V-STARTS/N

Picture Perfect Measurements™
The V-STARTS/N systems from Geodetic Systems, Inc. (GSI) are a comprehensive range of turnkey digital photogrammetry solutions.

Platinum
(Pt)
Our most accurate and flexible offering

Gold
(Au)
Offer accuracy and functionality at a reduced cost

Silver
(Ag)
Suitable for less demanding accuracy requirements

The lightweight, highly portable V-STARTS/N cameras have been modified and ruggedized for reliable, high-accuracy, 3D measurement even in the most difficult conditions. Each offering comes with GSI’s unparalleled V-STARTS software and our total commitment to customer support.

The V-STARTS/N retains 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
- Small and portable so it goes practically anywhere, including into tight places where others cannot go

V-STARTS/N's accuracy, portability and ruggedness make it well-suited for a wide variety of applications in many industries. Typical applications include:

- Part and tool inspection
  In difficult conditions and with minimal production downtime

- Antenna inspection
  Day/night, hot/cold, of practically any size and in any orientation

- Automotive periodic tool inspection and troubleshooting
  During breaks and even on moving lines

- Shipbuilding fit-up, alignment, piping and inspection
  Outside/inside and even on the water

- Heavy engineering bridge blocks, part fit-up and conformance
  Practically any size, in any conditions

- Wind energy tower flatness, blade and spar measurements
  In the factory or in the field
V-STAR/N

1. **Custom Calibrated Lens**
   GSI's proprietary methods and calibration produce a lens that is both rugged and highly accurate.

2. **Robust Design**
   GSI's custom modifications include a unique lens guard with self-closing cap. Together, they surround the lens (without touching it) so it is protected from practically any hit or hazard.

3. **Protected Internal Flash**
   Thanks to GSI's advanced techniques, the V-STARS/N systems deliver high-accuracy using the cameras built-in flash so, in many situations, a bulky, cumbersome and battery-hungry external flash is not needed.

4. **Easy to Use**
   The V-STARS/N systems are ready to shoot straight out of the box. With its focus, flash, aperture and shutter preset for most situations, the user only needs to "point and shoot". Images can be reviewed on the camera's large, bright LCD screen, and can be saved to disk or transferred via the optional wireless interface (802.11g).

5. **Portable**
   Every V-STARS/N system (camera, notebook, accessories) can be carried as on-board luggage so it can go anywhere in the world with you. The camera is also small and lightweight so it is ideal for working in confined spaces.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Silver</th>
<th>Gold</th>
<th>Platinum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy*</td>
<td>10um + 10um/m</td>
<td>7um + 7um/m</td>
<td>5um + 5um/m</td>
</tr>
<tr>
<td>Sensor</td>
<td>24MP</td>
<td>36MP</td>
<td></td>
</tr>
<tr>
<td>FOV</td>
<td>narrow</td>
<td>medium</td>
<td>medium</td>
</tr>
<tr>
<td>FOV*</td>
<td></td>
<td>74(H) x 53(V)*</td>
<td>74(H) x 53(V)*</td>
</tr>
<tr>
<td>Shutter life</td>
<td>150k</td>
<td>200k</td>
<td>200k</td>
</tr>
<tr>
<td>Wireless</td>
<td>Optional (802.11g)</td>
<td></td>
<td></td>
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<tr>
<td>Backup camera</td>
<td>Optional</td>
<td></td>
<td></td>
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<tr>
<td>Lens guard</td>
<td>Standard</td>
<td>Standard</td>
<td></td>
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<tr>
<td>Self-capping</td>
<td>Standard</td>
<td></td>
<td></td>
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<tr>
<td>Protective covers</td>
<td>Standard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Built-in flash</td>
<td>Standard</td>
<td></td>
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<tr>
<td>External flash</td>
<td>Optional</td>
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<td></td>
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<tr>
<td>Weight</td>
<td>1.5kg (with lens, battery, handle, and protective covers)</td>
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<tr>
<td>Dimensions</td>
<td>150 x 150 x 125 MM (without handle)</td>
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<tr>
<td>Temperature</td>
<td>0 to 40°C, non-condensing</td>
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</table>

* Conditions for meeting accuracy specification:
  1) Targets are of acceptable size and quality
  2) Each target is seen in at least eight pictures with good geometry

For more information on this exciting development in measurement technology please contact GSI or your local GSI distributor.

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