SPOT CORE I/O

BOSTON DYNAMICS

Spot CORE I/O enhances both the computation and communications available on the Spot platform and makes it easy to configure inputs and outputs. Connect sensors, cameras, and other devices to Spot and process the data collected into actionable insights.

ADDITIONAL COMPUTATION

Dedicated processing via CPU and GPU for sensor integrations requiring on-robot computation.

ENHANCED COMMUNICATION

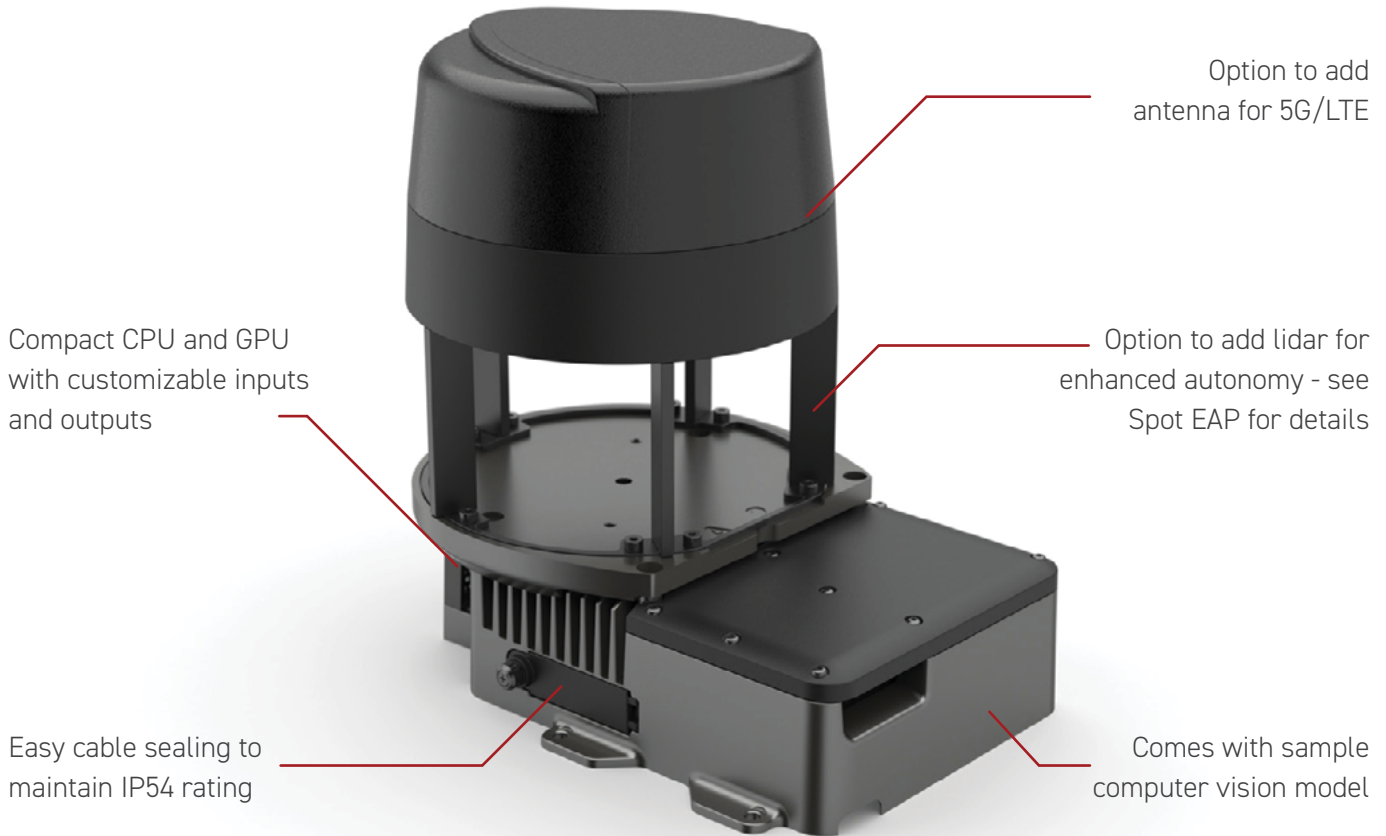Built-in 5G/LTE modem, CBRS support for private LTE networks, and access to two Ethernet ports.

FLEXIBLE CONNECTIVITY

Easy-to-use, weather-sealed connectivity, including GPIO, E-Stop, and multiple power options.

CHIRONIX ›

CONFIGURATION DETAILS

Option to add antenna for 5G/LTE

Compact CPU and GPU with customizable inputs and outputs

Option to add lidar for enhanced autonomy - see Spot EAP for details

Easy cable sealing to maintain IP54 rating

Comes with sample computer vision model

SPECIFICATIONS

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

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

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)

ENVIRONMENT

Storage Temperature	-40 to 70°C
Operating Temperature	-20 to 45°C
Ingress Protection	IP54

CONNECTIVITY AND STORAGE

5G/LTE	User-installable SIM card
Ethernet	GbE interface, unmanaged 2 port Ethernet switch for additional connectivity
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