

V-STARS /D Systems

Picture Perfect Measurements™

V-STARS/D Systems are powered by DynaMo, our latest generation of high-speed, high-resolution cameras, with our highest speed and accuracy ever!

The lightweight, highly portable **DynaMo** systems from Geodetic Systems, Inc. (GSI) are designed for reliable, high-speed, high-accuracy 3D measurement even in the most difficult conditions.

The **DynaMo** systems come in six different camera configurations, each offering differing speed, accuracy, and resolution. They can be used in both single-camera online S-Mode, and multiple-camera, real-time M-Mode.



D5R - 5 Million Pixel (MP) 25Hz
D5F - 5 Million Pixel (MP) 100Hz
D12R - 12 Million Pixel (MP) 12Hz
D12F - 12 Million Pixel (MP) 50Hz
D45R - 45 Million Pixel (MP) 3Hz
D45F - 45 Million Pixel (MP) 12Hz

All systems include GSI's unparalleled **V-STARS** software and our total commitment to customer support.



Features

- Wide field-of-view
- Large operating range - ~1 to 20 Meters (3 to 65 feet)
- Extremely portable (all items fit in two carry-on cases)
- High-speed electronic shutter with unlimited life
- Single cable (PoE) for data and power
- High-speed, low-visibility LED flash system freezes fast moving objects. Virtually unlimited life
- Optional small, lightweight, cableless hand-held probes for measuring untargeted points and features

V-STARS/DynaMo's accuracy, portability and ruggedness make it well-suited for a wide variety of applications in many industries, such as aerospace, antennas, automotive, engineering construction, shipbuilding and more.

The **V-STARS DynaMo** system has all the inherent advantages of photogrammetry:

Immune to vibration and movement

so it can be used where other technologies cannot

Works from lifts, cranes and unstable platforms

so it can see and measure what others cannot

Fast picture taking and no warm-up time

so measurements are quick and production downtime is minimized



High speed flash and shutter

for measuring fast-moving objects even in sunlight

Small and portable

so it goes practically anywhere, including into tight places where others cannot go



Geodetic Systems

V-STARS/DynaMo

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For more information on [DynaMo](#) or any other GSI product, please contact GSI or your local GSI distributor.

Specifications

Feature	D5R	D5F	D12R	D12F	D45R	D45F
Resolution Million Pixel (MP)	5MP		12MP		45MP	
Single Camera Accuracy (μm) ^{1, 2}	5μm + 7μm/M		5μm + 6μm/M		5μm + 4μm/M	
Dual Camera Accuracy (μm) ^{1, 2}	10μm + 14μm/M		10μm + 12μm/M		10μm + 8μm/M	
Speed (Hz) ³	10-25Hz	40-100Hz	5-12Hz	20-50Hz	1-3Hz	4-12Hz
Field-of-View (FOV) (V x H°)	Very-Wide (50x60°) or Ultra-Wide ⁴ (62x75°) ⁴		Ultra-Wide 66x83°		Ultra-Wide 60x82°	
Picture Synchronization	2 – 5 μs (via Ethernet actions command, no sync cable required)					
Flash	Deep Red (660nm) or Infra-Red (IR) LEDs (740nm)					
Cabling	Ethernet, Cat5e or better, Max length 50M					
Power (12V)	5-10W	10-15W	5-10W	10-15W	10-15W	
Weight (grams / pounds)	300g / 0.7lb	450g / 1.0lb	450g / 1.0lb	650g / 1.4lb	800g / 1.8lb	
Dimensions - cm inches	10x10x3.7 4.0x4.0x1.5	11x11x5 4.3x4.3x2.0	11x11x5 4.3x4.3x2.0	12x12x6.2 4.7x4.7x2.5	13x13x7.5 5.1x5.1x3.0	
Minimum shutter time	17 μs	23 μs	17 μs	23 μs	70 μs	

- 1) Accuracy is a fixed amount plus a variable amount (that depends on the size of the measured area in Meters).
- 2) Conditions for meeting accuracy specification are:
 - a. Targets are of acceptable size and good quality.
 - b. The recommended S-Mode and M-Mode guidelines are followed (see S-Mode and M-Mode manual for details).
 - c. Deep-Red LEDs are used; accuracy is typically 10-30% worse using our less-visible Infra-Red (IR) LEDs.
- 3) M-Mode Speed depends on operating conditions, including: # of targets, type of computer, and the # of cameras (speed range in the table is for the standard two-camera system).
- 4) Two lenses can be used with the D5 cameras. A very-wide angle lens or an even wider ultra-wide angle lens.

**ISO 9001:2015
CERTIFIED COMPANY**

 **PRI Registrar**
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