SRI International is introducing wall-climbing robot prototypes for surveillance, inspection, and sensor placement applications. Ideal for remote surveillance or inspection of concrete pillars or other structures (e.g. bridges, tunnels, etc.), this robot uses SRI’s patented electroadhesion technology to enable wall climbing. It can also be used to carry payloads such as cameras, wireless network nodes, and other sensors.

Electroadhesive robots enable:
- Sensor placement above ground clutter
- High-resolution inspection of vertical surfaces
- Automated mapping of 3D structures
- Automatic detection of cracks

**Robot Features**
- Remotely driven by operator-controlled wireless transmitter
- High-performance, rugged, steel-reinforced electroadhesive belt
- High strength carbon fiber tail
- Able to traverse concrete walls with bumps, ledges, pipes, and wire bundles
- Operates in dusty, outdoor environments
- Operates on most surfaces
- Innovative roller design that houses all electroadhesion electronics components
- High strength/weight ratio fiberglass honeycomb chassis
- High torque servo motor
- High energy-density lithium polymer batteries for robot drive and advanced lithium ion batteries for electroadhesion

**PERFORMANCE SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Outside: Approx. 50 cm x 70 cm Main body: Approx. 40 cm x 50 cm</th>
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</thead>
<tbody>
<tr>
<td>Total Weight (excluding all payloads)</td>
<td>1.2 Kg</td>
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</table>
| Payload Capacity | • 200 g at a distance 10-15 cm from wall  
• Heavier payloads (up to 1 Kg) can be hung from the robot at a distance of less than 2 cm from wall |
| Operational Surfaces | Concrete, metal, wood, glass, and drywall |
| Steering | 5° (greater steering angles available) |
| Battery Life | • 200 m travel distance without recharging  
• 5 hours perching time without recharging |
| Remote Control Range | 100 m |
| Operational Conditions | 10° – 40°C 
Robot can navigate in limited wind conditions (< 5 m/s) |
| Obstacle Clearance | Obstructions of height 1 cm or less perpendicular to direction of robot motion |

Watch SRI’s wall-climbing robot in action on our YouTube channel: youtube.com/innovationsri
The technology and design of this robot may be adapted to fit the needs of your specific application. Contact SRI to discuss its potential for your project.

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About SRI International
Silicon Valley-based SRI International, a nonprofit research and development organization, performs sponsored R&D for governments, businesses, and foundations. SRI brings its innovations to the marketplace through technology licensing, new products, and spin-off ventures. Commemorating its 65th anniversary in 2011, SRI is known for world-changing innovations in computing, health and pharmaceuticals, chemistry and materials, sensing, energy, education, national defense, and more.

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