

Portable Projection System

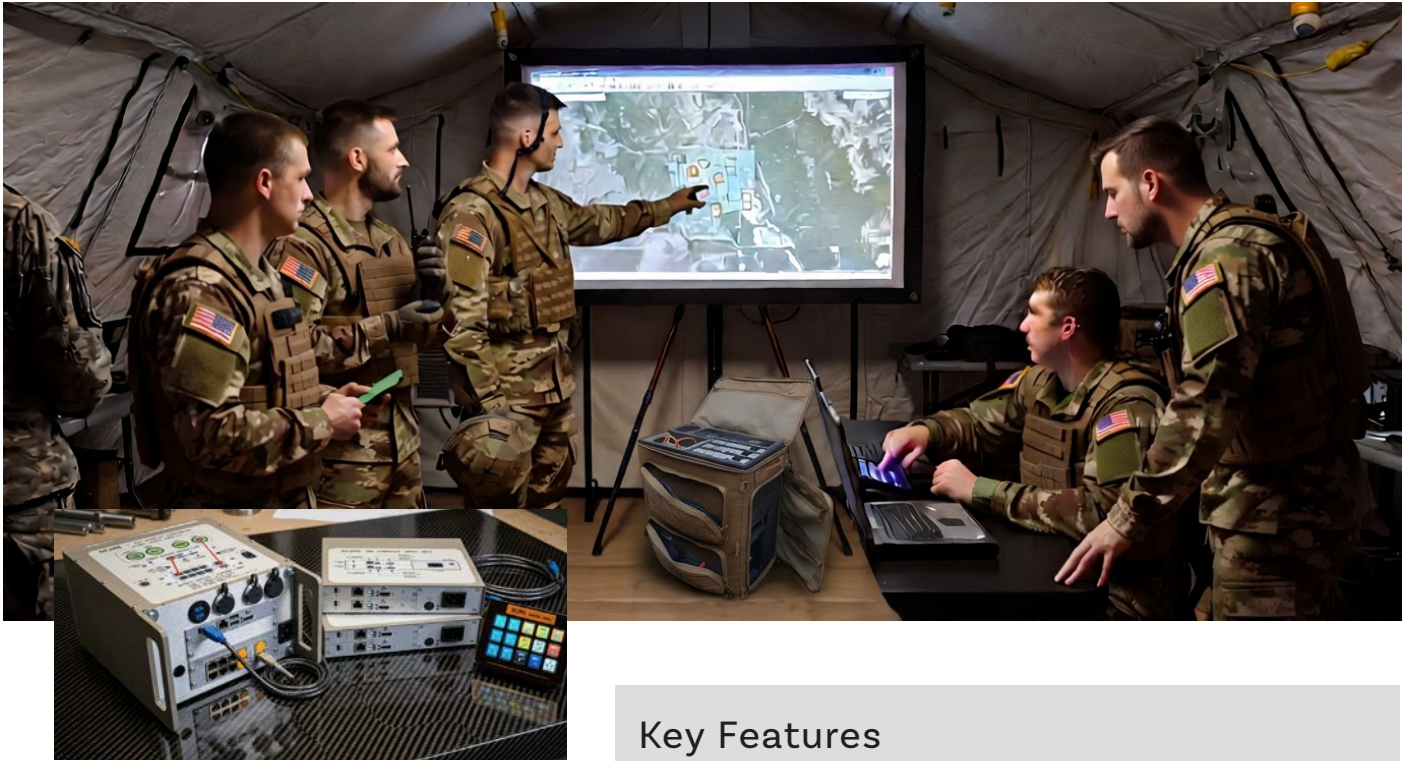
Multi-Domain Access Portable Projection Systems For Real-Time Decision Makers
A large screen display system for up to four sources fits into a single backpack



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Multi-Domain Access Portable Projection System



GD2's Multi-domain access portable projection system (MAPPS) will revolutionize tactical command and control for next-gen C2 (NGC2), offering unprecedented multi-domain capabilities by giving operators the ability to integrate information from aerial and ground-based data sensors through a modular projection control system. MAPPS introduces a small form factor modular and mobile approach to giving the warfighter a clear understanding of the digital battlespace.

