNX

In terms of communications, the need for Special Forces is to have secure, reliable and portable networks. To meet these needs for compactness and security, the new generation of 4G LTE Professional Radio Networks is a solution of choice.

A complete range to cover all needs

AIR-LYNX offers a private and secure version of 4G LTE public networks, with a complete range of specific products, from fixed to ultra-mobile. These 4G networks include all the equipment and software necessary to establish reliable communications. Fast to deploy, flexible in frequency, these networks adapt to many situations. They benefit from greater security and resiliency, thanks in particular to the encryption and security mechanisms inherent to the LTE standard, and to specific Air-Lynx smart features. In addition, the user has full control over his 4G network.

Value-added services

AIR-LYNX also develops a range of classic and innovative services such as MCPTT, Individual calls, Group calls, Geolocation, Data transmission, Audio and Video Broadcasting. These services are compatible with any Android device.

In particular, AIR-LYNX has released some recent innovations perfectly adapted to the needs of critical missions:

• Multicast Video (eMBMS), a first on the market for Mission Critical Applications
• Interoperability with existing networks (Narrowband PMR or Public)
• More accurate deployments through dynamic radio environment management solution (optional).

A 4G LTE multicast manpack

In march 2017, AIR-LYNX goes even further in terms of mobility and compactness by adding to its range a 4G LTE Manpack, a complete network hooked up to a portable rack with all the elements necessary to communicate even more easily on the ground. It is also the first equipment of this type supporting multicast video broadcasting.
AIRBUS
A trend-setter in Intelligence.

Europe’s Number 1 defence and space company, Airbus Defence and Space develops and engineers cutting-edge and peerlessly reliable products and solutions in the field of defence and space. Its technologies enable governments and institutions to protect natural resources, societies and individual freedom. Airbus Defence and Space solutions guarantee sovereignty in foreign affairs and defence matters. Its wide portfolio meets the complex needs of its customers across the world, contribute to Europe’s defence and security, and secure Europe’s independent access to and utilisation of space.

In a changing and uncertain world, it has become essential to reinforce our ability to control information and obtain knowledge so as to detect and identify threats at the earliest opportunity.

To provide an appropriate response to these multi-various and evolving threats, intelligence gathering and secure communications are there to fuel a strategic and tactical needs. It aims at preparing, planning and carrying out operations, while providing an overall view of the operational situation.

To respond to this issue, Airbus Defence and Space has developed key technologies on the full range of sensors relating to intelligence, secure communications but also the entire chain of cyber services.

As a Large Systems Integrator (LSI), Airbus Defence and Space offers a coherent panoply of innovative technical solutions (satellites, drones, intelligence systems covering Land & Joint, Air Dominance and ISR scope, secure communications, etc.) covering the whole intelligence loop, from multi-sensor data retrieval through to use and analysis for the deciders to make the best choices.

That ability to merge data on a shared framework means that broad sections of a community can share the same strategic and tactical outlook where previously each intelligence channel worked in silo.

Airbus Defence and Space is thus present at all stages in the intelligence cycle. This means the right information is received as and when required to inform decision-making level.

ARDANTI DÉFENSE
3D PrepaMiss - An intuitive 3D Command & Control solution for fast-paced missions.

The military challenge
Planning military action requires the best knowledge of the field, of its constraints and opportunities.

Units need to make the field their own, before launching operations. It allows them to plan and assess an efficient action plan, and to present it to the operators.

Knowing field topology, being aware of intervisibility and masks, seeing building configuration, being able to see from the enemy’s perspective, all are crucial points which impact mission success and the safety of the forces.

An innovative solution, tested by French infantry
3D PrepaMiss is a field application for tablets and smartphones. It combines rich functionalities and intuitive use. It can communicate with information systems to receive orders, share information or send reports.

3D field analysis
• Quick mapping
• Multi-layer, photos, maps, plans
• Contour lines, hypsometry
• Satellite vision, oblique, ground
• Map orientation flexibility
• View from the enemy’s perspective

3D mission simulation
• Mission planning
• Intervisibility simulations
• Symbology and 3D object modes
• Aggregation and disaggregation
• Artificial Intelligence module

Command & Control
• Centralized tactical situation
• Unit localization
• Log book
• Augmented Reality
• Orders and reports
• Heterogeneous sensor management
• Effectors and robotics management

Visualisation
• Touch table, tablet, smartphone
• IoT
• Virtual Reality
• Augmented Reality

3D PrepaMiss - An intuitive 3D Command & Control solution for fast-paced missions.

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Atos SE is a digital transformation leader with 100,000+ employees in 72 countries and annual revenue of ca. €12 billion. Serving a global client base, the group is the European leader in big data, security and digital workplace. It provides cloud, infrastructure and data manage-ment, business and platform solutions, and transactional services.

**Tactical communications**
Atos provides a complete system enabling forces to communicate effectively in the field, based on its Hoox secure smartphone technology. Providing Android applications with high-speed LTE, it can switch transparently between dedicated and public network with no voice break. With unique features such as push-to-talk and BFT, the Atos solution integrates into an existing communications infrastructures.

**Command and control**
The Bull BMS (battle management system) is the single complete solution for sharing your tactical situations in real time during missions. It is designed for use by HQ staff, inside vehicles and by dismounted soldiers. The solution is easily extensible to anticipate future operational requirements and ensure national strategic independence. Bull BMS will equip the SICS (Scorpion Combat Information System) program of the French Army.

**Jamming**
Atos supplies its Bull range of counter-IED jammers. With smart reactive jamming that only activates on threat detection, these devices save power, ensure radio discretion and reduce radiation exposure for personnel. The Bull jammers automatically adapt countermeasures to threats, delivering permanent monitoring over a broad spectrum.

**Intelligence and reconnaissances**
Atos’ Bull data processing solutions and experts help intelligence organizations valorize their data and quickly identify security risks using big data platforms. The Bull range of SIGINT sensors makes it possible to efficiently gather mission-relevant data from a variety of radar and radio communication sources. Theses sensors can be fixed, transportable or airborne.

**Rugged PCs**
Atos supplies its Elexo range of rugged and semi-rugged materials adapted to adverse field conditions. It includes PCs and tablets from top suppliers with IP65, MIL STD 810, MIL STD 461, TEMPEST SDIP-27 or ATEX standards. Atos can physically adapt these PCs to the specific requirements of your missions.

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**Bertin Technologies**

French leading experts in the field of innovation for defense and security.

