

Spot[®] CORE I/O

Spot CORE I/O enhances both the computation and communications available on the Spot platform.

Easily configure inputs such as sensors, cameras, and other devices to Spot and process data collected into actionable insights.



Features



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



Option to add lidar for enhanced autonomy (see Spot EAP 2)



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) = 2.8 kg (6.3 lbs)

Mass/Weight (without antenna) = 1.4 kg (3.2 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

CONNECTIVITY AND STORAGE

5G/LTE = User-installable SIM card

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

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

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 Spot CORE I/O's operating system.

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

Contact

sales@bostondynamics.com

www.bostondynamics.com/products/spot/payloads

BostonDynamics

