



The VueSim 7104 is a highly configurable smart display, designed to simulate the performance of Electronic Flight Instrument Systems (EFIS), such as a Primary Flight Display (PFD) or Multi-Function Display (MFD).

The VueSim 7104 can be configured to receive and render the same cockpit data as a fully FAA-certified EFIS at a greatly reduced cost since it does not have to be FAA-certified (DO-178/DO-254/DO-160) for the simulation environment. It can easily be configured to process flight data from a variety of sources including ARINC 429 (e.g., ADAHARS, ADF IAS, NAVCOM), Ethernet, discrete I/O and/or other buses (e.g., ARINC 453, MIL-STD-1553), depending on the end user's requirements.

General Digital can tailor the VueSim 7104 to simulate virtually any PFD/MFD by configuring the unit with an assortment of standard or custom LCDs, ARM processors, Graphic Processing Units (GPUs), I/O expansion modules, bezel switches and rotary encoders.

The VueSim 7104 supports a variety of display options including sunlight readable, sunlight readable + NVIS (NVG), standard luminance, transfective, as well as an Extended Color Gamut (ECG) version that greatly enhances the colors.

Please feel welcome to consult a General Digital Sales Engineer for additional information, or visit our Web site: [www.GDdisplaysystems.com](http://www.GDdisplaysystems.com).

QUICK LOOK

## DISPLAY

- » 10.4" XGA (1024 x 768 pixels) Active Matrix TFT LCD Display
- » Wide Viewing Angle (Horizontal & Vertical)
- » 3000:1 Dimming Ratio
- » LED Backlit
- » Boost-style LED Controller
  - Optimized Uniformity Even After Individual LED Failure
  - Increased Reliability (Open and Closed Circuit Failures)
- » High Brightness and NVIS Compatible Available
  - Sunlight Readable (MIL-L-85762-A)
  - High/Standard Brightness
  - NVIS (MIL-L-3009)
  - Transfective
- » Extended Color Gamut Available

## PROCESSOR

- » Dual Core or Quad Core ARM Processor
- » Removeable SD Card

## STANDARD I/O

- » 10/100 Ethernet
- » DVI-D Out
- » ARINC 429
- » RS-232
- » USB 2.0 (Two Type A)
- » USB Maintenance (Type B)
- » Multi-Purpose Port (External Dimming, RS-232 & Discrete I/O)

## EXPANSION

- » Three Internal Expansion Slots for **Optional Expansion Modules**, such as:
  - GPU
  - ARINC 429
  - Discrete I/O
  - Customer Specified

## POWER

- » +9–36 VDC
- » 2W2 Connector
- » AC Power Available

## MORE OPTIONS

- » Standard and Custom Expansion Modules
- » Various Overlays and Optical Coatings
- » Optical Bonding of Overlays to Both Front and Rear of LCD
- » Buttons, Switches, Additional Rotary Encoders
- » Custom Bezels
- » Cooling Fans
- » AC Power
- » Custom Software and Firmware

**Designed and Manufactured in the U.S.A.**

**DISPLAY**

	Size (Diag.)	Resolution (Pixels)	Number of Colors	Luminance [1]	Contrast	Sunlight Readable Contrast	Weber Display Class	NVIS Radiance	NVIS Color
DVS-10X-224	10.4"	1024 x 768	16.2 Million	500 Nits	1000:1	—	—	—	—
SVS-10X-9011	10.4"	1024 x 768	16.7 Million	800 Nits	900:1	—	—	—	—
SNVS-10X-9017 [2]	10.4"	1024 x 768	16.7 Million	1670 Nits	1050:1	18.40	6	1.53 nW/cm <sup>2</sup> /sr	U: 0.35 V: 0.421
SVS-10X-9017 [2]	10.4"	1024 x 768	16.7 Million	1670 Nits	1050:1	18.40	6	—	—
SVS-10X-9018	10.4"	1024 x 768	16.7 Million	750 Nits	1188:1	9.21	5	—	—

**1** The minimum luminance is controller dependent.

**2** Display has been bonded with AR/ITO borosilicate glass.

	Response Time (Rise/Decay)	Horizontal Viewing Angle	Vertical Viewing Angle	Shock	Vibration	Notable Features
DVS-10X-224	14/11 ms	±88°	±88°	50 G, 11 ms, ½ Sine Wave	1.5 G (10–300 Hz)	
SVS-10X-9011	3/15 ms	±80°	±80°	50 G, 11 ms, ½ Sine Wave	2 G (5–100 Hz)	
SNVS-10X-9017	30 ms	±85°	±85°	220 G, 2 ms, ½ Sine Wave	1.5 G (10–300 Hz)	Dual Mode Daylight/NVIS, General Digital LED Rails, Uniformity >80% in Sunlight Readable & NVIS Modes
SVS-10X-9017	30 ms	±85°	±85°	220 G, 2 ms, ½ Sine Wave	1.5 G (10–300 Hz)	General Digital LED Rails
SVS-10X-9018	30 ms	±85°	±85°	220 G, 2 ms, ½ Sine Wave	1.5 G (10–300 Hz)	Extended Color Gamut, General Digital LED Rails

