


EDGE



TORCH-X™ DISMOUNTED

THE MOST EFFICIENT INTEGRATED WARRIOR
DISMOUNTED SUITE FOR MAXIMUM COMBAT
EFFECTIVENESS IN MULTIDOMAIN OPERATIONS





THE MOST EFFICIENT INTEGRATED WARRIOR DISMOUNTED SUITE FOR MAXIMUM COMBAT EFFECTIVENESS IN MULTIDOMAIN OPERATIONS



STRATEGIC AND OPERATIONAL NEED

Combat effectiveness and survivability of dismounted forces in the modern battlespace requires real-time situational awareness and seamless integrated networked communications. Integration of “on soldier” IoT equipment (weapons, sensors) and integration of soldier to network provides the soldier with multidomain networked sensors and effectors capabilities. Torch-X Dismounted dramatically improves performance on the battlefield. The combat-proven solution is in operational use in the IDF and NATO countries in Europe.





SOLUTION OVERVIEW

Torch-X Dismounted is an advanced networked solution that enhances combat effectiveness and survivability of dismounted close combatants. The warrior suite comprises integrated hardware components, C⁴I applications and an advanced Load Carriage System developed by Elbit Systems. The solution improves soldier lethality and survivability by integrating the soldiers' sensors and effectors to the network. The connected soldier can use all sensors and effectors that are connected to the network, dramatically shortening the sensor-to-shooter loop.

Designed to meet the challenges of multidomain warfare, Torch-X Dismounted delivers real-time situational awareness with automatic data dissemination based on hierarchy and geography. The solution enhances capabilities for all members of the platoon, including Blue Force Tracking, enemy (red) tracking, reports, mission planning, navigation, terrain analysis, augmented reality and 3D visualization.

Complete integrated dismounted soldier suite



Torch-X Dismounted includes advanced C² applications, personal network radios, mobile computing devices, tracking devices, augmented reality display and sensors. With a seamless integration approach, the solution significantly improves soldier effectiveness and survivability. Torch-X Dismounted uses an optimal ergonomic and biomechanical design, combined with an advanced mechanism for ideal weight distribution, stabilization and tight fit. The suite features a modular advanced load carriage and protective measures, enhancing maneuverability and combat effectiveness on the battlefield, including full armor protection according to NIJ 0101.06, level IV.

Open architecture



Based on Elbit Systems C⁴ISR service platform, Torch-X Dismounted is designed as an open architecture “evergreen” ecosystem that can accommodate third-party applications and provide the development environment for future growth and requirements. The system supports common interoperability standards and can be integrated to multiple IoT soldier devices, sensors, effectors, target acquisition devices and communications networks.

AI-based decision support



Torch-X Dismounted features decision support tools to reduce the soldier’s cognitive load. These tools recommend navigation routes, observation posts and CASEVAC routes. Torch-X Dismounted automatically collects and stores the soldier’s physiological data and alerts the soldier and chain of command when a soldier is approaching the physiological combat effectiveness threshold.

Operation of manned and unmanned systems



Torch-X Dismounted seamlessly supports integration and operations of unmanned systems along with human soldiers. Soldiers can use Torch-X Dismounted to task UGVs and UAS. The system autonomously directs the optimal networked effector/s to accomplish the task.

User experience



Torch-X Dismounted is built for the dismounted combat environment, from the comfort of the Load Carriage System to minimizing the required cognitive load. Using the most advanced augmented reality technologies, Torch-X Dismounted presents actionable, context-aware data allowing the soldier to focus on the combat activities in the battlefield.

Modular and scalable



Torch-X Dismounted components can be tailored to the needs of all soldier types, including commanders, team leaders, forward observers, snipers, special weapons operators and riflemen.

Security



Torch-X Dismounted is a secured battle management system, designed and developed as a secured system for all echelons of the ground forces. The system is accredited by the world’s leading intelligence alliances and compliant with all major security standards. Torch-X Dismounted is penetration tested on a regular basis and updated to withstand new emerging cyber security threats.

Safety



To enhance the dismounted soldiers’ safety, Torch-X includes advanced NIJ 0101.06 level IV armor protection including hard and soft ballistics. The lightweight and ergonomic design provides an optimal balance between comfort and operational performance.

Soldier-centric integrated system with advanced networked components



RAPTOR™

Compact, rugged, all-in-one tactical wearable computing unit.



SmartEye

Smart MIL-standard glasses for augmented situational awareness.



Smart WristView

A compact computer and display worn conveniently with a strap on the wrist or elsewhere, serving as a powerful tactical device for the dismounted soldier.



SmartSight

See-through augmented reality digital add-on for day sights to enhance situational awareness.



Torch-X Dismounted App

Integrated warrior combat networked solution for enhanced combat effectiveness and survivability of special forces and infantry across all echelons.



SmartNVG

Helmet-mountable navigation and head-up display add-on for night vision goggles, providing tactical augmented reality.



E-LynX™ Soldier Radio

A powerful SDR personal radio with no GPS reliance for network services. The IP radio offers ad-hoc networking capabilities including multi-hop services for voice and data.



Fortware

Lightweight, thin advanced personal ballistic panel solutions.



TORCH-X RAS

Autonomous, robust, lightweight, multi-mission tactical support.



HattoriX-M

Man-packed CAT-1 Passive and Laser target acquisition system.





KEY FEATURES

Real-time situational picture

AI-based decision support tools

Support for man / unmanned teaming

Supports numerous interoperability standards

Seamless integration with IoT devices

Navigation and target acquisition in a GPS-denied environment

Augmented situation awareness picture

Enhanced maneuverability and effectiveness using advanced ergonomic and modular LCP

KEY BENEFITS

Enhances combat effectiveness and survivability

Modular and scalable

Simple and intuitive user interface

Battle-proven, secure and safe

Operation in a GPS-denied environment

Seamless target handoff