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° to -15.0° (30°)
- **Angular Resolution (vertical)**: 2.0°
- **Field of View (horizontal)**: 360°
- **Angular resolution (horizontal/azimuth)**: 0.1° – 0.4°
- **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
- **5G FR2**: n66, n71, n77, n78, n79
- **LTE**: 1, 2, 3, 4, 5, 6, 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

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*Actual storage available will be less due to operating system.
†Noted bands will be supported in a future release.