Since the very earliest days of the company, Bertin has been providing key input in the strategic sectors of Defense and Security. Our activities in this field include the provision of consulting and expertise, the performance of studies and the design and delivery of high-tech equipment. Bertin Technologies is renowned for its high levels of skill, knowledge & know-how and counts among its clients the DGA (French arms procurement agency), the CEA (atomic energy commission), DCNS, EADS, Nexter, Safran or Thales.

**FusionSight – Digital Night Vision Device**
Developed in partnership with PHOTONIS, FusionSight® is a lightweight Night & Day Vision Enhancer combining two viewing modes, based on colour low light and thermal cameras, to use separately or in smart fusion. Especially adapted to infantry chiefs and special forces’ requirements, this reliable handheld device is efficient on the field during operations facing hidden and camouflaged enemies. Drastically enhancing the detection of threats and targets of interest, FusionSight® is also a key device during investigation missions for quick or long-term surveillance tasks.

Fully digital and designed for users, FusionSight® allows evidence pictures’ snapshots and live streaming on multiple interfaces, for long-term team operations.

**PeriSight – Night & Day Vision Enhancer for vehicle**
PeriSight® is a network of imaging sensor modules offering multiple viewing channels colour low light and thermal. The system provides night and day 360° surveillance in short range to enhance Land Situational Awareness (LSA).

Patented smart low light/thermal fusion allows Driver Vision Enhancement (DVE). Fully digital, PeriSight® enables additional key features such as shared user video stream, electronic stabilization, automatic detection and target tracking.

Developed to meet customers’ requirements, PeriSight® is compatible with any kind of vehicle.

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Yesterday’s solutions are now too heavy and not sufficiently efficient, that is why at Bren-Tronics, we work hard to propose innovative light-weight solutions such as fuel cell, solar fast charging solutions and soldier wearable rechargeable batteries.

The need for alternative energies in operations

Bren-Tronics is a specialist in designing and manufacturing scalable autonomous energy solutions. As an example, powered by environmentally friendly reformed methanol, the XX55™ provides 50W of continuous power for portable applications such as SATCOMMS, Radios, Sensors and other intelligence, surveillance and reconnaissance applications. Its lightweight and efficient operation makes it highly transportable. Near silent operation make it suitable for tactical roles. Power can be generated or batteries recharged whilst away from support platforms, eliminating the need for sun, wind and gasoline powered systems.

It’s all a question of adaptability on the field fast charging solar solutions

Bren-Tronics engineering efforts provide innovative ways to manage operational military charging requirements. One recent charging achievement is the Bren-Tronics FLEX Charger®. This is a powerful foldable lightweight charger (500 g) that the warfighter can carry on or in their rucksack. Designed for field charging, the FLEX can be powered from a variety of power sources including solar, AC, DC or fuel cells. The charger includes advanced features such as Maximum Power Point Tracking and simultaneous charge capability. More than 10 FLEX Charger® configurations are available, capable of charging a variety of batteries including the PRC-152 Falcon HH battery, PRC-148 MEBITR battery, BB-2590/U battery, etc. Average charge time is around 3 hours with the appropriate input power.

Soldier Modernization portable battery system highly capacitive and light weight

With over 12 years experiences in major Future Soldier Programs, Bren-Tronics offers centralized battery for dismounted soldier to drastically reduce weight and optimize running time. Today, our unique 10.8V SMP® and 14.4V NETT+® rechargeable battery family offers the highest energy density +212Wh/kg possible for a true wearable soldier power system. Especially designed to support soldiers in their mission, the batteries have been successfully field tested and used by NATO countries since 2005.

When you think power, think Bren-Tronics.
CENTIGON
Manufacturer of tailored mobile solutions.

With a 60+ year track record in armour integration, CENTIGON provides customized mobile solutions for military, defense, security and civil applications. With extensive manufacturing and R&D expertise, CENTIGON vehicles protect against multiple ballistic threats, from handgun to armour piercing and blast effects.

A systematic control of the materials is conducted in our laboratory to ensure traceability; vehicle tests are carried out at renowned independent testing facilities like BNE, CERPREM, Melrïchstadt, TNO & GMetIQ. CENTIGON France is one of the five factories in the Centigon Security Group which employs 500 people worldwide.

For the Special Forces, Centigon offers a range of armoured SUV’s for missions like surveillance, communication, reconnaissance, escort convoy, pursuit… Multiple chassis are available including Toyota Land Cruisers 200/78/79 series, Nissan Patrol and Land Rovers. Depending on the threat to defeat, the armour package will vary to provide protection to the crew against handgun, armour piercing or blast effect.

The Fortress 200 offers discreet protection in a rugged and tough 4x4 vehicle. The Land Cruiser features the proven performance and attitude that make it an excellent choice for a wide range of safety applications. Our Fortress 200 is available in several armour configurations including VR7 (BRV 2009) / STANAG level 1. The Fortress 200 is available in 2 different finishes - Authority and Mission.

The Fortress 200 Intervention is armoured to STANAG 4569 level 2 and withstands the perfect platform for missions covering difficult terrain around the world and can carry up to 9 persons.

The rear double doors and roof hatch act as shields to protect the crew under fire. Rims, tires, door hinges, brakes and suspension have been replaced to cope with the armour weight. The Fortress 200 Intervention can be used in Europe and deployed in operations theatres.

The Fortress 76 offers a high level of protection in a rugged and tough 4x4 vehicle. The use of many original parts enables these vehicles to be serviced by local mechanics or even the crew itself. Suitable for expatriates and UN personnel, the Fortress 76 is the perfect platform for missions covering difficult terrain around the world and can carry up to 9 persons.

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COMROD FRANCE
Antennas, Masts and Power supplies.

Comrod France SAS have their corporate headquarters in Saint Amand les Eaux, France with design and manufacturing facilities in Norway, France, Hungary and the USA. Comrod France is a subsidiary of the Norwegian group Comrod Communication AS.

The group designs and manufactures antennas, antenna combining and control systems, telescopic and sectional masts, power supplies and battery chargers for tactical communications market.

Comrod antenna products cover all frequency bands in the IF, VHF, UHF and SHF spectrum and include wideband, multi band and multi port products. These products can overcome issues with co-site interference or platform space availability. In addition to our extensive range of vehicle and manpack antennas we have a large range of remote antennas for use with wide area networks and also for extending the range of tactical networks.

