



10.4"

12.1"

15.6"

18.5"

## GENERIC VEHICLE ARCHITECTURE

# RSD-G Rugged Smart Display GVA

## Smart displays with modular architecture

Based on the very latest Intel Core™ i7 and Xeon™ extended temperature range CPU technology, the Leonardo DRS RSD-G range of high resolution, modular multi-function tactical smart displays provide leading edge computing and display capabilities for the most demanding ground vehicle environments.

The RSD-G range shares a common CPU/Input-Output processor module which is integrated with either a 10.4", 12.1", 15.6" or 18.5" display. This allows systems integrators the flexibility to mix and match the smart displays while maintaining a common processing architecture across systems. The displays are equipped with 30 programmable function keys which conform to the requirements of the GVA human-factors standard as defined by DEF-STAN 23-09. 00-082 Video Streaming and NGVA DDS Middleware is also available on a case by case basis.

The RSD-G range can be configured with an embedded NVIDIA RTX A1000 Graphics Processing Unit to deliver AI performance. The smart displays can also be enhanced by a low latency video capture card supporting multiple 3G-SDI inputs plus loop-through and PCIe streaming to connected external devices. Various display resolutions are available, ranging from the 1024 x 768 for the 10.4 & 12.1" options to a full hd resolution 1920 x 1080 for the 15.6 & 18.5" displays. All displays are direct sunlight readable, NVIS compatible and have a multi-touch resistive touch screen. Storage is provided by a variety of removable SSDs, ranging from 256GB (10.4"), 512GB (10.4", 12.1"), 1TB (12.1", 15.6", 18.5"), and 2TB (12.1", 15.6", 18.5")

 **LEONARDO DRS**

## FEATURES

- Intel Core™ i7 and Xeon™ architecture
- Modular design for easy technology insertion
- Up to six video inputs supporting both analog and digital formats
- Gbit Ethernet video output
- Five unique communication interfaces

- XGA and FHD resolutions
- 10-point AMR touch screen
- GVA compliant bezel key layout
- RSD-G121/156/185 Qualified to MIL-STD-810H
- RSD-G121/156/185 Compliant with MIL-STD-461G
- Supports Windows 10 and 11 or Ubuntu Linux

## PHYSICAL SPECIFICATIONS

Weight	RSD-G104: 6.4 kg RSD-G121: 7.1 kg RSD-G156: 9.6 kg RSD-G185: 12 kg
Dimensions (mm)	RSD-G104: 329 x 299x 84.93 RSD-G121: 329x 278x 90.14 RSD-G156: 441x 290 x 118 RSD-G185: 506 x 327 x 78.1
CPU	Intel® Core™ i7-6822EQ, 4 cores, 2.0 GHz Intel® Core™ i7-9850HL, 6 cores, 1.9 GHz Intel® Xeon® W-11155MLE, 6 cores, 1.9GHz

## STANDARD INTERFACES

Ethernet	4 x 1Gb LAN Interfaces
USB	6 x USB 2.0s
Communications	4 x RS-232, 4 x selectable RS-422 or RS-485, isolated
MilCAN	2 CAN Bus interfaces
Video In	10.4": 4 x CVBS, 12.1": 4 x CVBS + 2 x HD/3G-SDI, 15.6 & 18.5": 4 x CVBS + 4 x HD/3G-SDI
Video Out	10.4" & 12.1": 1 x VGA, 1 x DVI-D, 15.6" & 18.5": 1 x VGA, 1 x DVI-D, 4 x HD/SDI (Loop Out)
Discrete I/O	8 in & 8 out GPIO Lines
Audio	Audio: 1 x Audio Line-in, 1 x Audio Line-out, 1 x Mic-in

## OPTIONAL INTERFACES

Nvidia AI Accelerator & GPU	10.4 NVIDIA GeForce GTX 1050 GPU (MXM3.1 Type A, 4GB GDDR5); 12.1/15.6/18.5 NVIDIA RTX A1000 GPU (MXM-A, PCIe Gen 4.0 x8, 4GB GDDR6, 35W, DP output)
Video Capture Card	10.4 4 x CVBS; 12.1 4 x CVBS, 2 x HD/3G-SDI; 15.6 & 18.5 4 x CVBS, 4 x HD/3G-SDI + 4 x HD/3G-SDI Loop-through

### Other optional interfaces on request

## ENVIRONMENTAL

Temperature	Operating, -40°C to +71°C; Storage: -46°C to +81°C; MIL-STD-810H, 510.7; 502.7
Rain	RSD-G121/156/185 MIL-STD-810H Change 1, Method 506.6
Shock	Operating: MIL-STD-810H Change 1, Method 516.8, Procedure I, 40G, 11ms; Non-Operating: MIL-STD-810H Change 1, Method 516.8, Procedure V, 75G, 6ms
Dustproof	IEC 60529, IP6X
Waterproof	IEC 60529, IPX7
Humidity	MIL-STD-810H Change 1, Method 507.6, Procedure II, 5% to 95% non-condensing
Salt and Fog	MIL-STD-810H Change 1, Method 509.8, 5%, 96 hrs
Altitude	Operating: MIL-STD-810H Change 1, Method 500.6, Procedure II, 20,000 ft; Storage: MIL-STD-810H Change 1, Method 500.6, Procedure I, 40,000 ft
Sand and Dust	RSD-G121/156/185 MIL-STD-810H Change 1, Method 510.7
Vibration	MIL-STD-810H for common carrier, composite two-wheeled trailer, composite wheeled vehicle, and general minimum integrity exposure vibration profiles
Input Power	16 ~ 36VDC (28VDC Nominal)
Power Consumption	RSD-G104/121 150W RSD-G156/185 180W
Power Compliance	MIL-STD-1275E
EMI	MIL-STD-461G (CE102, CS101, CS114, CS115, CS116, CS118, RE102, RS103)
Conducted Emissions	CE102
Conducted Susceptibility	CS101, CS114, CS115, CS116
Radiated Emissions	RE102
Radiated Susceptibility	RS103

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