



DIRECT MEASUREMENTS, INC.

# DPS

## Dual Purpose Sensor Strain Measurement/Crack Monitoring



### DPS Features

- Measures strain and monitors crack initiation/growth
- Accurate, compact, easy to use
- No separate data acquisition equipment required
- Logs data continuously at user-specified frequency
- Reusable (can be relocated)
- Direct data download via USB drive
- Device control via supplied web interface software ("DPSConsole")
- DPSView software for real-time monitoring and post processing

### DPS Applications

#### *Civil Infrastructure*



#### *Aerospace & Defense*



#### *Energy*



#### *Laboratory & Testing*



Patent Pending DART DSE DPS

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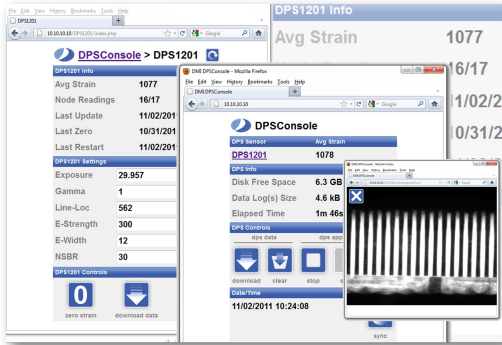


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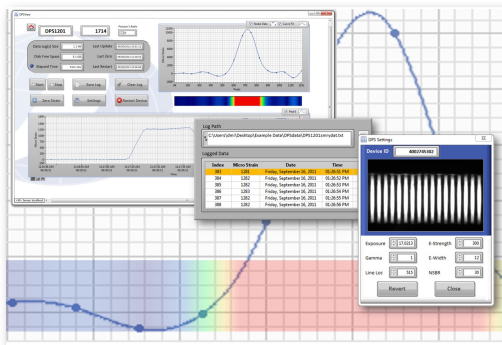
## Dual Purpose Sensor Strain Measurement/Crack Monitoring

### DPS Software



#### DPSConsole

DPSConsole provides a basic web interface to the DPS. Connect any wireless Internet-capable device (computer, phone, iPod, etc) to the DPS to access the DPSConsole device-control and network data-download features. Requires a wireless network connection to the DPS via standard 802.11 connection.



#### DPSView

DPSView is a real-time graphical interface that analyzes and displays current and recent average strain and strain variations within the data. Includes multiple charting options, device control and network data-download capabilities. DPSView software utilizes National Instrument's powerful LabVIEW tools and requires wireless network connection to the DPS via standard 802.11 connection.

### DPS Technical Specifications

#### DPS Device

Total Weight: 1.5 lbs (0.68 kg)  
Max Data Rate: 1/second (user specified)  
Strain Range: +/- 15,000 microstrain  
Accuracy: <10 microstrain\*1  
Data Retrieval: Wireless via DPS Software or 2.0 USB Flash Drive

#### Sensor Head

Material: ABS Plastic  
Dimensions: 2.38 D x 1.15 H in  
(60.5 D x 29.2 H mm)  
Tether: USB cable, 16.4 ft (5 m)  
or USB Flash Drive

#### DPS Device Enclosure

Material: Gray Polycarbonate  
Enclosure Rating: NEMA 4X, UL94-HB, UV Stabilized  
Connectors Rating: IP-68 Weatherproof  
Dimensions: 4.7 L x 3.2 W x 3.4 H in  
(120 L x 81 W x 86 H mm)  
Temperature Range: -40 to 248 F (-40 to 120 C)

#### Power Input

Voltage: 110-125VAC  
Cord Length: 1 ft (0.3 m)  
Cord Type: NEMA5-15P  
Cord Voltage Rating: 125 V  
Cord Current Rating: 10 A

#### DPS Device Onboard Processing

Chip: OMAP 3530 ARM, 720 MHz  
Networking: 802.11b/g wireless  
Connectivity: USB 2.0

#### DPS Polymer Gage\*2

Material: Polyester  
Dimensions: 0.375 x 0.183 (9.5 x 4.6 mm)  
Operating Temperature: -200 to 200 F (-129 to 93 C)

#### DPS Software

DPSConsole  
DPSView

\*1 DMI results under controlled conditions, actual results may vary

\*2 Bonding methods and material same as conventional electrical-resistance strain gage application