The group mast capability is extensive with product lines covering sectional sleeve masts from man portable 5 metres (16 feet) up to heavy duty 34 metres (110 feet). Smaller sectional masts are fitted together and elevated by hand. The larger sectional masts are deployed using a tripod assembly with either a hand operated lifting mechanism or electric winch depending on the size of the top load. The telescopic mast range is available with either composite or aluminium tubing with heights available up to 24 metres (78 feet), capable of supporting headloads up to 50kg (110lbs) depending on the model selected. Models are available that are push-up, hand cranked or electrically driven. A range of mast ancillaries are available such as rotators, tilters and positioners. These can be rope operated or electrically driven. The latest Comrod Automated Payload Alignment Systems (CAPAS) allow quick and effective deployment of communication or sensor assets without exposing personnel to unnecessary danger. Payloads can be positioned via computer control over CAN, RS232, RS485 and Ethernet.

Comrod masts are also integrated in vehicles for supporting Surveillance and EO/IR Systems. The Comrod ComPact series of power supplies and battery chargers offer the best power to size density of any power supply on the market. ComPact Series power supplies are fully ruggedised and have been fully tested to MIL-STD 810E. They are also fully sealed and submersible to IP67.

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From initial training to complex missions

Operational training sessions are developed to meet your needs to fulfill your missions in all conditions at all responsibility levels. DCI is training members of your units within the French Armed Forces training centers in core special forces missions:

- **Reconnaissance**
  - In-depth intelligence acquisition - Target designation
- **Direct action**
  - Target engagement - Communication installations, networks or lines neutralization - Deception action - Counterterrorism (hostage liberation and evacuation, recovery & control) - Special supports provider (C2, transport, fire) - Citizens, VIP and High Value sites protection - Investigation in closed environment (buildings, underground networks, ships, etc.). DCI also supports your instructors training.

To support these missions, DCI offers specialty training in different fields

- **Operational deployment**
  - Helicopter: fast rope, SPIE rope, abseiling, umbrella - Plane: operational jumper, High Altitude-Low Opening (HALO) and High Altitude-High Opening (HAHO) - Maritime: fast boats steering, raid, etc. - Land: vehicle tactical - operational driving, etc. - Helicopter special operations and support to special operations from helicopters - Maritime special operations: boarding at sea, interception of a ship at sea and recapture by force, palm diver and beach reconnaissance - Combat SAR - Sniper: long distance sniper, helicopter sniper, counter sniper, shooting director/instructor - Use of explosives (destruction, intrusion). DCI provides your operational teams with training in combat rescue and offers training in extreme environments and a specific preparation to reduce the risk of post-traumatic stress disorder.

Capability acquisition within a global offer

DCI supports you for your need analysis and for your equipment selection and acquisition and also offers you its expertise in the design and implementation of training centers. DCI also supports you in the devising and implementation of your doctrine, concepts and organization in order to reinforce your capabilities in the field of special forces.
ELNO

Cutting edge technology for communication in harsh environment.

Working with armed forces all over the world, ELNO has deployed its extensive expertise in the design and production of communication systems for use in harsh environments. Highly sophisticated technologies and equipment ergonomics are leveraged to maximise the effectiveness of crew communications and protection. Always on the front lines of innovation, after its success in the FELIN program, ELNO was recently selected to contribute to the French “SCORPION” Defence program.

HOPLITE - 3d headset with cartilaginous sound conduction

HOPLITE represents the next generation of communicating headsets, the latest innovations for soldiers and Special Forces. With a long experience providing Bone Conduction headsets and ANR helmets, our equipment allows crew-members to improve their mission effectiveness. HOPLITE headset provides a high wearing comfort thanks to its ergonomic earphones and allows communication in noisy ambients. Cartilaginous Sound Conduction technology offers the operator the possibility of using earplugs for a double protection in particularly severe environments. Used in vehicles, the ANR option reduces the sound level (in particular in low frequencies), the DNR reduces ambient noise and improves the quality of voice transmitted. Available for the first time world wide, the 3D TalkThrough® option sends back the external sound and offers the user a real spatial perception of the environment in 360°. This option is a cutting edge technology which is available for the first time ever.

ELIPS TY - full digital ip intercom for armoured vehicles

Imagined several years ago by ELNO as the intercom of the future, ELIPS™ has been officially selected as part of the French SCORPION EBMR program to equip up to 2500 vehicles.

This open and fully-configurable system, based on distributed intelligence has successfully convinced the decision-makers. This new generation full-duplex intercom connected to an IP bus is common to any platform. During the initial presentations to the French armed forces, ELIPS™ was immediately perceived as a system offering new operational capabilities.

ELIPS TY is a compact version of ELIPS™ adapted to equip vehicles or gun turret, where place is limited: small size, less cabling, no switch required for connection to the network, daisy chain mounting, powered by vehicle battery.

GROUPE MARCK

Uniforms and Equipment Solutions.

Groupe Marck is a French industrial group designing, manufacturing and selling uniforms, equipment and services solutions for public authorities and armies worldwide.

Two companies of Groupe Marck feature historical and dedicated know-how serving the Forces

• VTN: With 60 years of experience, VTN is a leading manufacturer of technical clothing for personal protection and security. Thanks to its strong Research Department, it has developed several specific uniforms in collaboration with GORE® and in synergy with operational forces. They meet the requirements of special forces, in order to optimize the operationality and protection of the soldier.

• SILLINGER: Sillinger is a shipyard recognised worldwide for the performance, reliability and quality of its craft in CSM/Neoprene. Sillinger designs and manufactures boats dedicated to military use: foldable, RIBS or rapid deployment units. Since 1962, the company has equipped armed forces, marine commandos, coast guards, firefighters, etc. all over the world. Sillinger also sells anti-pollution inflatable structures. And offers a full range of logistics support services.

Groupe Marck key figures

• 7 production sites in France and 1 in Tunisia
• 946 employees worldwide
• 2016 consolidated turnover: 110 M€

Groupe Marck comprehensive offer

• BALSAN: Uniforms and corporate wear
• B.B.A: Accessories for uniforms
• ETELIUM: Vessels and marine structures
• MARCK: Clothing and equipment for security forces worldwide
• OMP SOLUTIONS: Global offer for peacekeeping operations
• SENTINEL: Clothing and equipment for local authorities
• SILLINGER: Inflatable boats and structures
• SOFEXI: Equipment for public authorities worldwide
• VTN: Technical equipment

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HGH INFRARED SYSTEMS

IR systems for 360-degree situational awareness.

The infrared reference for over 30 years

Founded in 1982, HGH Infrared Systems designs, develops, assembles and sells optronic systems for industrial, civil, defense and security applications. In 35 years of existence, HGH has established itself as an international reference in terms of innovation in infrared technology, through the development of multiple advanced sensors.

