



LAND TACTICAL C2SA SW APPLICATION SUITE DISMOUNTED SOLDIER COMBAT INFORMATION SYSTEM

C2SA Sw Applications Product Suite is at the heart of Soldier C2 System solution, strengthening the five operational capabilities required by NATO: lethality, C4I, mobility, autonomy, and survivability.

C2SA is designed for enhancing operational effectiveness of Land Forces in the digitised battlespace. Its primary goal is to achieve Information Superiority, Network Enabled Capabilities and Force Protection by means of secure, resilient, end-to-end solutions and services.

The product relies on proven expertise obtained from the domestic Soldier programmes, Italian Soldato Futuro and its evolutions and UK Soldier Modernisation programme. Dismounted Soldier CIS evolved by exploiting long-term relationships with customers and constructive inputs from the operations, that assured the continuous delivery of the most effective and reliable solutions using most advanced technologies.

C2SA Applications support the fighter performing Command & Control functions enabling information exchange and managing data acquisition from sensors and engaged subsystems, thus maximising the perception of the tactical situation on the battlefield.

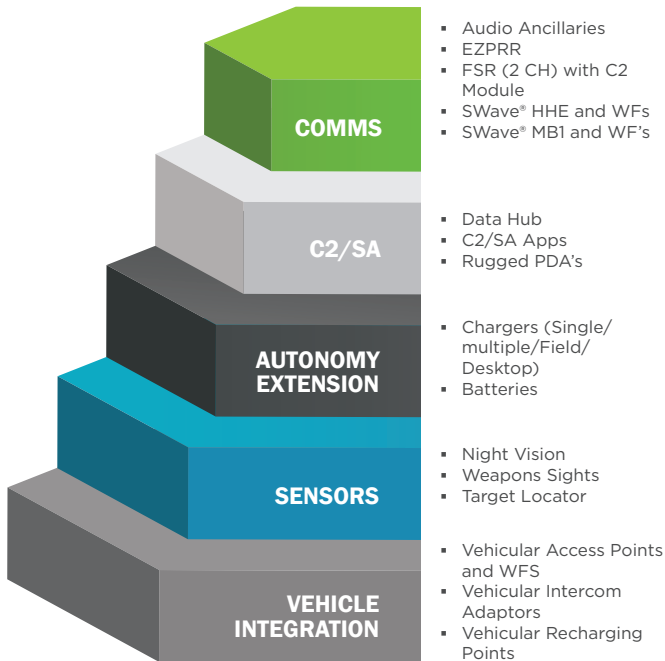
KEY BENEFITS

- Effective mission planning and configuration generation for nodes and radio devices
- Digital maps preparation and loading
- Acquisition and presentation of the Operational Scenario and Situational Awareness information
- Cartographic presentation enhanced by APP-6 symbols
- Navigation aids: routes & waypoints
- Orders, messaging and reports management optimised for the tactical environment
- Operational-level integration of voice and data services
- Updated Situation-Awareness
- Full integration with Vehicular C2NSA Applications.

C2SA

Land Tactical C2SA Sw suite is composed by C2SA Desktop and C2SA Soldier applications providing the most complete solutions for both mission planning phase and the execution of the operational duties.

C2SA Desktop Application provides the complete set of pre-deployment configurations and mission data that make each soldier readily operational.



Thanks to the ease-of-use of the rugged smartphone touch screen and to software applications' modularity, C2SA Soldier Application guarantees a high level of automation, satisfying a wide variety of end-user needs, inclusive of an effective integration of all types of GFE components and sensors.

All radios from SWave Family, multiband and Software Defined Radios are part of the Soldier System Solution on which the C2SA Application Suite may run.

C2SA APPLICATIONS

C2SA Applications suite is composed by a set of off-line and on-line interoperable components, establishing a smooth process for moving from action planning, to context setting, to execution, and back to the evaluation of the outcomes.