The MAPPS platform for data and video source distribution offer operators the ability to connect multiple video inputs and display the images over large screen display systems or any number of individual displays. Video output displays are managed through a front panel pushbutton interface or through an embedded GUI Control Software.

MAPPS is based on the latest industry standards for high definition computer imaging. With MAPPS common operational and tactical picture images can be shared from a wide range of sources over the same projection management infrastructure.

Key Features

- Modular, low SWaP solution including all components necessary to display up to four sources to a large screen display.
- Display agnostic classified and unclassified data sources in a Next Gen C2 deployable command post.
- Designed to be setup by a single person making it ideal for dismounted troops or mobile command post.
- Uses standard COTS components for electronics complying to HDMI video distribution up to 1920 x 1080p
- Adaptable to other video formats such as DVI and DisplayPort.
- No special tooling required
- Small form factor makes is easy for the "Ready Now" expeditionary advanced base operations.
- Perfect for field training centers and mission C2 operations where display of real-time information, maps and other tactical data needs to be enhanced for the decision makers on a common operations picture.

Complete system loads in a Backpack

The Backpack is designed to hold all the components that are part of the MAPPS package. It is constructed with heavy-duty nylon material using dual-direction YKK zippers and a full compliment of MOLLE straps on three sides. The main compartment includes high-density foam cavities to load components for the portable projector screen system, control panel and up to three transmitter modules. A side zipper pocket allows access to the main DC2MS control module and access to cables and other spare components. A top-access pocket allows storage for a keyboard and mouse and two wide zipper pouches in the front are large enough to hold cables for HDMI, USB and network connections.

The backpack includes extra-wide padded shoulder straps and a sturdy sternum & waist support belt designed for long haul missions. Additionally, side handles are added to allow two-man transport when it is not used as a backpack. A heavy-duty stainless steel ring is sewn into the top that allows the backpack to be easily hung on hooks or easily used as a center weight when attached to the center hook located on the projection screen tripod base.



Backpack top access stores transmitters, control panel and projector systems



Extra wide padded shoulders and waistband belt for single person carry



Backpack side access provides storage for the MAPPS control module.

Ultra-short-throw projection screen assembly



The ultra short throw projector mounts between the tripod legs and supports the projector screen with quick-release pull pins to hold it steady and at the right distance away from the lens.



Projector Screen system includes projector mounting kit for UST projector, tripod, collapsible screen frame and foldable rear projection snap-on screen material.