Since the early 2000s, HGH has speeded up its international expansion, with over 80% of its production exported. In 2010, HGH acquired Electro Optical Industries, the world pioneer of electro optical test equipment. This acquisition greatly enhances HGH worldwide presence and support capability toward customers. With the skills gathered over decades, HGH has developed a new range of products, SPYNEL, 24/7 wide area surveillance system, with automatic intrusion detection and tracking. SPYNEL protects several critical infrastructure around the world, and won numerous international innovation awards.

Transportable wide area surveillance system, deployable in theater within minutes

With dimensions of less than 12x20 cm and weight of only 1.8 kg, the Spynel-M is a cost-effective, rugged, and compact solution for wide area surveillance, taking advantage of fifteen years of expertise in major security projects. SPYNEL-M is a high-resolution panoramic thermal camera, acting as an infrared radar. Continuously capturing full 360-degree infrared images every second, it provides real-time security against conventional and asymmetrical threats including hardlydetectable targets such as UAVs, RHIBs, or crawling men.

One single Spynel-M sensor is able to perform 24/7 early human intrusion alerts over a 1.5 km-diameter area and can replace up to 16 traditional cameras over 360 degrees. Easily transportable, it can be carried in a backpack and quickly deployed on a light mast or fixed atop a building for superior wide area surveillance. While requiring only 5 watts of power, Spynel-M can also be operated with solar or alternate power supply systems to allow for a remote operation. The system requires no additional light source; unlike radar, it is completely passive and cannot be jammed. The new sensor benefits from the functionalities and performance of the intuitive advanced intrusion detection software, Cyclope, which automatically tracks and detects an unlimited number of targets from any direction at any time of day or night and under any type of weather conditions.

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LACROIX & ALSETEX

ETIENNE LACROIX GROUP is a 100% private family equity originally founded in 1848. The company is a worldwide leading manufacturer in the field of pyrotechnics for security and defense applications.

Lacroix and Alsetex, subsidiaries of the family-owned group Etienne Lacroix, have been specialized in the design and manufacture of a wide range of pyrotechnic products since the 1960’s, which are today employed by intervention and counterterrorism teams around the world.

Alsetex

Offers a complete range of munitions and grenades: such as, distraction, flash & bang, enhanced blast distraction, stingball, training, signalling, fast smoke and blast. It has also developed an extremely light and waterproof 40 mm modular range, launched by hand or launcher; Munition and ammunition are specifically designed for intervention and military operations.

Lacroix

Offers a comprehensive, passive self-protection solution for a range of land vehicles. The system includes threat detection, situation analysis and appropriate reaction to ensure defeat. Various modes are available: fully manual or automatic, stand-alone or fully integrated, single-use or communicative, retrofit or installed on new generation vehicles.

A wide range of ammunition is provided: unrivalled multiband smoke screening, crowd control, AP effects, training, etc.

Our vehicle self-protection solutions are used in numerous countries, in current theaters of operation on various types of vehicles.

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LHERITIER

LHERITIER is an innovative French company (part of ALCEN Group). For more than 30 years, LHERITIER is a key player in the field of optronics, developing visible (low light) cameras ruggedized for the defense, security, aerospace and transport markets.

From vehicles recognition to facial identification

LHERITIER proposes CAT EYE, a dual use portable surveillance and imager camera aimed at the defense and security markets. The natural image quality of CAT EYE, highlighted by LHERITIER video algorithms offers visual performances by day as by night, to meet any surveillance mission from a secure distance in a single channel.

CAT EYE recognizes and identifies at more than 4 km a vehicle (daylight) and identify human beings at 1.3 km. In relative obscurity, CAT EYE recognizes human beings at 700 meters and identifies it up to 280 meters as well as vessels or vehicles plate number. CAT EYE in active mode detects all kind of snipers or observers scopes at secure distance with an incomparable capacity to identify the threat. CAT EYE is dedicated for long range surveillance mission, small target detection even under camouflage and snipers or observers detection and identification at secure distance.

Accurate, mobile and autonomous

CAT EYE optimizes with accuracy in a single passive and active imagery camera operational efficiency in various areas like surveillance missions, counter intelligence and counter terrorism, Forward Observation Base protection or snipers detection. This mobile camera with innovative day/night vision is designed to detect, recognize and identify with any kind of targets (vehicles, UAV’s, human beings) from hundreds meters up to several kilometres range distance. In both daytime even in low light levels (down to quarter moon), or in the midst of night, CAT EYE captures a clear, sharp and realistic image by restoring the natural contrasts magnified by the human brain. Portable or used as stand alone camera, CAT EYE thanks to its active imagery mode is able to detect any kind of optical device such as optical scopes used by snipers or binoculars/cameras used by observers given invaluable and critical information.

CAT EYE: Optimal image quality for all Special Operations

• A single channel camera easy to use with an instantaneous image.
• Full HD 1080 p images and videos in low light (passive mode)
• Long range identification capacity up to 5 km for critical intelligence mission
• Critical intelligence image even under poor meteorological conditions (night -3 in passive mode and 4-5 in active mode)
• Snipers and observers detection at long distance
• A low consumption camera given autonomy (4h) for all surveillance mission

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MBDA

Europe’s leading missile systems company.

MMP (Missile Moyenne Portée - Medium-Range Missile)

MMP is the 5th (and latest) generation land combat missile system designed for dismounted infantry as well as for integration on combat vehicles.

• Lightweight weapon system, easily man portable.
• High level of day and night, all-weather reconnaissance and identification capability.
• Confined space firing capability.
• Rapid reaction operation, reversible firing sequence.
• Three operating modes:
  - Fire and Forget,
  - Man-In-The-Loo (retargeting capability),
  - NLOS (Non Line Of Sight) with Lock-On-After-Launch after passive designation by a third party such as a UAV or recce team.
• Lethality against a wide target set: hot and cold targets from the latest MBTs with reactive armour to dismounted infantry, either in the open or concealed within a building.
• Collateral damage risk minimization.

Main characteristics

Missile:
• Dual-band seeker (uncooled IR and TV channel)
• Inertial navigation for accurate trajectory
• Real time fibre optic data-link
• 2 selectable trajectories + 2 selectable warhead modes
• Range: 4,000 m
• Weight (incl. tube): 15 kg

Firing post:
• Fully digitized, NCW compatible
• GPS, magnetic compass & laser range finder
• Weight (incl. tripod and battery): 11 kg

MMP on vehicles

MBDA is integrating the MMP missile on several types of vehicles and turrets:

• Through the use of a special bracket to adapt infantry firing posts on all types of vehicles (armoured or not), especially on special operations vehicles,
• On the IMPACT light remote-controlled turret designed to be easily fitted to an extensive range of vehicles,
• On the Nexter T40 turret for the French Army’s JAGUAR.

