








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

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