# Spot 

FOR PUBLIC SAFETY

## Keep people out of harm's way and safely assess hazardous situations.

Spot helps reduce risk in potentially dangerous scenarios, enabling first responders to safely assess and de-escalate tense or hazardous situations.

## Investigate Suspicious Packages

Investigate suspicious packages and suspected explosives with Spot while maintaining a safe perimeter. Integrate sensors to measure oxygen levels of potentially explosive environments or detect explosive materials. Equipped with cameras, x-ray devices, and the Spot Arm, Spot enables Explosive Ordnance Disposal (EOD) technicians to safely inspect suspicious packages.

## De-escalate Hostage Scenarios

Spot can gather valuable information to support response teams and facilitate remote negotiations, reducing risk to first responders and the public. In active shooter or hostage situations, Spot can help first responders establish visual and two-way communications, so they can gather the information needed to de-escalate the situation and keep officers and bystanders out of harm's way.

## Detect Hazardous Materials

Deploy Spot with specialized sensors to detect radiological and nuclear material, toxic gases, and other hazardous materials. Spot helps field operators identify and assess Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE) threats from a safe stand-off distance, traversing unpredictable terrain and collecting data about the risk.



## Specifications

## Base Robot

DIMENSIONS
Length $=1100 \mathrm{~mm}$ (43.3 in)
Width $=500 \mathrm{~mm}$ ( 19.7 in )
Height (Sitting) $=191 \mathrm{~mm}$ ( 7.5 in)
Default Height (Walking) $=610 \mathrm{~mm}$
(24.0 in)

Max Height (Walking) $=700 \mathrm{~mm}$
(27.6 in)

Min Height (Walking) $=520 \mathrm{~mm}$ (20.5 in)

Net Mass/Weight (Spot with
battery) $=31.7 \mathrm{~kg}(69.9 \mathrm{lbs})$

## LOCOMOTION

Max Speed $=1.6 \mathrm{~m} / \mathrm{s}$
Max Slope $= \pm 30^{\circ}$
Max Step Height = 300 mm (11.8 in)

## Battery

Battery Capacity = 564 Wh
Average Runtime $=90 \mathrm{mins}$
Standby Time $=180 \mathrm{mins}$
Recharge Time $=60 \mathrm{mins}$

## Charger

Input Voltage $=100-240 \mathrm{VAC}$
50/60Hz 8A Max
Output = 35-58.2 VDC, 12A Max
Length $=380 \mathrm{~mm}$ (15.0 in)

## Tablet

Height $=127 \mathrm{~mm}$ ( 5.0 in )
Width $=214 \mathrm{~mm}$ ( 8.4 in )
Depth $=10 \mathrm{~mm}(0.4 \mathrm{in})$
Weight $=426 \mathrm{~g}(0.9 \mathrm{lbs})$
Touch Screen Size = 8" diagonal

## Travel Cases

ROBOT CASE
Includes robot and tablet
Length $=927 \mathrm{~mm}$ (36.5 in)
Width $=546 \mathrm{~mm}$ (21.5 in)
Height $=464 \mathrm{~mm}$ (18.25 in)
Net Mass/Weight =
47.6 kg ( 105 lbs )

TERRAIN SENSING
Horizontal Field of View $=360^{\circ}$
Range $=4 \mathrm{~m}$ (13 ft)
Lighting = > 2 Lux
Collision avoidance $=$ maintains set distance from stationary obstacles

CONNECTIVITY
$\mathbf{W i F i}=2.4 \mathrm{GHz} / 5 \mathrm{GHz} \mathrm{b} / \mathrm{g} / \mathrm{n}$ Ethernet

ENVIRONMENT
Ingress Protection $=$ IP54
Operating Temp. $=-20^{\circ} \mathrm{C}$ to $45^{\circ} \mathrm{C}$

Length $=324 \mathrm{~mm}$ ( 12.8 in )
Width $=168 \mathrm{~mm}(6.6 \mathrm{in})$
Height $=93 \mathrm{~mm}(3.7 \mathrm{in})$
Mass/Weight = 5.2 kg (11.5 lbs)

Width $=315 \mathrm{~mm}$ (12.4 in)
Height $=178 \mathrm{~mm}$ ( 7.0 in )
Mass/Weight $=7.5 \mathrm{~kg}(16.5 \mathrm{lbs})$
Operating Temp. $=0^{\circ} \mathrm{C}$ to $45^{\circ} \mathrm{C}$

Resolution = 1920×1200
Ingress Protection $=$ IP65
Joystick Add-on available for Spot Arm

## POWER CASE

Includes two batteries and charger Length $=810 \mathrm{~mm}$ ( 32 in )
Width $=530 \mathrm{~mm}$ (21 in)
Height $=300 \mathrm{~mm}$ (12 in)
Net Mass/Weight (two batteries) = 28 kg ( 61 lbs )

## Payload Mounting

Max Weight $=14 \mathrm{~kg}(30.9 \mathrm{lbs})$
Mounting Area $=850 \mathrm{~mm}(\mathrm{~L}) \times 240$
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

## Spot Dock

DIMENSIONS
Length $=1140 \mathrm{~mm}$ (44.9 in)
Width $=414 \mathrm{~mm}$ ( 16.3 in )
Height $=403 \mathrm{~mm}$ ( 15.9 in )
Mass/Weight $=22.9 \mathrm{~kg}(50.5 \mathrm{lbs})$
POWER
Input $=100-240$ VAC $50 / 60 \mathrm{~Hz} 8 \mathrm{~A}$
Output $=58 \mathrm{~V}$ at 12 A
Charge Time $=2-3.5$ hours*
*Charge time varies based on table below

| Ambient Temp. | $\mathbf{8 0 \%}$ charge | $\mathbf{1 0 0 \%}$ charge |
| :--- | :--- | :--- |
| $\mathbf{2 5 ^ { \circ }} \mathrm{C}$ | 50 min | 2 hrs |
| $\mathbf{3 5 ^ { \circ } \mathrm { C }}$ | 2.5 hrs | 3.5 hrs |

## ENVIRONMENT

Operating Temp. $=0^{\circ} \mathrm{C}$ to $35^{\circ} \mathrm{C}$
Lighting = Ambient light required
Mounting = Bolt/tie down
locations provided
CONNECTIVITY
Gigabit Ethernet passthrough to robot

CERTIFICATIONS
UL1564, NEMA 2
IEC 61558

## 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