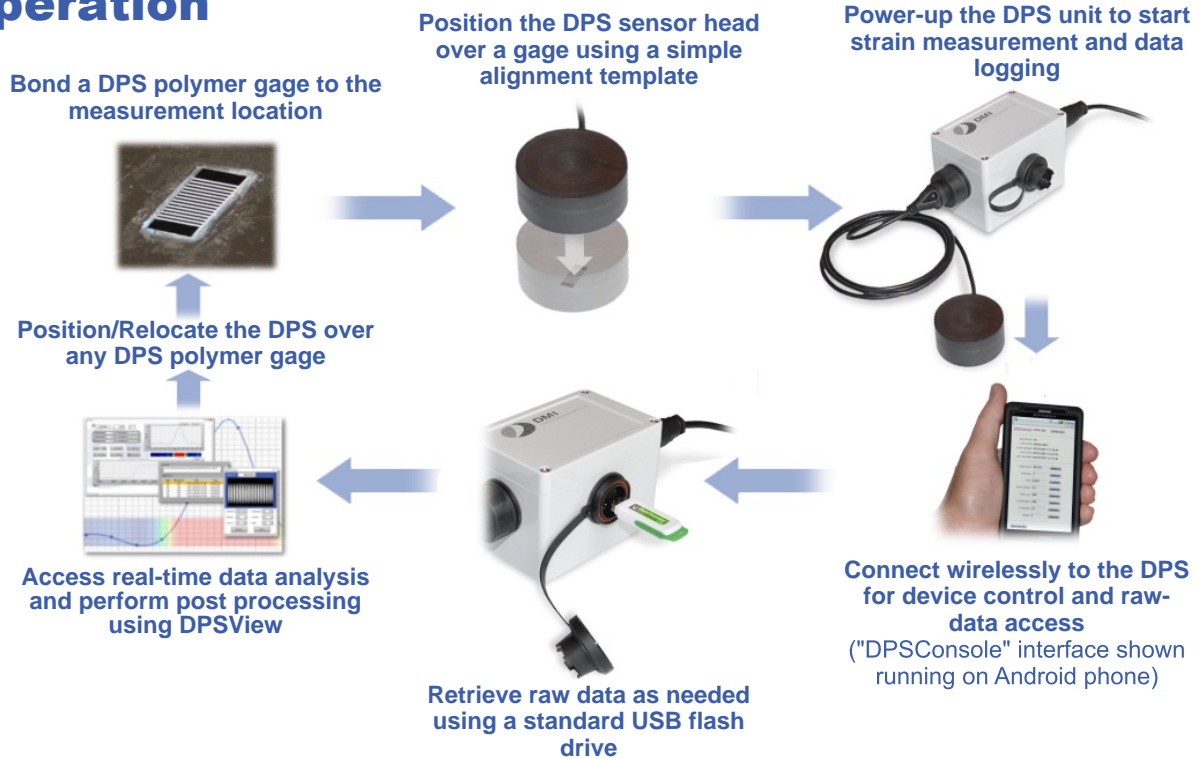


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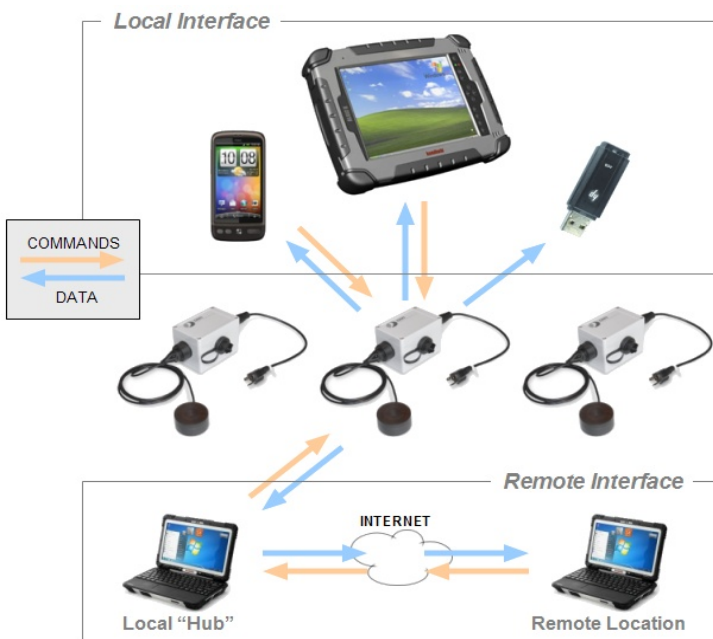
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## Dual Purpose Sensor Strain Measurement/Crack Monitoring

### DPS Operation



### DPS Data Retrieval



### Contact Information

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