REAR PROJECTION SCREEN SYSTEM

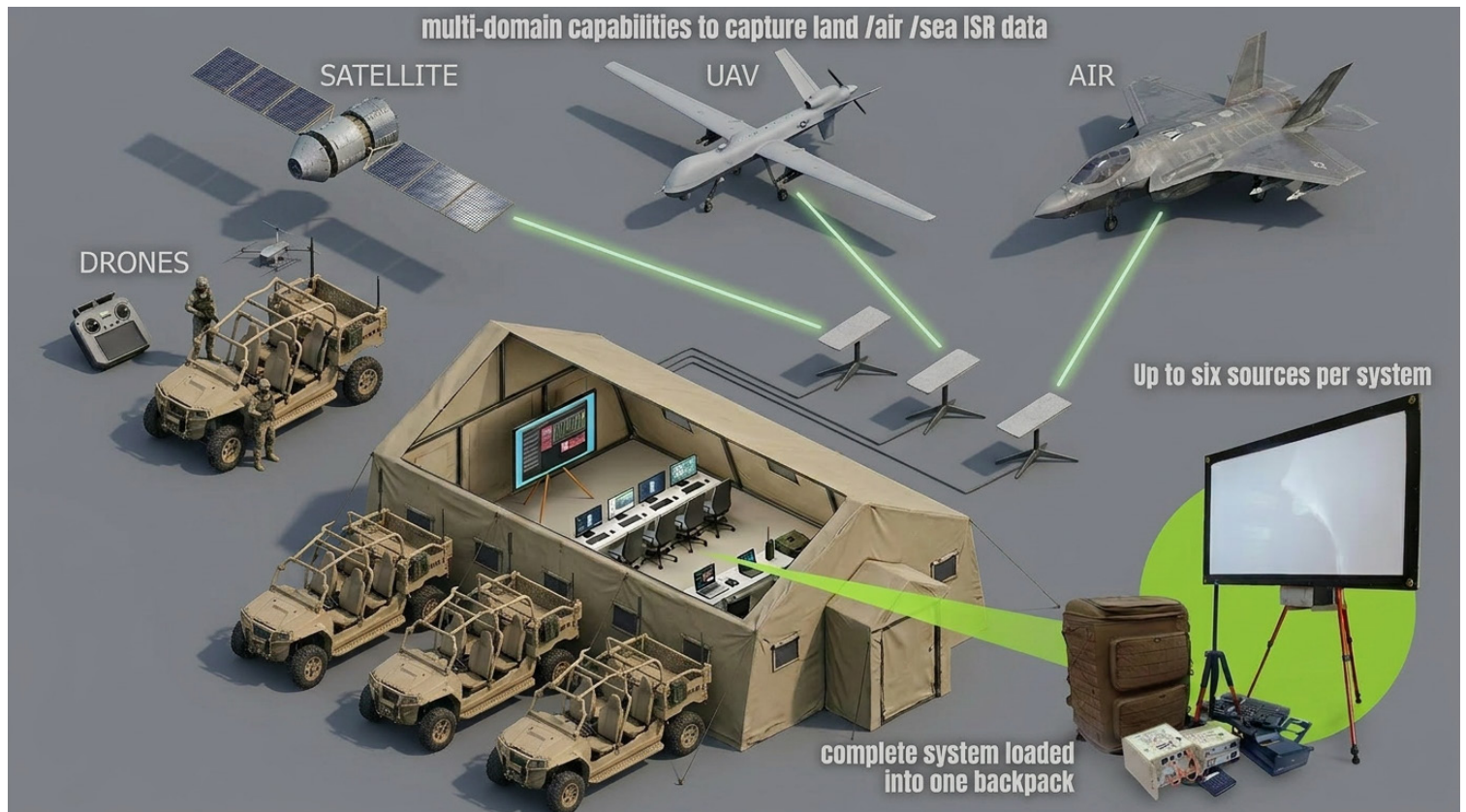
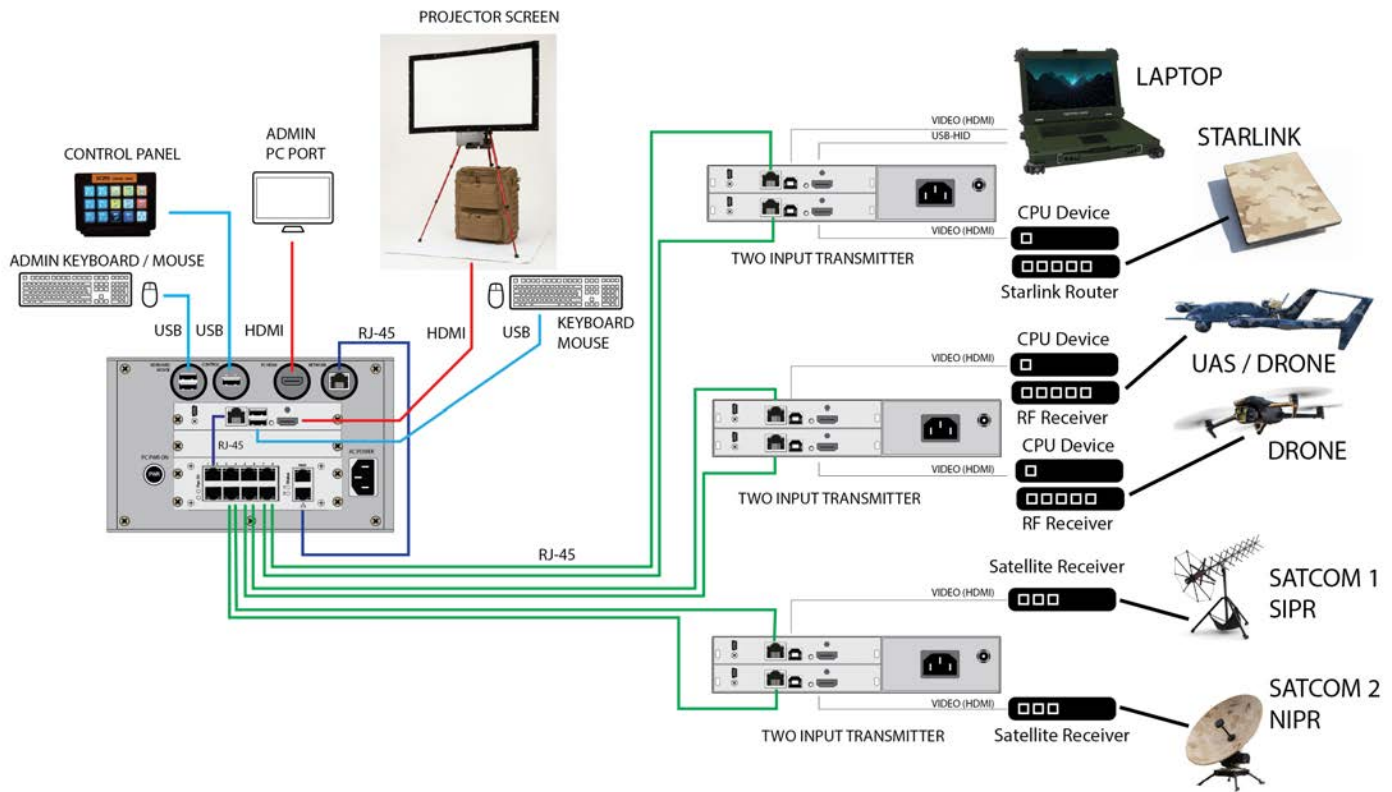
This heavy duty tripod is made of aluminum alloy material with adjustable legs and non-slip rubber feet. The unit collapses to 18" for storage and extends up to 54" fully extended. Each leg has three column quick-release flip-lock knobs for fast extension and easy leveling where floors are uneven. A center tube extends from the tripod to allow the screen support bracket to slip in place.

