The Enlighted Surface Sensor, USB, placed under each open-office workspace, detects when the desk is in use, providing users with real-time desk availability. The Surface Sensor is a new variation of our Gen 5 sensor optimized for easy deployment and tuned for placement under desks in a minimally-sized package.

**OVERVIEW**

The Surface Sensor, USB, is a complete sensing node powered by a low voltage power source. The sensor incorporates an optical Fresnel lens with a blinder cover that restricts the sensor’s field of view to avoid false detection of motion near the desk. An innovative mount-based design or an adhesive strip included in the kit supports easy installation and maintenance.

The sensor must be connected to a low voltage power source. Enlighted’s recommended solution includes the following:

- USB-A to micro USB-B or micro USB-A connector cable
- AC/DC 5V with 10W or 3W external wall mounted power adapter

**FEATURES**

**Edge Sensing:** Local processing capability supports advanced sensing and detection algorithms, providing optimization of existing features and enabling future applications.

**Bluetooth Low Energy:** An embedded BLE radio allows the sensor to receive and transmit beacons.

**Occupancy Sensing:** A digital Passive Infrared (PIR) sensor supports precise motion identification while minimizing false detection events.

**IoT Sensing Node:** When configured as an IoT Node, the sensor streams comprehensive live data for use with Enlighted’s real-time location, analytics, and API software products.

**Standards-Based Networking and Security:** The Enlighted 802.15.4 wireless network with AES-128 encryption delivers secure, reliable communication that coexists with Wi-Fi networks by sensing low-traffic channels and transmitting in bursts.

**Data Privacy:** The sensor captures occupancy data in the sensor coverage area. The sensor cannot directly reference or identify any natural person.
MOUNTING
For a typical 27” height desk, mount the sensor to the underside of the desk 15-26” from the front edge of the desk and at least 5” from the rear edge of the desk. Install the sensor parallel to the front edge of the desk using either the adhesive tape or the mount shipped with the sensor. After installation, the sensor lens must be facing the desk occupant.

SENSOR COVERAGE PATTERNS
The Surface Sensor incorporates an optical Fresnel lens that works with the digital Passive Infrared (PIR) sensor to detect occupancy and motion. The multifaceted lens focuses light onto the PIR to produce an all-encompassing field of view through the aggregation of many narrow fields of view. When the sensor is deployed as recommended, the area covered by each sensor overlaps, reinforcing coverage and accuracy across the entire floor plan.

<table>
<thead>
<tr>
<th>Desk Height</th>
<th>Major Motion (Radius)</th>
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<td>27”</td>
<td>32”</td>
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TECHNICAL SPECIFICATIONS
- **Mount Adhesive:** One VHB Adhesive Strip
- **Mount Bracket:** Polycarbonate Polymer, ~5 grams weight, Two #4 0.5” wood screws
- **Maximum Input Power:**
  - USB Port: ~120mW
- **Maximum RF Output Power:**
  - RF Output IEEE 802.15.4: 3-4dBm
  - BLE: 0 dBm
- **Wireless Standards:**
  - IEEE 802.15.4
  - Bluetooth 4.0 Low Energy (BLE)
  - Radio Frequency: 2400-2483.5 MHz
  - Wireless Range: 150 ft. (46 m) radius open range
  - Encryption: AES-128

ORDERING INFORMATION
- **SU-Si-USB-IoT** Surface Sensor, USB
- **BRKT-SU5I-50** Mount Bracket
- **API-RTO-DSK-A-01** Desk Occupancy API

WARRANTY
5 years
View [www.enlightedinc.com/limited-warranty-terms](http://www.enlightedinc.com/limited-warranty-terms) for complete terms and conditions

*Optional 50-pack of the brackets with screws sold separately.