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Helicopter Landing Mats

A unique compact and light weight double ply rubber coated fabric material used for preparing a surface for the Forward Area Refueling and Ammunition Points. Mustmove® Helipad is so compact that 8 full kit of 400 m² can be transported inside a KC20 (ISO 20′ container). The very unique reusable anchoring system offers a very quick and safe anchoring system.

Vehicle Recovery System

An innovative with very efficient and specific design for the recovery of military vehicles from sand and mud. This solution is the best alternative to most of the existing recovery mats which, when efficient, are used only for few operations.

Beach Access Mats & Temporary Roads

Matting system deployable by 2 or 4 men in order to design a trackway for vehicles or for the beaching.

Refueling

Musthane manufactures fuel bladders with high standards in quality specifically for special forces requirements. These fuel bladders can be dropped into the ground or sea. The fuel bladders can be offered with our home designed fuel pumping and filtration units in service for forward area refueling of helicopters.

Ballistic Protection

Musthane manufactures specific ballistic protection for fuel bladders or vehicles made of polymers and advanced textiles.

Nexter, a KNDS company, is committed to meeting the needs of both French and foreign armies, by designing, developing and producing complete defense and security solutions: from the VBCI 8x8, TITUS® 6x6 and ARAVIS® 4x4 armored vehicles to the CAESAR® self-propelled artillery system. Its activity also includes the supply of systems and ammunition for Air and Naval Forces.

As one of the leading player of the Land Defense industry, Nexter is also able to provide solutions for Security Forces and therefore counter new threats.

With this in mind, Nexter has developed the TITUS®, designed to fulfill a broad spectrum of missions, from troop transport operations to combat support and logistic support missions, including security and peace-keeping missions, counter-insurgency and anti-terrorism. Protected from advanced ballistic attacks, but also from CBRN threats, and benefiting from an exceptional level of mobility, the TITUS® is a clear asset for Security Forces worldwide. With TITUS®, tactical commander has a 6x6 vehicle that can be customized to a changing environment, making it the versatile armored vehicle of the 21st century and the answer to Defense & Security operational requirements for both today and tomorrow.

ARAVIS®, a 13 ton vehicle (combat weight), is currently the best protected vehicle in its class in the Defense and Security market. It has been in service in the French Army since 2010 and is combat-proven in Afghanistan. It is now deployed in Mali (Barhane operation), protecting personnel against the full range of threats, including IEDs which have constantly raised in asymmetric combat environments.

Nexter also has a full range of state of the art weapon system solution for Security Forces like the ARX®25, a RCWS, fitted on armored vehicles, providing exceptional firepower and high hit performances on the ground.

The P20, a Nexter weapon system solution, based on the famous 20mm gun (20M621) designed and mass-produced by Nexter, reflects also Nexter’s know-how that provides confidence to Special Forces. It can be used to arm light carriers such as 4x4 vehicles for fire support, neutralization, protection, self-defense and deterrent missions.
NUANCES TECHNOLOGIES
Control wireless communications - Battle-proven equipment.

Nuances Technologies designs lightweight and discreet electromagnetic spectrum control systems addressing the needs of forces involved in tactical operations. The solutions developed by Nuances Technologies enable full control of wireless communications. Scalable, they benefit from a modular design and can be adapted to any type of mission. All international wireless communications standards are covered. Portable and quickly deployed on the ground, the systems can also be integrated in all types of vehicles.

Many features are offered
- Detecting, monitoring and recording targeted communications, over a very large frequency range;
- Locating the position of transmitters on a map, automatically or manually;
- Identifying potential targets in order to enable decision-making;
- Neutralising communications with selective jamming if necessary;
- Securing communications over all types of territory;
- Replacing defective telecommunication networks;
- Supporting hostage recovery and other rescue and evacuation operations;
- Controlling national sovereignty in the field of cellular communications…

Solutions
- RCIED active/reactive/hybrid jammers
- Communications jammers
- Vehicle protection systems
- Long-range cellular blocking systems
- Anti-drone solutions
- Mobile private communication networks

Contacts
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OUVRY
OUVRY is a French company that specializes in the study, development and manufacturing of CBRN systems of personal respiratory and body protection and decontamination solutions.

Ever since OUVRY was created - more than 10 years ago, OUVRY continues to develop building on 3 capacities

- Low to medium volume industrial manufacturing with a controlled and experienced supply chain, which is mainly French:
  - Infantry soldiers’ CBRN personal protective suit (22,000 CBRN suits supplied to the French Army between 2010 and 2016 under the FELIN future infantry soldier programme) and Special Ops’ personal protective suits - combat suit (coat/trousers) adopted by Special Operations Command units, TRP® adopted by counter-terrorism and hostage rescue units.
  - O’C50® CBRN respiratory protective mask manufactured in Lyon, respiratory protective systems (FM53 mask and STS53D SCBA), EZAIR PAPR, MILCDF50 CBRN filter canister.

- Design, research & development, system integration, project management (e.g.: fighter pilots’ and aircraft pilots’ equipment). System integration ensures that requirements related to ergonomics, thermal-physiology, as well as the tactical requirements related to combat conditions (camouflage, weather conditions, health hazards, maritime environment...) are taken into account.

- Innovation capacity: the latest one was presented in November 2016 during the French DGA Innovation conference: the new immediate dry decontamination mitt DEC’POL®. DEC’POL®: brand new device for CBRN immediate decontamination, absorbs and destroys biological and chemical warfare agents. DEC’POL® is simple and fast to use, and dramatically reduces cross contamination risks by limiting the release and inhalation of powder that may contain toxic agents.

O’C50®: The O’C50® mask is CE certified and offers protection, comfort, ergonomic adaptation and enhanced communication: flexibility of the face piece and de-mist properties, side mounted canisters, panoramic and flexible visor, optimized harness, drinking device, optional voice projection unit and microphone.

TRP® - TARGET® gloves: Intervention Groups’ coverall and CBRN gloves: Made on the basis of an optimized air permeable filter fabric (innovative, light, fire-retardant materials, etc.), the TRP® coverall ensures optimum protection and performances. We are extremely convenient with the operational needs of our customers, which means we are able to adapt the design to meet tactical requirements. Our suits are available in training version.