The projector assembly is designed to mount easily between the tripod leg supports with thumbscrews that utilize the leg supports to hold the ultra short throw project in place to project an image size of 40" wide by 22" high. The projector provides up to 1080p60 resolutions in 16:9 formats.

The aluminum screen frame collapses to 22" x 13" and uses button snaps to keep the rear projection screen tight for quality image projection. The projector system weighs less than 10lbs (4.5kg) and can be set up in less than 5 minutes.

The projection system has been designed as a rear projection system when installed between the legs of the tripod but can easily be converted to front projection to work with other large screen setups.

Diagram of Display Management System



MAPPS Control Module

MATRIX SYSTEM

The display matrix includes eight RJ-45 ports for I/O connections. It includes one RJ-45 connection for an Ethernet port conforming to EIA/TIA-568-B. The unit includes an internal power supply with an IEC 60320 Type C14 inlet for main power that provides 12VDC/5A for system power. LED indicators included for active signal status. Power requirements are 100-240VAC, 50/60Hz @0.7A (13W max.). Mean time between failure (MTBF) is estimated at 684,700 power-on hours.

PROJECTION/DISPLAY CONNECTION

The receiver unit includes connections for a single display. Connections include HDMI for video sources and USB-HID for optional keyboard and mouse connections. The receiver unit is driven by the Control Module power supply providing 12V DC to the card. The RJ-45 port connects directly to port 1 of the matrix. Resolutions up to 1920x1200@60Hz are supported.