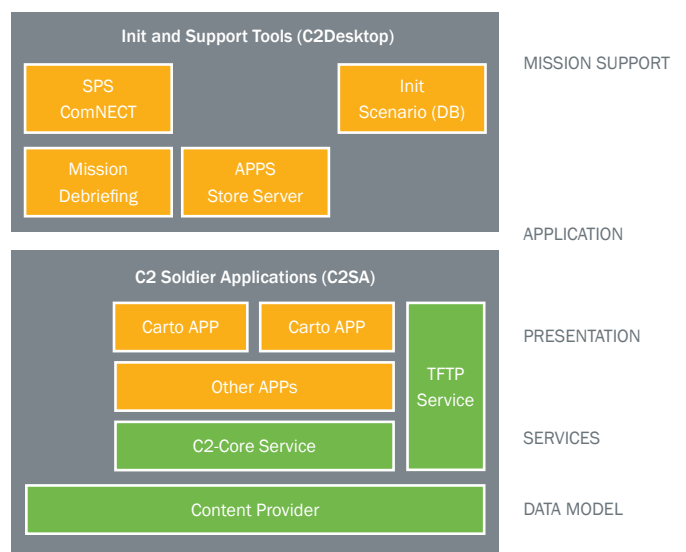
They cover:

- Detailed mission planning, preparation and debriefing
- Real-time Situational Awareness management
- Effective data messaging mechanisms, adapted to the disrupted tactical environment
- Comprehensive communications management, extending to the complete set of soldier radios
- Digital mapping management, adapted to the level of detail and scope of the actual operation
- Support of an on-the-field reference resources environment (Military App Store), providing up-to date solutions directly to the final user.

C2SA DESKTOP APP

The C2SA Desktop Application provides a set of dedicated utilities supporting operations:

- Planning of teams composition and soldier nodes parameters
- Map preparation and conversion
- Initialisation data for the operational scenario
- Automatic generation of configuration files for C2SA Soldier Application and radio devices
- Mission Debriefing, at the end of operations.



C2SA SOLDIER APP

The C2SA Soldier Application consists of a set of lightweight, easy to use Apps, running on Android rugged smartphone platform, implementing the C2 services for providing constantly updated Situational Awareness to the Dismounted Soldier.

Dedicated C2 functions are assigned to distinct operational roles, ranging from Commander to team members, and taking into account even degraded scenarios (roles hand-over).

The C2SA Soldier Application provides:

- Complete Situational Awareness management
- Effective message exchange (chat service)
- Nine-line and VMF Messages formats support
- Optimised data dissemination mechanisms and messages aggregation
- Connected devices status monitoring
- Zeroize service
- Automatic reconfiguration of the node through pre-defined mission profiles activation
- Light Infantry Support
- Interoperability in Joint-coalition environment
- Intuitive user interface.

The C2SA Soldier Application fits the Vehicular and Deployable C2 solutions, providing a unified system, from the tactical edge to the highest levels of command.



SITUATIONAL AWARENESS

The automatic information dissemination service realigns the operational scenarios data between the members of the team by including:

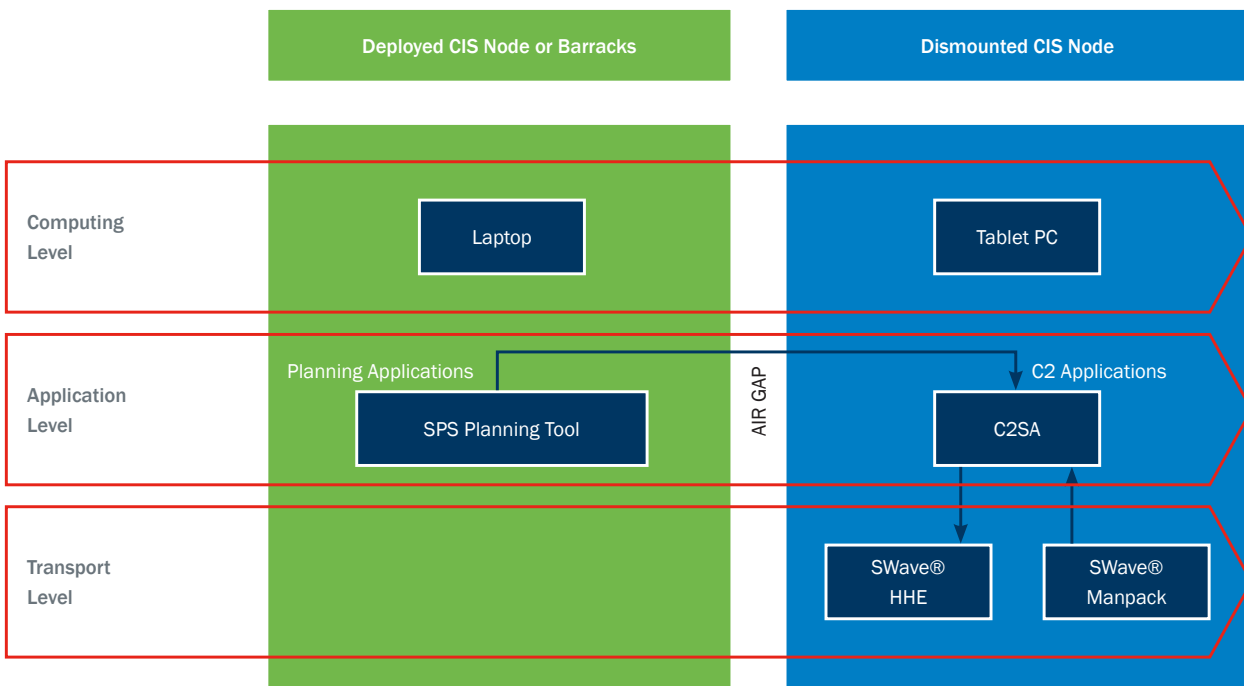
- GPS positional information, optimised for Narrow Band links
- Light Infantry positional information of team members equipped with radio only
- Scenario data, through periodic dissemination or Store & Forward mechanisms
- Sensors information: communications, weapons and physiological data.

DATA MESSAGING

C2SA Soldier Application supports:

- MIL-STD-6017, and MIL-STD-2045-47001C (VMF)
- STANAG 5527 (NFFI) through C2NSA Application
- Server-less Chat messaging.

Inclusion of Video Streaming Apps increase soldiers' communication capabilities, too.





COMMUNICATIONS MANAGEMENT

C2SA Soldier Application is radio-agnostic, operating with various radios without requiring any special adaptation. Specifically, C2SA takes advantage of both the SWave® radio family and the PRR/FSR dedicated lite radios in high intensity operations, while exploiting the dual-use smartphone in low intensity operations, under TacLTE coverage.

These radios enable voice and data communications supporting unicast and multicast transmission between the team members and between team Commander and higher operational levels. The system completely configures, controls and monitors both radio assets according to C2 operational needs.

DIGITAL MAPPING

C2SA Soldier Application interacts with the user with the Cartography Apps, implementing the user interface for the representation of the tactical scenario and enabling the activation of C2 functionalities.

- Raster/Vector maps support
- DTED Maps support
- Full support for tactical symbols according to APP 6B
- Terrain analysis capability.

ANDROID MILITARY MARKET

When operating under TAC LTE coverage, C2SA Soldier Application can access a private Android Military Market for planned operational configurations and Apps updates.

New applications are constantly made available, such as: Real-time video processing for counter-terrorism and counter-piracy, Friendly fire avoidance, Fire Direction Detection, Fire cards, Inter-visibility Function, and Augmented SA.

C2SA CUSTOMISATIONS

The evolution of C2SA according to a 'Growth-Capability' paradigm is an high commitment: C2SA Applications are flexible and open to be easily expanded with new ad-hoc Apps, in conformity with the inclusion of new technologies and Soldier System improvements. C2SA Applications' modular architecture enables even third parties to build new Apps accommodating any specific final user's requirements.

TECHNICAL SPECIFICATIONS

C2SA Desktop Application	Available on Windows 7 OS
	SQLite Database Management System
C2SA Soldier Application	Available on Android OS (4.0 and higher)
	Android ContentProvider Database
	Luciad Mobile for Android GIS

DESKTOP APPLICATION MINIMUM PLATFORM REQUIREMENTS	
Operating System	Windows 7 x86/x64
HW requirements	Intel i5 Processor, 2.8GHz
	1024 x 768 graphic resolution
	2 GByte RAM
	160 GByte HDD
	DVD/CD RW
	1 Ethernet port, 1 USB port

