

SkyLink is a system that enhances the safety and situational awareness of military parachutists during adverse weather and night operations. It offers dynamic re-tasking abilities for both personnel and guided cargo systems. SkyLink helps in mission planning, real-time wind calculations, moving map displays, and customization options for optimal in-flight navigation. It also improves the environmental, geographic, and team situational awareness of parachutists.

SkyLink integrates with MMIST's Sherpa, Dropsonde and LaunchPADS Mission Management systems, which enables cutting-edge techniques for Special Forces insertion and Ground Forces resupply.

SkyLink + Sherpa

SkyLink can be optionally used as remote controller for Sherpa GPS guided parachute delivery system, allowing the user to override autonomous flight for the purposes of obstacle avoidance at or near the landing area. A modified landing point may be re-programmed with a simple push of a button while the Sherpa is in flight, or direct steering control of the Sherpa can be affected. Additionally, the Sherpa can be customized with various embedded radio frequency (RF) interface options to suit different requirements.

SkyLink + LaunchPADS

SkyLink is fully integrated with LaunchPADS, which is MMIST's versatile mission planning software that allows users to plan and execute all types of cargo airdrop and airborne parachute operations.

LaunchPADS software interfaces with a wide range of Geographic Information Systems (GIS) data and supports full 3D visualization. Users can enter flight path, waypoints and landing coordinates in latitude/longitude, UTM, or military grid reference (MGRS) formats.

Additionally, the 3D map overlay screen to input target coordinates graphically can be used.

LaunchPADS also allows to identify terrain constraints that may impact users proposed flight path and allows to input new deployment points or impose waypoints to avoid obstacles.

SkyLink + Dropsonde

The Dropsonde system is used to collect real-time wind data that helps in determining the release point for airdrops. As the Dropsonde falls with a speed of approximately 25 meters per second or 5000 feet per minute, it uses GPS satellite information to determine its location while being carried by the horizontal winds. The Dropsonde system works in conjunction with SkyLink and enables aircrew to measure local winds before an airdrop, thus improving the accuracy of the Calculated Aerial Release Point for a cargo airdrop or parachutist jump.

Base Capability: Fight-Through System (Air/Ground Navigation)

SkyLink is a navigation system that provides real-time data on canopy performance, inflight navigation calculations, air/ground route support, moving maps, and a smooth transition from air insertion to ground navigation.

System Operational Concept

SkyLink enhances parachutist situational awareness for safer missions. The operational phases are: Preparation, Execution, Turn-Around.

Preparation: SkyLink Navigation Module facilitates mission planning, data entry, sharing, and Built-In-Test checks. Precise control over mission details and real-time equipment readiness ensures optimal mission preparation.

Execution: SkyLink assists users during en route navigation, dispatch point updates, gear checks, and navigation. The system's intuitive interface supports successful waypoint navigation, ensuring optimal positioning for parachute insertions.

Turn-Around: SkyLink's reusable design promotes easy reprogramming, inspection, and recharging, ensuring readiness for future missions and quick turn-around.

Hardware

The System comprises of rugged equipment designed to withstand military operations. Its key components include the End User Device (EUD), a connection arm equipped with a compass for backup navigation and the optional interpersonal data radio for enhanced communication.

Software

The SkyLink Navigation Module is an Android application installed on the rugged End User Device, which plays a central role in planning and executing missions. This application provides real-time information about canopy performance, in-flight navigation calculations, route planning, moving map display, and full fight-through capabilities. The SkyLink Situational Awareness Module is another essential component that offers situational awareness to the team, proximity alerts, and dynamic route retasking, thus ensuring safety and effectiveness during missions.

<p>Mounting Options</p>	<p>M.O.L.L.E. Base PAD 4-Point harness connection 3 Quick connectors Emergency jettison feature</p> <p>M.O.L.L.E. Chest Rig 3 Quick connectors M.O.L.L.E. Pouches (as required)</p> <p>Also interfaces to existing user defined mounting solutions and PDAs</p>
<p>Radio options</p>	<p>Provides datalink between other SkyLink jumpers and/or Sherpa PADS systems Data & Data/Voice Capability Soldier Portable Radios PRC-148, PRC-152, TrellisWare (Shadow, Spirit, other)</p>
<p>Radio Enabled Options</p>	<p>Mission Target Retask: Jump team can select alternate targets on the fly for team or Sherpa PADS Ground Station: Available for Ground Monitoring, Command and Control</p>
<p>Air Navigation Module</p>	<p>Position, speed, and altitude Waypoint navigation ETA, distance and azimuth to landing point Dynamic wind calculations Wind line and navigational cone display Embedded electronic compass and backup floating compass Optional user defined navigation modes</p>
<p>Ground Navigation Module</p>	<p>Position, speed Waypoint Navigation ETA, distance, and azimuth to target Dynamically add Points/Items of interest</p>
<p>Moving Map</p>	<p>Compatible with map imagery, DTED, and scenery files</p>