# SPOT

**BOSTON DYNAMICS**

## TRANSFORMATIVE MOBILITY



**Automate sensing and inspection, capture limitless data, and explore without boundaries.**

### OPERATE WITH EASE

Spot's vision system makes it easy to navigate around objects and over rough terrain. Control the robot from afar using an intuitive tablet application and built-in stereo cameras. Spot can also be teleoperated via Scout desktop software.

### AUTOMATE DATA COLLECTION

Program repeatable autonomous missions to gather consistent data. Flexible autonomy allows Spot to adjust to changes on its programmed path as desired. Missions can be launched from the Spot Dock for remote operations.

### CUSTOMIZE FOR YOUR NEEDS

Spot can carry up to 14 kg (30 lbs) of sensing equipment. Our diverse payload ecosystem is ready for a variety of applications, from thermal and acoustic inspections to laser scanning and site progress monitoring.

### LEARN WITH TRAINING AND SUPPORT

We make it easy to get started with Spot. Our Support Center features a comprehensive collection of knowledge articles and discussion groups, product training options are available, and in addition to our one-year limited warranty, we offer premium service and support through a Spot CARE subscription.

## FEATURES

- 14 kg (30 lbs) Payload Limit
- 90-Minute Run time
- Object Avoidance
- Stair & Complex Terrain Navigation
- Manual & Autonomous Operation
- IP54 Rated
- Flexible API and Python SDK
- Premium Service and Support

# INDUSTRIES

### MANUFACTURING

Set Spot up to do autonomous inspection rounds or use the robot to create digital twins of a plant in advance of rework.

### CONSTRUCTION

Inspect progress on construction sites, create digital twins, and compare as-built conditions to Building Information Modeling (BIM) autonomously with Spot.

### POWER & UTILITIES

Create autonomous routes or drive the robot to remotely perform inspections in electrified or radiation dense areas.

### MINING

Create routine tunnel inspection routes and attach additional payloads to take measurements and ensure safe working conditions.

### OIL AND GAS

Create autonomous routes or drive the robot to remotely inspect facilities and improve site awareness of plant operations.

### PUBLIC SAFETY

Drive Spot remotely to get eyes on dangerous situations and inspect hazardous packages from afar.

# SPECIFICATIONS

BASE ROBOT

### DIMENSIONS

| | |
|---|---|
| Length | 1100 mm (43.3 in) |
| Width | 500 mm (19.7 in) |
| Height (Sitting) | 191 mm (7.5 in) |
| Default Height (Walking) | 610 mm (24.0 in) |
| Max Height (Walking) | 700 mm (27.6 in) |
| Min Height (Walking) | 520 mm (20.5 in) |
| Net Mass/Weight (Spot with battery) | 31.7 kg (69.9 lbs) |

### LOCOMOTION

| | |
|---|---|
| Max Speed | 1.6 m/s |
| Max Slope | ±30° |
| Max Step Height | 300 mm (11.8 in) |

### BATTERY

| | |
|---|---|
| Battery Capacity | 564 Wh |
| Average Runtime | 90 mins |
| Standby Time | 180 mins |
| Recharge Time | 60 mins |
| Length | 324 mm (12.8 in) |
| Width | 168 mm (6.6 in) |
| Height | 93 mm (3.7 in) |
| Mass/Weight | 5.2 kg (11.5 lbs) |

### TERRAIN SENSING + CONNECTIVITY

| | |
|---|---|
| Horizontal Field of View | 360° |
| Range | 4 m (13 ft) |
| Lighting | > 2 Lux |
| Collision avoidance | maintains set distance from stationary obstacles |
| WiFi | 2.4GHz / 5GHz b/g/n Ethernet |

### ENVIRONMENT

| | |
|---|---|
| Ingress Protection | IP54 |
| Operating Temp. | -20°C to 45°C |

### CHARGER

| | |
|---|---|
| Input Voltage | 100-240VAC 50/60Hz 8A Max |
| Output | 35-58.2 VDC, 12A Max |
| Length | 380 mm (15.0 in) |
| Width | 315 mm (12.4 in) |
| Height | 178 mm (7.0 in) |
| Mass/Weight | 7.5 kg (16.5 lbs) |
| Operating Temp. | 0°C to 45°C |

# SPECIFICATIONS CONT.

## PAYLOAD MOUNTING

| | |
|---|---|
| Max Weight | **14 kg (30.9 lbs)** |
| Mounting Area | **850 mm (L) x 240 mm (W) x 270 mm (H)** |
| Mounting Interface | **M5 T-slot rails** |
| Connector | **DB25 (2 ports)** |
| Power Supply | **Unregulated DC 35-58.8V, 150W per port** |
| Integration | **Available software API and hardware interface control document** |

## TABLET

| | |
|---|---|
| Height | **127 mm (5.0 in)** |
| Width | **214 mm (8.4 in)** |
| Depth | **10 mm (0.4 in)** |
| Weight | **426 g (0.9 lbs)** |
| Touch Screen Size | **8" diagonal** |
| Resolution | **1920x1200** |
| Ingress Protection | **IP65** |

**Joystick Add-on available for Spot Arm**

## TRAVEL CASES

### ROBOT CASE
Includes robot and tablet

| | |
|---|---|
| Length | **927 mm (36.5 in)** |
| Width | **546 mm (21.5 in)** |
| Height | **464 mm (18.25 in)** |
| Net Mass/Weight | **47.6 kg (105 lbs)** |

### POWER CASE
Includes two batteries and charger

| | |
|---|---|
| Length | **810 mm (32 in)** |
| Width | **530 mm (21 in)** |
| Height | **300 mm (12 in)** |
| Net Mass/Weight | **28kg (61 lbs)** |

## SPOT DOCK

### DIMENTIONS

| | |
|---|---|
| Length | **1140 mm (44.9 in)** |
| Width | **414 mm (16.3 in)** |
| Height | **403 mm (15.9 in)** |
| Mass/Weight | **22.9 kg (50.5 lbs)** |

### ENVIRONMENT

| | |
|---|---|
| Operating Temp. | **0°C to 35°C** |
| Lighting | **Ambient light required** |
| Mounting | **Bolt/tie down locations provided** |

### CONNECTIVITY
Gigabit Ethernet passthrough to robot

### POWER

| | |
|---|---|
| Input | **100-240 VAC 50/60 Hz 8A** |
| Output | **58V at 12A** |
| Charge Time | **2-3.5 hours\*** |

**\*Charge time varies based on table below**

| Ambient Temp. | 80% charge | 100% charge |
|---|---|---|
| 25°C | 50 min | 2 hrs |
| 35°C | 2.5 hrs | 3.5 hrs |

### CERTIFICATIONS
UL1564, NEMA 2
IEC 61558

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### SAFETY AND COMPLIANCE, UNITED STATES

Designed according to ISO 12100 for risk assessment and reduction methodology and IEC 60204-1 for electrical safety. See Information for Use for further details on intended uses.

EMC: FCC Part 15B
Radio equipment: Incorporates a FCC Part 68 Certified radio system Laser product = Class 1 eye-safe per IEC 60825-1:2007 & 2014