LiDAR Configurations

- Velodyne Puck (VLP-16)
- Velodyne HDL-32E
- Quanergy M8 (Core)
- Velodyne Puck (32MR)
- Quanergy M8 (Ultra)
- Teledyne Optech CL-360
**Velodyne Puck (VLP-16)**

**Tactical-Range LiDAR Unit**
- Effective range: < 75 m
- Range accuracy: ± 3 cm
- Scan rate: 5-20 Hz
- Returns: 2
- Weight: 830 g
- Wavelength: 903 nm

**Notes:**
- Most cost-effective unit for both Geo-MMS LiDAR and Point&Pixel
- Variations include ‘Lite’ and ‘Hi-Res’
- VLP-16 Lite weights 240 g less (590 g)
- VLP-16 Hi-Res has narrower vertical FOV and thus improved vertical resolution

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**Velodyne Puck (32MR)**

**Mid-Range LiDAR Unit**
- Effective range: < 120 m
- Range accuracy: ± 3 cm
- Scan rate: 5-20 Hz
- Returns: 2
- Weight: 925 g
- Wavelength: 903 nm

**Notes:**
- Channels: 32 beams
- 600,000 points/second (per return)
- Horizontal FOV / Resolution: 360° / 0.1-0.4°
- Vertical FOV / Resolution: 40° / 0.1-0.4°

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**Velodyne HDL-32E**

**Tactical-Range LiDAR Unit**
- Effective range: < 75 m
- Range accuracy: ± 2 cm
- Scan rate: 5-20 Hz
- Returns: 2
- Weight: 1,000 g
- Wavelength: 903 nm

**Notes:**
- Highest grade unit for tactical-range projects
- 700,000 points/second (per return)

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**Quanergy M8 (Ultra)**

**Mid-Range LiDAR Unit**
- Maximum range: Up to 200 m
- Range accuracy: ± 3 cm
- Scan rate: 5-20 Hz
- Returns: 3
- Weight: 900 g
- Wavelength: 905 nm

**Notes:**
- M8 comes in three variations: Core, Plus and Ultra
- Core has a maximum range of < 100 m
- Plus has a maximum range of < 150 m
- Ultra has a maximum range of up to 200 m
- 420,000 points/second (per return)

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**Quanergy M8 (Core)**

**Tactical-Range LiDAR Unit**
- Maximum range: < 100 m
- Range accuracy: ± 3 cm
- Scan rate: 5-20 Hz
- Returns: 3
- Weight: 900 g
- Wavelength: 905 nm

**Notes:**
- M8 comes in three variations: Core, Plus and Ultra
- Core has a maximum range of < 100 m
- Plus has a maximum range of < 150 m
- Ultra has a maximum range of up to 200 m
- 420,000 points/second (per return)

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**Teledyne Optech CL-360**

**Long-Range LiDAR Unit**
- Effective range: 300 m – 775 m
- Range accuracy: ± 1 cm
- Scan rate: 50-250 Hz
- Returns: Up to 4
- Weight: 3,500 g
- Wavelength: 1,550 nm

**Notes:**
- Highest grade UAV LiDAR unit available
- Horizontal FOV / Resolution: 360° / 12µrad
- Dimensions: 310(L)×160(W)×116(H) mm