Spot®

for Bomb Disposal

INVESTIGATE, IDENTIFY, RENDER SAFE, DISPOSE

Keep people out of harm's way while assessing and rendering safe potentially explosive threats from a distance.

Spot as a tool for EOD helps reduce operator risk in render safe scenarios. Quick to deploy, Spot makes first contact with a suspicious package or IED, enabling operators to identify threats and determine next steps remotely.
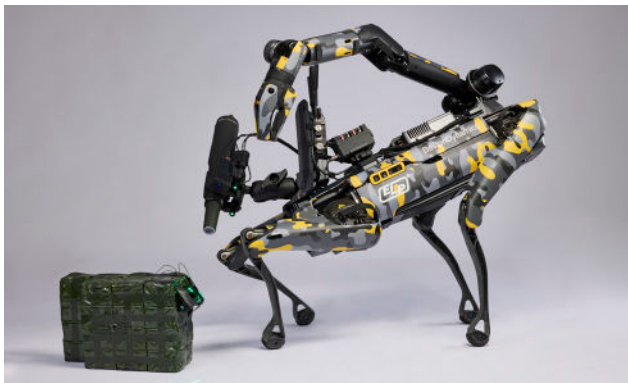
Locate

Mission ready in minutes, Spot can traverse uneven terrain quickly while operators maintain safe standoff distances. Operators have full control using a handheld controller tablet, and full eyes on the scene using Spot's on-board cameras and sensors.

Identify

Once on target, Spot can relay back crucial information to operators and incident command. With the Spot Arm and intuitive manipulation presets, you can carefully pick up objects, open doors, and get closer eyes onto the suspected object with the gripper camera.

Render Safe and Dispose

Once the team has the information they need to take action, Spot can be equipped with a disrupter to render the target safe. Working with our technology partner, ELP GmbH, the kit is designed for the integration of large and medium sized disrupters, and includes a fully integrated laser aiming and radio firing system.

ELP Disrupter Integration Kit

The disrupter integration kit from ELP GmbH can be mounted directly on Spot, or used with a gripper mount for better reach in challenging locations such as underside of vehicles, inside containers, and more.

Pinpoint accuracy is ensured by the innovative laser aiming system - enabling exact display of the targeted point from a distance from 0 to 50 ft (0-15 m), and activated automatically when the object is at least 50 ft away. The distance to the target is shown to operators on the tablet display, making it easier than ever to position the disrupter precisely.

The aiming system is fully integrated into the operator's peripherals and uses the encrypted radio link of the Persistent Systems MPU-5 (Sold Separately).

BostonDynamics

www.bostondynamics.com/products/spot
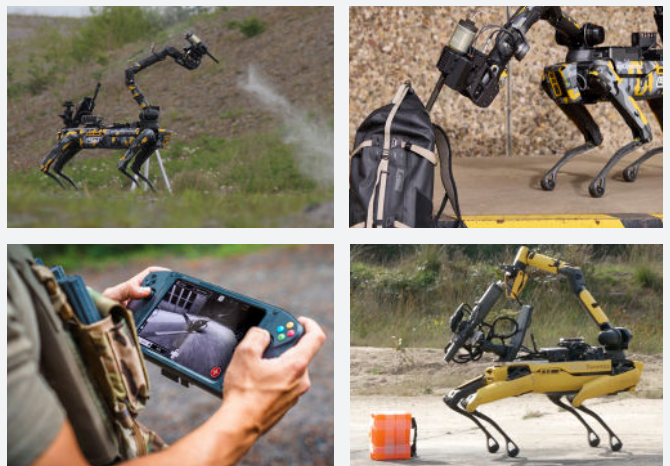
Specifications

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)

TERRAIN SENSING
Horizontal Field of View = 360°
Range = 4 m (13 ft)
Lighting = > 2 Lux
Collision avoidance = maintains set distance from stationary obstacles

CONNECTIVITY
WiFi = 2.4GHz / 5GHz b/g/n
Ethernet

ENVIRONMENT
Ingress Protection = IP54
Operating Temp. = -20°C to 55°C

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)

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

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 (two batteries) = 28kg (61 lbs)

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

CAM+IR

DIMENSIONS
Length = 334 mm (13.1 in)
Width = 227 mm (8.9 in)
Height
(Front Mount) = 357 mm (14.1 in)
(Rear Mount) = 427 mm (16.8 in)
Weight
(Front Mount) = 7.5 kg (16.4 lbs)
(Rear Mount) = 8.0 kg (19.8 lbs)

360° CAMERA
Field of View (FoV) = 360 x 170°
Video Frame Rate = Variable*
Video Storage = No
Video Streaming = Yes
Resolution = 10 MP
File Size = 31.1 MB
Still Image Format = PPM (Portable Pixel Map)

PTZ CAMERA
Resolution = 2MP, 1080p video
Optical Zoom = 30x
Pointing Accuracy = 2 degrees
Range of Motion = 170°/sec
Tilt Range = -30 to 270°

IR CAMERA
Scene Temp. Range
(High Gain) = -40°C to +160°C
(Low Gain) = -40°C to +550°C
Video Speed = 7.5 Hz
FoV = 69 x 56°
Image Resolution = 640 x 512
Accuracy = Radiometric ±5°C

AUDIO
Input = Sennheiser MKE600 shotgun microphone
Storage = Removable 256 GB USB 3.1

ENVIRONMENT
Ingress Protection = IP65
Operating Temperature = -20°C to 45°C

Disrupter Integration Kit

AIMING SYSTEM
- **Aiming Laser (Class 3 Laser)**
- **Laser Range Finder (0-15m)**

COMPATIBLE DISRUPTERS
- **Chemring RE12G**
- **Chemring RE70**
- **Chemring M5 Hornet**
- **CarbonFire**
- **Additional disrupters on request**

FIRING CIRCUIT
- **FOG (RCV - Integrated)**
- **Other on request**

COMMUNICATIONS
- **Boston Dynamics CORE I/O**
- **Persistent Systems MPU-5 (Sold Separately)**

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