CBRN air permeable TARGET® gloves: specially developed for handling handguns, the air permeable gloves bring comfort and accuracy to the user.

SF Combat suit: developed from the experience acquired in the demanding field of Special Forces and manufactured on the basis of optimized air permeable filter fabric (innovative, light, fire-retardant materials, etc.), the combat suit (interfacing of coat, hood and trousers) provides the user with optimum protection and performances.

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PHOTONIS Night Vision is the world leader in the design and manufacturing of state-of-the-art Image Intensifier Tube for military, space and commercial applications.

**INTENS™ - 4G Image Intensifier Tube**

The INTENS™ tube offers extended bandwidth sensitivity (from 400-1100 nm) and improved sensitivity to 100μlx (Night Level 6). These innovations provide a 40% increase in detection, recognition, and identification (DRI) over previous tubes. INTENS™ is a unique intensifier well-suited for Multi-Mission Night Vision; ideal for use in the darkest mission conditions including deep mountain valleys and jungle terrain.

With INTENS™, Photonis provides Special Forces with the best performance Image Intensifier Tube available today. These fully-4G compliant tubes offer superior resolution, crystal-clear images under any lighting condition and when CONOPS require, the capability to see beyond 1000nm, providing warfighters with an unfair advantage.

**Day-to-Night Digital Vision in Colour**

NOCTURN camera is a rugged low-light camera module that features high-definition resolution, high sensitivity and high dynamic range with low power consumption. It provides color or monochrome real-time imaging capabilities - from daylight to bright starlight - in the visible and near infrared spectrum. Its small size, makes this camera module ideal for integration into aerial, mobile and hand-held surveillance systems.

Developed in partnership with BERTIN, FusionSight® is the world-first compact monocular that combines a colour low light sensor with a thermal image sensor. When combined, these sensors enhance situational awareness and provide users with the option of using a thermal image, colour optical image or a smart fused thermal and full colour image, that can also be recorded.

Developed in partnership with Rochester Precision Optics, The CMOS Night Observation Device (CNOD) is a versatile digital high definition sight that enables its operator to see in the day (bright sunlight) as well as low light (night) with high contrast and high resolution. Two functions in a single device at the fraction of the cost of similar systems currently on the market. Use as clip-on or stand alone weapon sight for 24/7 high definition operation.

The latest innovation is the EBNOCTURN Camera, the most powerful Digital Night Vision Camera made for: Military Night Vision - Weapon Sights - Helmet mounted vision - Precision Targeting. Features: Ultra Low Light Level down to 10 μlux, High frame rate - No Latency, Outstanding Image Quality, Optimized resolution for Mobility Application.

**PROTECOP**

**Personal protection expert.**

With 30 years of solid experience, PROTECOP has established itself as a recognized expert in the field of personal protection for crowd control and ballistics.

Equipped with the latest technology, PROTECOP develops exclusive equipments thanks to its integrated services: R&D, design department, prototype workshop, etc.

Protecop possesses its own production tool, meaning it can control its products from design to manufacture. Recognized for its know-how, PROTECOP exports its equipments in nearly 70 countries worldwide.

**Tailor-made ballistic solutions**

PROTECOP ballistic solutions meet the requirements of individual forces on a case-by-case basis and provide total traceability.

**Plate carrier with quick release system**

The latest in the ballistic range, the plate carrier, which equips the French Police and Gendarmerie, offers a maximum mobility thanks to its weight (8 kg) and design while ensuring a maximum protection. Its Stand Alone plates stop the following ammunitions:

- 1 shot 7.62x54 RAPAPI 012
- 1 shot 300 WM RMS TUG
- 2 shots 30.06 M2AP

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Risk&Co Solutions provides to special forces intelligence means that enable them to conduct operations on sensitive foreign soil.

To ensure these missions, Risk&Co Solutions has a complete range of services and products: listening, interception, surveillance, location, jamming.

Training and technical solutions for intelligence
Risk&Co Solutions provides innovative services and equipment adapted to the spectrum of special forces missions and to the constraints of the various environments (aerial, terrestrial, maritime) in which they operate. A detailed needs assessment can be proposed to identify the most appropriate and the most compact solution. A very good knowledge of the market and constant monitoring of innovations enable the company to propose to its customers the latest technologies. Risk&Co Solutions offers a complete range of communications interception, jamming and localization products.

The company also has sensors certified “airborne” that can be integrated on different types of carriers (airplanes, UAVs).

An specific technical support and training sessions complete the range of services offered by Risk&Co Solutions.

Technical Surveillance Counter-Measures / Covert entry
Risk&Co Solutions provides training sessions and sales equipment dedicated to the covert entry of buildings and vehicles (mechanical and electronic opening, transponder copying, alarm deactivation).

Quality, performance & professionalism have been RIVOLIER’s operative words since its creation in 1830.

Rivoler has positioned itself to respond to complex and diversified market’s. By providing integrated solutions adapted to the Special Forces environment, we ensure the interoperability of forces and cover the entire spectrum of tactical and operational engagements.

Our response focuses on the following specific themes:
Intelligence / Direct action / Support / Training / Instruction

Five fields of expertise

- **Equipment**: a carefully selected range of products, to meet your mission’s needs successfully. Dealing with operating conditions is a key factor for success. Urban or rural areas, dry or humid climate are only a few of the parameters we help you handle.

- **IED-EOD**: “Problems are best to be solved before they surge” A threat is best kept away by being appropriately equipped beforehand. According to the importance of the threat, our role is also to help you define an appropriate response.

- **Intervention**: we offer a full spectrum of means to immediately counter any aggressive actions. To guarantee the success of your different operations, RIVOLIER offers a wide range of weapons, optics, optronics, ammunition and ballistic protection using the most recent technologies.

- **New technologies**: during missions, operators need to communicate to report, prove, demonstrate and interact. Tapping equipment, jammers, and telecommunication devices have to be even more efficient, as reduced and lightweight as possible, with quick and easy handling and multiple functions. It is vital to be able to counter the same equipments used by the other side.

- **Training**: a staff made of highly experienced operators coming mainly from SF units provides a technical training in connection with the equipment sold.
**ROCKWELL COLLINS**

FireStorm™ integrated targeting system.

A lightweight, wearable joint-fires system that enables full digital connectivity with CAT I levels of accuracy. The FireStorm™ integrated targeting system from Rockwell Collins is keeping pace with the challenges of evolving battlefields, tactics and technologies. It builds on our more than 20 years of FireStorm and Rosetta Technology® ground targeting products, providing sophisticated ground targeting technology while simplifying military data links.

