

Spot[®] EAP 2

Spot EAP 2 enhances the autonomy, computation, and communications available on the Spot platform.

Improve Spot's autonomous navigation with lidar providing a sensing range up to 100 meters. Easily configure inputs such as sensors, cameras, and other devices and process data collected into actionable insights.



Features



Lidar enhances autonomy by mapping 100m around Spot



Compact CPU and GPU with customizable inputs and outputs



5, 12, and 24V regulated power output



RJ45 standard ethernet adapter



Easy cable sealing to maintain IP54 rating



Built-in 5G/LTE modem with CBRS support for private networks and option to use AT&T's public network



Comes with sample computer vision model



Specifications

DIMENSIONS

Length = 224 mm (8.8 in)

Width = 173 mm (6.8 in)

Height (with antenna) = 246 mm (9.7 in)

Height (without antenna) = 64 mm (2.5 in)

Mass/Weight (with antenna) = 3.6 kg (7.9 lbs)

Mass/Weight (without antenna) = 3.1 kg (6.8 lbs)

PROCESSING (JETSON XAVIER NX)

CPU = 6-core NVIDIA Carmel ARM V8.2 64-bit CPU
with 6MB Lw + 4MB L3 cache

GPU = 384-core NVIDIA Volta GPU with 48 Tensor cores

Memory = 16GB 128-bit LPDDR4x at 51.2 GB/s

LIDAR

Model = Velodyne VLP-16

Sensor = 16 Channels

Measurement Range = 100 m

Range Accuracy = Up to ± 3 cm

Field of View (vertical) = $+15.0^\circ$ to -15.0° (30°)

Angular Resolution (vertical) = 2.0°

Field of View (horizontal) = 360°

Angular resolution (horizontal/azimuth) = $0.1^\circ - 0.4^\circ$

Rotation Rate = 5 Hz – 20 Hz

Laser Product = Class 1 eye-safe per IEC 60825-1:2007 & 2014

Laser Wavelength = 903 nm

Power = 8 W

Voltage = 9-18 V

Other = Integrated web server for monitoring and configuration

SECURITY

Disk Encryption =

SSD encrypted with standard LUKS technology

Network Encryption =

Connections encrypted with TLS 1.2 and 1.3

Authentication =

Access to services restricted to authenticated users

Secure Boot =

Tamper-proof filesystem with hardware root of trust

Firmware Verification =

Firmware updates must be cryptographically signed

CONNECTIVITY AND STORAGE

5G/LTE = User-installable SIM card. AT&T is the supported 5G provider in the United States; however, customers also have the option of utilizing their own private 5G network. For international customers, users must obtain their own SIM from a local carrier for which there may be additional network restrictions.

Ethernet = GbE interface, unmanaged 2 port Ethernet switch for additional connectivity

Storage = 512GB SSD*

USB 3.1 = 2x USB 3.1 ports with support for 4.5W

USB-C = 1x USB-C port with support for 50W power delivery and video out

SD Card = 1x SD card slot

Other Connections =

E-Stop interface

PPS output

GPIO (Configurable to PWM output)

I2C Ports

Power Outputs =

48V or robot battery voltage for Spot Explorer models

24V, 50W

12V, 50W

5V, 30W

MODEM SUPPORTED BANDS (TELIT FN980)

Regions = North America, EMEA, APAC

5G FR1 = n1, n2, n3, n5, n7, n8, n12[†], n20, n25, n28, n38, n40, n41, n48, n66, n71, n77, n78, n79

LTE = 1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 28, 29DL, 30, 32, 34, 38, 39, 40, 41, 42, 43[†], 46(LAA) 48(CRS), 66, 71

WCDMA = 1, 2, 3, 4, 5, 6, 8, 9, 19

ENVIRONMENT

Storage Temperature = -40 to 70°C

Operating Temperature = -20 to 45°C

Ingress Protection = IP54

*Actual storage available will be less due to operating system.

[†]Noted bands will be supported in a future release.

Contact

sales@bostondynamics.com

www.bostondynamics.com/products/spot/payloads

BostonDynamics

