MxD Family

One platform. Multiple mission configurations.

MxD is a modular display platform engineered for real-time operation in demanding tactical environments. Configure the platform as a display, fixed computer or removable computer configuration through a shared architecture designed for scalable deployment in armored vehicles.

Key Features

- FPGA-based low latency architecture
- NGVA and VIVOE ready
- Highly configurable for mission-specific requirements
- Ruggedized for extreme tactical environments

Capabilities

Modern vehicle platforms require display systems capable of handling multiple real-time video and data sources without compromising operational responsiveness. Built on MilDef's FPGA-based architecture, the MxD platform enables low latency video performance, standardized integration and scalable compute configurations supporting long-term platform evolution in demanding tactical environments.

The capabilities of the MxD Family include:

- **Military-Grade Durability:** Built to withstand severe environmental conditions, conforming to strict military standards such as MIL-STD-810, MIL-STD-461, MIL-STD-1275, Tempest and RTCA DO-160.
- **Real-time operation:** FPGA based low latency architecture & full High-Definition resolution with optically bonded display for sunlight-readability makes information presented detailed and clear without any compromises.
- **Crew interaction:** Multi-touch, NVIS support and programmable bezel buttons
- **Standardized integration:** NGVA and VIVOE ready.
- **Versatile Connectivity:** Prepared with a wide range of rugged interfaces, Ethernet, USB, and video inputs**.**

Display Configuration

Display MD Series	Panel PC MSD Series	Modular Panel PC MID Series
		
Dedicated display	Panel PC with removable SSD	Display with removable computer (MCS).

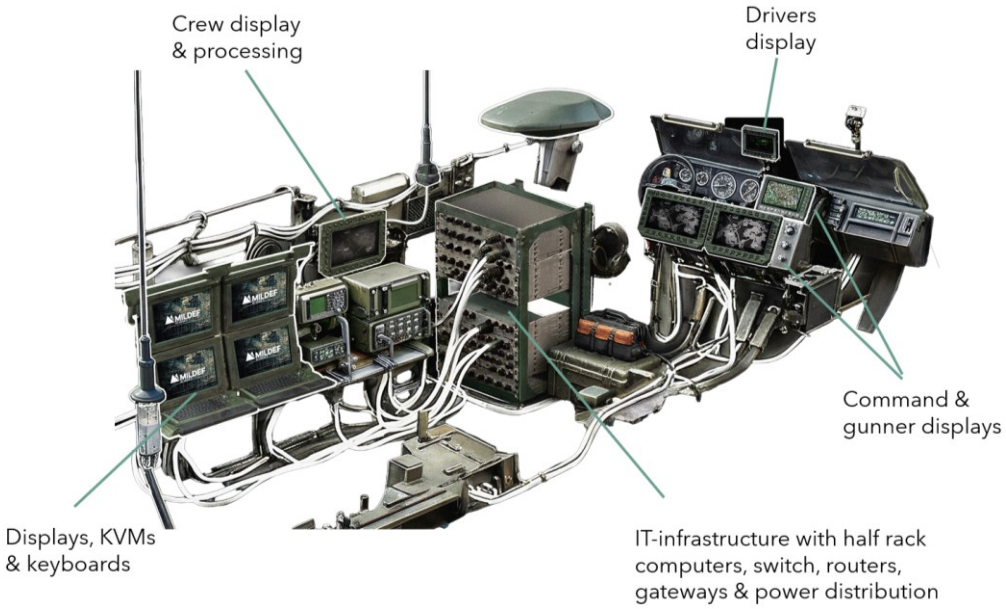
Standard sizes			
10.1″	13.3″	15.6″	18.5″
			
Driver Display	Gunner/Commander Display	Crew Display	Crew Display

Solution provider

MilDef offers solution and integration delivering seamless, end-to-end solutions by integrating hardware and software into complete systems that meet customer requirements. Managing integration projects/programs to ensure alignment with mission objectives/business strategy and technological capabilities.

Hardware ECO-system

Our hardware offer includes all the building blocks for complete IT infrastructure for the tactical edge, such as displays, network products, power products, docking stations, mounting solutions etc.



Use case

The MxD family is a core component of many tactical platform designs. Some use case examples are:

- **Armored C2 Vehicle**
  Workstations as part of a full C2 infrastructure for a forward command vehicle. Interconnects with radios, sensors and vehicle intercom to enable reliable operations.

- **Artillery Vehicle**
  Displays and panel PC to operate an indirect fire platform in an environment that exposes the equipment to severe shocks and vibration during firing mission.

- **AD C2 Vehicle**
  As a part of an Air Defense command and control system where the importance of displaying high resolution information, rapid boot, and enable operators to interact with physical buttons for critical functions like zeroization or fire mission commands.

Specifications

Display Capabilities			
Display sizes	10.1", 13.3", 15.6",18.5" (other sizes on request)	Display surface	Hardened glass 6H
Display resolution	Display size 10.1" – 15.6": 1920 x 1080 FHD 16:9 ratio Display size 18.5": 3840 × 2160 4K 16:9 ratio	Available interfaces	- Digital video-in - VIVOE - Video expansion ports - GPIO - USB 2.0 - USB 3.0 (MID & MSD Series only) - Digital video-out (MID & MSD Series only) - Docking interface for MCS computer module (MID Series only)
Display luminance	Display size 10.1" – 15.6": Minimum 800 nits, typical 1000 nits Display size 18.5": Minimum 350 nits, typical 600 nits	Bezel buttons	Display size 10.1" – 15.6": 32 GVA complaint buttons Display size 18.5": 12 buttons
Display touch	Resistive multi touch	Power input	12 – 36 V DC
Display features	Black-out Day-, Night-, and Night Vision mode Picture-in-Picture On-screen Display		
Computer Capabilities			
Processor	MSD Series: Intel® Atom™ x7835RE MCS Series for MID Display: Intel® Core™ i7-1185GRE	Storage	MSD Series: Enclosed and removable m.2 2242 SSD up to 1 TB MCS Series with computer module: m.2 2280 SSD up to 2 TB
Memory	MSD Series: Built-in 16 GB LPDDR5 MCS Series for MID: Up to 48 GB DDR4		
Environmental			
MIL-STD-810			
Shock operating	Functional Shock. 40G/11ms	Noise level	Max noise level of 40 dB SPL 1 m (3.3 ft)
Temp. operating	-40 to 65°C (-40 to 149 °F)*	Salt fog	5 ± 1%
Temp. storage	-40 to 71°C (-40 to 160 °F)*	Temp. shock	65 °C (149 °F) / -40 °C (-40 °F)*
Humidity	Aggravated, 95 ± 4% RH	Vibration	Rotary wing aircraft – helicopter
IP Class	IP65		Truck/trailer - loose cargo
Low air pressure	Rapid Decompression 8000 ft / 40000 ft		Ground vehicles - ground mobile tracked
	Operation/Air Carriage 15,000 ft		Ground vehicles - ground mobile wheeled
Optional standards			
RTCA/D0160, VG, DEFSTAN, MIL-STD, etc. can be included on request.			
EMC			
MIL-STD-461			
EMI/EMS	Ground Army	ESD	CS118
Optional standards			
RTCA/D0160, VG, DEFSTAN, MIL-STD, etc can be included on request.			
Power			
Vehicle Power	MIL-STD-1275		
Optional standards			
VG, DEFSTAN, MIL-STD, etc can be included on request.			

*Higher available on request