**Design and specifications**

| **Orbit**          | Altitude: 617 km  
Type: SunSync, 10:30 am descending Node  
Period: 97 min. |
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<td><strong>Life</strong></td>
<td>Estimated Service Life: 10 to 12 years</td>
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</table>
| **Spacecraft Size and Aperture** | Size: 5.3 m (17.7 ft) tall x 2.5 m (8 ft) across  
7.9 m (26 ft) across deployed solar arrays  
Aperture: 1.1m |
| **Sensor Bands**   | Panchromatic: 450 - 800 nm  
4 Multispectral:  
Red: 655 - 690 nm  
Green: 510 - 580 nm  
Blue: 450 - 510 nm  
Near-IR: 780 - 920 nm |
| **Sensor Resolution** (GSD, Ground Sample Distance, geometric mean) | Panchromatic Nadir: 0.31 m  
20° Off-Nadir: 0.34 m  
56° Off-Nadir: 1.00 m  
65° (earth limb): 3.51 m  
Multispectral Nadir: 1.24 m  
20° Off-Nadir: 1.38 m  
56° Off-Nadir: 4.00 m  
65° (earth limb): 14.00 m |
| **Dynamic Range**  | 11-bits per pixel |
| **Swath Width**    | At nadir: 13.1 km |
| **Attitude Determination and Control** | Type: 3-axis Stabilized  
Actuators: Control Moment Gyros (CMGs) |

**Collection scenarios**

**Sensor bands**

- Panchromatic
- Multispectral
ARGUS Panoramic Camera System

12 cameras (Canon 1Ds Mark III) with 400mm lenses
NASA WB-57 Aircraft  – Argus Camera Payload
ARGUS Marine Examples from 50,000 feet

Jet Ski

Barge followed by tug
One-quarter of an image frame

50,000 feet above Ellington Airfield - NASA Johnson Space Center
Mooring Buoy Array
(18-inch diameter)
Present Capability

• Commercial satellite:  (DigitalGlobe WorldView 4)
  – 0.31m (nadir and B&W)
  – 1.24m (multispectral)
  – 13 km swath

• Existing NASA ARGUS Camera System
  – 0.15m (nadir) / 9 km swath
  – 0.30m (nadir) / 18 km swath

ARGUS could be used for a near-shore demo