Lightweight, loosely coupled and modular, this joint-fires system offers hardware options that allow users to tailor the system to their mission needs. It is available in two ways: as a complete turnkey solution, or as a user-selected FireStorm hardware and software components for integration and enhancement of current in-service systems. Both result in a highly capable and cost-effective system.

In its standard package, this FireStorm system consists of a fully integrated set of hardware, including a laser range finder, tactical PC, StingerHawk™ video downlink receiver, Joint Terminal Attack Controller (JTAC) Mobile networked joint fires digital targeting software, associated ancillaries, a power management system and the handheld HALT (High Accuracy Lightweight Targeter) azimuth augmentation unit.

The smaller, lighter HALT unit weighs less than 3 pounds/1.2 kg and can be carried in a vest pocket or large uniform pocket. The unit provides direct observation target location coordinates at CAT I levels of accuracy to provide precision-guided munitions with the targeting data they need.

The unit can also be used as a component of an integrated suite of equipment by military users. This suite is designed to fit the needs of the Joint Integrated Mission (JIM) family of infrared and visible-light gear. The JIM family is designed for the needs of a variety of special operations missions, from intelligence to engagement.

The HALT handheld unit is available in two sizes: a halved version weighing less than 2 pounds/0.9 kg and a full-size version weighing less than 3 pounds/1.2 kg. Both units can be used in any type of climate and environment.

**Key features/benefits:**
- Wearable portability
- CAT I level of accuracy for target location coordinates, providing pinpoint accuracy
- Fully integrated package of turnkey or user-selected hardware
- Digital connectivity with all digitally enabled platforms and command and control managers (Link 16, VHF and AFAPD)
- All arms call for fire
- Provides locations of friendly forces
- Automatically selects communication parameters
- Supports both azimuth augmentation software and indirect target mensuration system software
- Based on proven Rosetta software

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- Provides locations of friendly forces
- Automatically selects communication parameters
- Supports both azimuth augmentation software and indirect target mensuration system software
- Based on proven Rosetta software

**SAFRAN ELECTRONICS & DEFENSE**

Safran Electronics & Defense (Safran) develops and produces a comprehensive range of systems and solutions for Special Forces: tactical C2 systems, optronics systems for dismounted soldiers and combat platforms, networked remote sensors, mini drones or long endurance systems, robots as well as navigation and pointing systems. The systems of Safran have been deployed in a large spectrum of special missions, from intelligence to interventions.

**Portable optronics:** Safran’s portable optronics systems cover all the operational needs over the entire spectrum of special operations: intelligence, engagement, precision-strike, target designation, close air support, combat SAR, etc. In 2016, Safran introduced JIM Compact, a new-generation multifunction infrared binoculars. It features a highly robust, compact and lightweight (2kg with batteries) design, and an intuitive man-machine interface. Thanks to its open architecture, the JIM family constitutes a targeting system core when combined with a laser illuminator and the Stema geographic north seeker, also designed and built by Safran.

**Airborne optronics systems:** the Eurifil family of gyrostabilized optronic pods, featuring high-resolution sensors, is now deployed on a wide range of transport and combat helicopters. Safran will also be extending its use on new intelligence platforms, including the Patroller UAV, twin-engine airplanes and airships. Always adapted to the needs of armed forces, Eurifil family is currently used on Caracal special forces helicopters, Cougar of the French army, NH90 and Panther Mil of the French Navy. UAVs: as demonstrated with the Sperwer system and the new Patroller long endurance system, Safran has expert knowledge of all the critical technology required to engineer and manufacture tactical UAV systems, encompassing gyrostabilized optronic pods, transmission, inertial navigation, flight controls, ground stations, mission planning and debriefing systems, integration, airworthiness and flight testing. Connected with remote video terminals (RVT), a Safran UAV system can support intelligence units on the ground and forward observers. Safran is proposing mini-drone reconnaissance systems, designed to meet the exact needs of intelligence units and Special Forces. The Patroller is the French army’s new tactical UAV system.

**Robots:** Safran offers a solution based on the “dronization” of a multi-mission platform, skidied effider, a 4-seat, 4x4 vehicle with optional manned driving. Safran makes a number of contributions to this new roboticized vehicle: all-weather vision, a gyrostabilized optronic turret, geolocation, autonomous platform and mission control, and C4I components, all technologies at the heart of standalone mobility. Effider robot can carry a rapid deployment team, then provide autonomous support for intelligence gathering and engagement.

**Vigy Observer:** compact and lightweight, Vigy Observer is a fully panoramic stabilized observation system, easy to install on any type of vessel from OPV to RIBs. Operated from a touch terminal, it includes a cooled infrared image, video channels and a laser rangefinder. Employing advanced stabilization techniques, it provides clear images day or night, including in rough seas over 50 knots. Vigy Observer is in series production.

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STARTER

Military winches and engineering.

STARTER is a French manufacturer of electric and hydraulic winches for trucks and vehicles, including armored and special vehicles. Established in 1971, STARTER has developed a range of high level recovery winches dedicated to military applications that are used worldwide everyday.

STARTER’s engineering know-how

Our design department lies in the deep knowledge of the military automotive industry. Our manufacturing know-how is based on our long experience in welding, mechanics, hydraulic and electric so that every component used in our production is mastered, proven and certified.

Services from dedicated engineers

This also includes mounting, training and after-sales, with a spare parts policy based on reliability and availability. From solution design to maintenance through mock-up and setting, our team offers full support to your project. Our dedicated engineers can work side by side with our customers anywhere around the globe.

Winch designed for military applications

Our winches are developed to be used in harsh environments and are equipped with heavy-duty protection against shock, water, dust and electromagnetic interferences. Furthermore, their simple design and compact structure make them easy to maintain and cost effective.

New range:
- STARTER Tabor 24V IP 67
- The new range of compact and heavy duty 24V winch.
- Designed and upgraded up to IP67 protection & special finish coating to meet toughest special force use.
- Available from 3,6 to 4,5 tons pulling capacity.
- Delivered with metallic or synthetic rope and exclusive 10m remote control with emergency stop.

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SUNROCK

Design, Manufacturer and Distribution.

SUNROCK, French manufacturer of the Night Reaper Crew Served Weapon Light, also acts as a project leader, sells and markets equipment in collaboration with well known and reputable manufacturing facilities such as Verseidag Ballistic Protection based in Finland, Tencate Advanced Armor based in France, Theon Sensor, manufacturer of Night vision systems based in Greece, HS Produkt, one of the leader weapons manufacturing based in Croatia and Kriss, the Kriss Vector manufacturer based in the USA.

