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.