**EXPANSION BOARDS (All Models)**

Description	Description
ARINC 429 (24 inputs/8 outputs) [3]	64 Ground/Open or 28V Open Inputs/Outputs
GPU Expansion	Customer-Specific Communications

**3** Standard configuration. Board can be configured to a maximum of 32 inputs and 32 outputs.

**I/O CONNECTIONS (All Models)**

ARINC 429	Ethernet	RS-232	DVI-D	Power (Default)	USB 2.0	USB Maintenance
DB 44-pin Plug	RJ45	DE 9-pin Socket	Dual Link 24+1	2W2	Type A (x2)	Type B

**HMI (All Models)**

Rotary Encoder	Inclinometer
Two (2) Standard to Control Heading and Brightness (Can be equipped with fewer or more as required)	One (1) Standard

**POWER (All Models)**

Mount Type	Input Voltage Range	Output Voltage	Power (Maximum)
Internal	+9–36 Volts DC	+12 VDC	30 Watts

**MECHANICAL (All Models)**

Dimensions (H x W x D)	Construction	Finish	Weight, Operating	Weight, Shipping
10.688" x 8.438" x 3.961"	Aluminum	Bezel: Black Matte Powder Coat Enclosure: Gold Iridite	~5 Pounds	~7 Pounds

**ENVIRONMENTAL (All Models)**

Temperature, Operating	Temperature, Storage	Humidity, Operating	Humidity, Storage
-25° C to 60° C	-40° C to 100° C [4]	10% to 90% RH Non-condensing	10% to 90% RH Non-condensing

**4** The storage temperature range for DVS-10X-224 is -30° C to 80° C.

**OPTIONS** Ordered separately — Please inquire with a Sales Engineer to discuss your requirements

Description	Description
I/O Expansion Boards/GPUs	Cooling Fans
Custom Bezel Designs (Including Keypads, Buttons and Other Interfaces)	Touch Screens
Extended Color Gamut	AC Power Supply
	Multiple Display Sizes

**DISPLAY OVERLAY STANDARD OPTIONS** (Other Overlays Available — Please Inquire with a Sales Engineer)

gg	Description	gg	Description
01	Clear Float Glass, Antiglare Etch Two Sides, Not for Use with High Brightness Displays	19	GenClear™ Glass, Antireflective Coating Front Side, Optically Bonded to LCD

**DISPLAY OVERLAY CUSTOM OPTIONS** (Other Overlays Available — Please Inquire with a Sales Engineer)

Type	Description
Base Overlay Material	Soda-Lime Float Glass
	GenClear™ Float Glass
	Polycarbonate
	Acrylic
Surface Treatments	Antiglare (AG)
	Antireflective (AR)
	Antiglare/Antireflective (AR/AG)
Enhancements	ITO EMI Shield
	Mesh EMI Shield
	Contrast Filters
	Oleophobic Coatings
	IR Blocker

**MODEL NUMBER CONFIGURATOR [5]**

Model Style	Size & Resolution (aab)	Display (ccc)	Processor (ddd)	Keyboard/Pointer (ee)	Industrial Enclosure (ff)	Display Overlay (gg)	Power Supply (hij)
DVS-	10X-	224-	900-	00-	32-	##-	ID59
SVS-	10X-	9011-	900-	00-	32-	##-	ID59
SNVS-	10X-	9017-	900-	00-	32-	##-	ID59
SVS-	10X-	9017-	900-	00-	32-	##-	ID59
SVS-	10X-	9018-	900-	00-	32-	##-	ID59

**5** The pound symbol (#) indicates customer-defined values.

**ORDERING [6]**

Model Number	Description
DVS-10X-224-900-00-32- <b>gg</b> -ID59	VueSim 7104, 10.4" XGA Flight Simulator Smart Display, Daylight Readable, Panel Mount
SVS-10X-9011-900-00-32- <b>gg</b> -ID59	VueSim 7104, 10.4" XGA Flight Simulator Smart Display, Sunlight Readable, Panel Mount
SNVS-10X-9017-900-00-32- <b>gg</b> -ID59	VueSim 7104, 10.4" XGA Flight Simulator Smart Display, Sunlight Readable, NVIS Compliant, Panel Mount
SVS-10X-9017-900-00-32- <b>gg</b> -ID59	VueSim 7104, 10.4" XGA Flight Simulator Smart Display, Sunlight Readable, Panel Mount
SVS-10X-9018-900-00-32- <b>gg</b> -ID59	VueSim 7104, 10.4" XGA Flight Simulator Smart Display, Sunlight Readable, Panel Mount

**6 Bold Italicized letters** refer to standard customer-defined configurations (see Model Number Configurator above).