Innovation

SUNROCK excels in providing very innovative equipment for special forces and MOD. Based on the feedback of the operators, we improve as much as possible each and every product that we provide to our customers. Our main concern is to satisfy the operators by providing the most efficient equipment.

SUNROCK supplies the French military, the French special forces and the French Police since 2007 but also provides NATO countries through the NSPA organisation and exports more and more to foreign countries.

In 2017, SUNROCK has developed together with its partner Sestan-Busch in Croatia the new ballistic helmet for the French Police. In 2018, SUNROCK has improved its Night Reaper CSWL dedicated to the army, and has developed very innovative products in collaboration with Verseidag Ballistic Protection such as the Quick Release System Plate Carrier, the safety station, the Assault Soft Shield for the French special forces and law enforcement teams.

SUNROCK also propose the innovative B4U Camo, developed through the DGA program «mission d’innovation participative» for intelligence units.

SUNROCK also distributes the Kriss Vector in France and the famous and innovative handguns from HS Produkt which were awarded «best handgun of the year» in the USA in 2003, 2006, 2009 and 2013.

Customer oriented:

- Since 2016, SUNROCK is the leader provider of ballistic protections to the French Home Office.
- SUNROCK has always been customer oriented. Sunrock benefits from a high credibility among its customer by respecting its commitments: Delivery timeline, customer satisfaction, innovation and high quality products.
- SUNROCK tries to identify clearly the specific needs of its customers in order to develop and propose the most suitable product for them.
- SUNROCK also manage the after sale service for its customers.

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Website: www.sunrock.fr
SURVEY COPTER

The mini-UAV expert within Airbus.

Expert in mini-UAV since 1996, Survey Copter became an Airbus subsidiary in 2011. Survey Copter is offering a wide range of products ideally adapted to perform ISR mission, convoy protection or monitoring ground missions for military, special forces and also for specific civil applications.

Tracker 120 is a discreet and easy to operate solution. Hand-launched and equipped with 2 electric motors, the Tracker 120 has a high level of visual and acoustic discretion. Carried as a backpack, Tracker 120 is qualified to operate in severe environment and has 1.5 hours flight endurance. Deployed in various theatres by the French Army, Tracker 120 has been qualified by French DGA and obtained a type certificate. In addition, Tracker 120 has been sold to Middle East Special Forces, to Austrian Ministry of Defense and to other customers around the world. In total, more than 300 systems have been produced.

With 3 hours flight endurance, the DVF 2000 VT / Aliaca provides a 360° panoramic coverage thanks to the positioning of its vertical turret. DVF2000 VT / Aliaca can perform intelligence missions from 10 to 50 km range. Catapult launched, DVF2000 VT / Aliaca system is deployed in less than 10 minutes by 2 operators only. DVF 2000 VT / Aliaca in its previous version has been deployed by Special Forces worldwide and is perfectly adapted for maritime missions using a dedicated net landing solution.

With its thermal propulsion, the DVF 2000 ER can fly continuously for up to 8 hours. Launched by a pneumatic catapult, DVF 2000 ER is perfectly adapted to long lasting missions and is qualified to operate in very severe environmental conditions.

All our systems are equipped with an EO/IR gyro-stabilized turret (T120). This turret supplies perfectly stabilized, high quality images in real time which means that intelligence missions can be carried out by day or night. Some other payloads can be proposed with DVF 2000 ER.

THALES


FAC/JTAC missions require team members to carry, setup, power and use a large set of equipment and systems, for communications, target acquisition, target laser designation, command & control, situational awareness, etc…

In fact, the size and weights of pieces of equipment, the quantity of necessary batteries, and the various cables used to interconnect devices puts a heavy load - in the literal and in the figurative sense – on the shoulders of team members. Of course, once carried, all the devices must be set up (connecting cables, plugging batteries, starting devices) on location (and reversely powered off, disconnected and packed before departing).

Consequently, Thales has been developing a dedicated suite for Joint Terminal Attack Controller (JTAC), Forward Air Controller (FAC), Forward Observer (FO), Special Forces teams. This solution integrates a rugged hardware (CPU, touchscreen display and accessories). It is also compliant with various models of radio-sets, video stream receivers, optical target acquisition devices, target laser designators, etc…

Moreover, the system enable a CAS request within 3 clicks. Thales solution offers a smart ergonomic MMI, reducing weight and increasing operational efficiency by integrating Full Motion Video and accurate GEONIT capabilities (TLE 1).

Open and flexible, adapting to the specific requirements of Close Air Support missions, Commander Fire CAS Edition offers a dedicated JTAC suite (hardware, software, comms) and takes into account future scalability constraints and future challenges in the following areas:

• Implementing Digitally Aided Close Air Support capabilities among conventional and/or Special Forces units,
• Fire accuracy and increased range by the use of smart ammunition,
• Force protection, responsiveness of fire support and reducing fratricide,
• Participating in the deconfliction of the airspace,
• Managing continuity in mounted-dismounted mode,
• Accompanying digitization of the battlefield (C4I interoperability with terrestrial components),
• Coordinated and synchronized Air-Land maneuvers,
• Dynamic targeting and enhanced Digital Aided Close Air Support (DACAS Interoperability with allied and land forces),
• Based on operational experience of over 30 years.

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TRB HOLSTERS

French manufacturer of holsters for handguns, chargers and accessories.

TRB Holsters is a French company based near Paris, in Chanteloup-les-Vignes (78)

Our team of craftsmen is specialized in the design of Holsters and Pouches for Weapons and accessories.

Our experience in contact with our customers whether the Army, Police or combat sports trainers, shooting or close protection, contractors, special intervention units, guarantee our serious in the shaping of our products.

Among our many users Elite Units operators and Special Units.

We support you in your custom needs reliable holsters and carries, and useful to your work. Made in France - Worldwide shipping and Life Guarantee Holsters

More information www.trb-holsters.com
GICAT (French Land and Air-land Defence and Security Industry Association) is a professional organization established in 1978 grouping over 200 French companies, including the main industrial prime contractors, equipment suppliers, system integrators and a network of dynamic and innovative SMEs. These companies, which have a diverse range of activities (industrial contractors, consultancy and service providers, as well as clusters and research institutes), offer the full range of skill and know-how adapted to the operational requirements of the land and Air-land Defence and Security sector.

GICAT’s international development is based on the Eurosatory international trade show, organized by its subsidiary COGES, and mainstream defence and/or security trade shows abroad.