INTERNAL CONTROL

A mini-PC installed in the control module provides operational support for the software management of the matrix and control panel. The small form factor computer provides an Ethernet connection directly to the 8 port matrix, HDMI management port and three USB ports. Two USB ports are for admin management and the third is allocated for the LCD control panel. Pre-installed software includes the administrator software to configure the matrix, transmitter and receiver units. Also included is the software to manage the MAPPS control panel. External connections are mounted on the control panel faceplate making it easy to access the software for edits or modifications.



INPUT SOURCE UNITS

Each transmitter unit includes connections for two independent sources. Connections include HDMI for video sources and USB-HID for optional keyboard and mouse support. The chassis includes an internal power supply with an IEC 100-240V @50-60Hz plug that provides internal power to the transmitter units at 5V DC. The RJ-45 port provide connections from the transmitter to the matrix ports and can be extended up to 140m. Resolutions up to 1920x1200@60Hz are supported. Chassis size is 221 x 147 x 41 mm (8.7" x 5.8" x 1.7")



CONTROL PUSHBUTTON PANEL CPP

The Control Pushbutton Panel (CPP) gives you 15 fully customizable LCD keys to control the connected sources to the DC2MS Control Module. Pre-loaded software on the control module automatically loads the pre-configured button labels. Should a need to customize the labeling become necessary, the administrator can easily change the text or insert custom icon graphics. The CPP connects via a USB port on the control module.

Providing Rapid C2 Video Setup for the Warfighter

MAPPS is designed to replace the current complexity of mobile command post setups by allowing multiple sources such as computers, laptops, modems, etc. to be connected and viewed directly on a compact portable display system.

Instead of carrying hundreds of pounds of communication equipment, packing large shipping containers, or hauling pallets of equipment to the battlefield, the MAPPS system is instead carried by a single person in a backpack form. This system sets up in less than 20 minutes weighs less than 50lbs, and allows commanders to quickly select active mapping or other ISR information via a pushbutton panel connected to a distribution switch system.

Instead of hours spent on adapting multi-domain computer networks to a common data transport stream, MAPPS only needs the video output (such as HDMI) of the source device. The video signal is transported over a secure “non-networked” data stream to be displayed to an extended portable projector screen. The full system can be loaded into a manpack that is far more mobile, modular, and interoperable over existing C2 communication systems offered today.



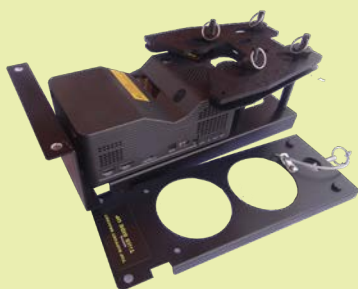
Spares and Replacement Parts



GD2-42MTX - 8 Port Switch, Internal PC, Receiver Unit with internal power supply.



GD2-2XTX - Dual Input Transmitter unit with internal power supply. HDMI and USB ports, CATx connection



GD2-PROJ-UST - Projector Assembly with Ultra Short Throw Projector and mounting hardware.



GD2-PB15X - 15 Position Control Panel with USB port connection



GD2-PROJSCREEN -Replacement Rear Projection Screen and Frame Assembly.



GD2-TRIPOD -Replacement Tripod with adjustable legs up to 52 inch.



GD2-CABLE -25 foot cable assembly with RJ-45 connectors. Provides up to 4 connections.



GD2-BKPK -Backpack Assembly with internal foam pockets

MAPPS Component Details

Control Module	Description / Specifications
Switch Port Count	8 ports (6 input x 2 output)
Type of Port Connection	RJ-45 / Video Signal ports
Network Connection	RJ-45 / 10/100 Ethernet
Computer Type	Small Form Factor PC with Windows 11, 512GB SSD, 3.4GHz celeron processor. HDMI, USB for keyboard/ mouse. Ethernet port
Computer Access Ports	HDMI, USB, Ethernet- round ports with dust caps. Direct connection to internal PC
Reciver Module Port	1- RJ-45 / 1 HDMI / 2 USB
Control Module Dimensions	8.50 wide X 5.125 high x 10.00 deep
Control Module Power	100-240VAC / 12VDC, 60W, 5A
Control Module Weight	5.5lb
Transmitter Modules	
Port Count - output	1 port / RJ-45
Port Count/Type - input	1 HDMI, 1 USB
Transmitter Chassis Size	221 x 147 x 41mm / 8.70 x 5.80 x 1.70 in
Transmitter Power	IEC 100-240VAC / 12VDC
Transmitter Weight	
Control Panel	
Number of Buttons	15
Interface Type	USB-C to USB 2.0
Key Type	LCD
Dimensions	118 x 84 x 30mm / 4.6 x 3.3 x 1.2 in
Weight	286 gram
Projector Systems	
Type of Projector	Ultra Short Throw / small form factor
Resolution	default 1080p / scales to 4K
Features	Auto Focus / Keystone / Front-Rear settings / throw ratio 0.2:1 / 16:9 aspect ratio
Power	Wall plug adaper 60W, 20V, 3A USB-C cable
Input Type	HDMI
Dimensions	94 x 71 x 190mm / 3.70 x 2.75 x 7.48 in
Weight	less than 50lbs (22.5kg)
Projector Screen	Adjustable Height Tripod with backlit screen 40 x 22 in. to support 50" 16:9 image. Mounting brackets for UST projector.
Backpack with padded shoulder straps and waist support belts	Canvas backpack with storage pockets for the complete DC2MS package. 20.5 wide x 12.5 deep x 25.0 high. Total weight of package fully loaded in less than 50lbs.
Order Number GD2-MAPPS4x1	Complete System with Projector Parts and Backpack

NEW FOR 2026 - MAPPS- LC



Deployable displays are crucial for battle command software, incident response, surveillance feeds, UAV operations, and mission planning. The ability to display real-time information, maps, and other tactical data securely enhances decision-making and collaboration among units.

In previous conflicts command posts C2 systems were huge, heavy, complicated, and time-consuming to set up, move and tear down. The Multi-Domain Access Portable Projection System - Low Cost (MAPPS-LC) is positioned to support the deployment of smaller „right-sized“ formations armed with smaller mobile tactical command posts to operate in multiple regions simultaneously. The modern TOC must shrink in size and primarily act as a lightly manned (squad to platoon-sized), mobile information node that is constantly on-the-move. MAPPS-LC will simplify multi-domain operations and reduce SWaP requirements for these new style command posts



Matrix Switch has been tested to full NIAP PP 4.0 / Common Criteria Standards

NEW FOR 2026 - MAPPS- LC



Features and Benefits of the MAPPS-LC

- Delivers a quad-channel switch fabric for displaying four images simultaneously or a full screen single image on a large screen display.
- Fully secured to isolate different security levels (SIPR, NIPR, CENTRIX)
- Adaptable to operate with touchscreen displays or other collaborative screen systems
- Designed with an ultra short throw rear projector with mounting brackets to assemble directly to the tripod leg braces.
- Compact and lightweight, MAPPS-LC provides forward-deployed warfighters with a new level of tactical communications to manage SATCOM, UAS, FMV and other forms of ISR imagery to a single COP.
- MAPPS-LC ensures a continuous communications link with advanced interoperability and can connect multiple levels of secure networks across US and coalition forces without compromising network security.
- Simple command sets reduces training time for live operations
- Increasing speed to active COP operations
- Enhanced situational awareness
- Operating at the halt or on-the-move to establish a fully functional COP setup.
- Ideal for the smaller mobile command post where hasty movement is necessary
- Pre-configured button panel for simple and intuitive operations
- Can be easily integrated with NGC2 SD-WAN and PQC security levels of operations to support C-UAS measures.
- Includes Projector, Tripod, 4-port switch, 20ft HDMI cables, and modular projector frame.
- Projector can operate approx. 45 minutes on internal battery
- Total system can operate on AC or DC power with optional inverter package
- Total weight of manpack system is less the 40lbs



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