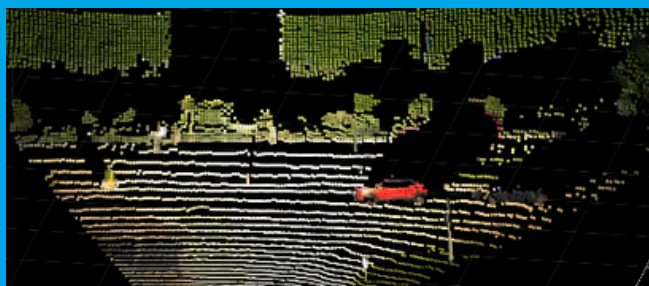
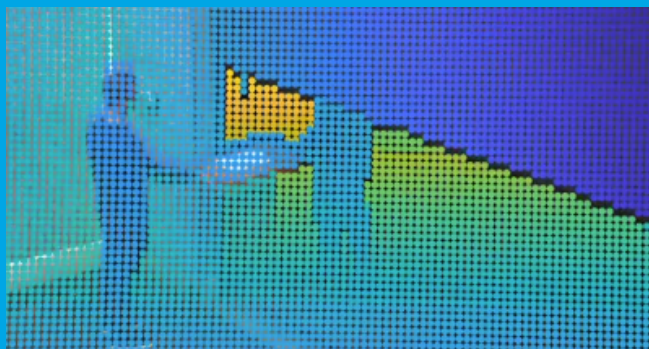
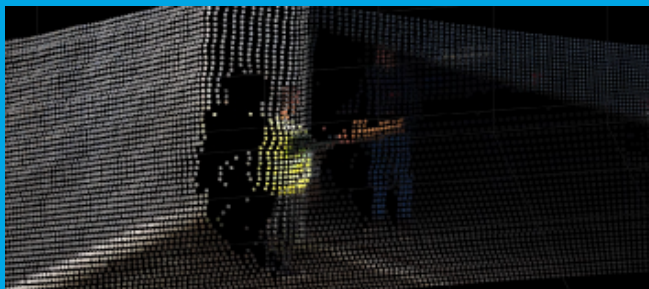
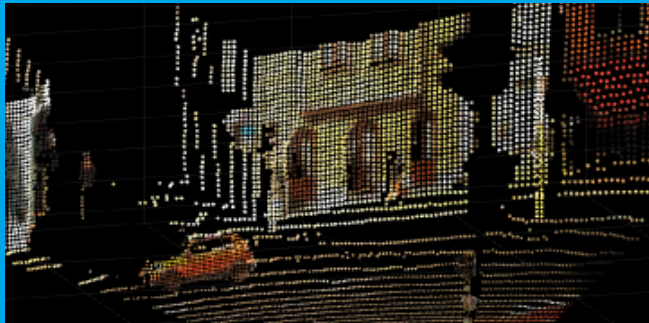


# Xenomatix

True solid state lidar

## Technical Data Sheet



## Xavia

She Sees Everything



**Xavia 6D**



**Xavia 3D**

## Optical Performance Lidar

|                                   |                                                |
|-----------------------------------|------------------------------------------------|
| Best range*                       | 140 m                                          |
| Range on 10% target*              | 50 m (at 100 klux, 90% TPR, $10^{-4}$ FPR)     |
| Minimal range                     | 0 m                                            |
| Dynamical range                   | 114 dB (only with Advanced Reflector Handling) |
| Typical accuracy**                | +/- 7.5 cm                                     |
| Typical precision (1 $\sigma$ )** | 0.07% of the distance                          |
| Field-of-view                     | 57.6° x 16.8° (horizontal x vertical)          |
| Angular resolution                | 0.3° x 0.3° (horizontal x vertical)            |
| Laser wavelength                  | 940 nm                                         |
| Laser class                       | Class 1 (IEC 60825-1:2014)                     |
| Lidar technology                  | True solid state                               |

## Output Lidar

|                         |                                                     |
|-------------------------|-----------------------------------------------------|
| Data connection         | 1000 BASE-T GigE                                    |
| Highest frame rate*     | 20 Hz                                               |
| Raw data output format  | Rich point cloud                                    |
| Data rate*              | 5 MB/sec                                            |
| Points per second*      | 215 040 pts/sec                                     |
| Data per point          | Range, XYZ, reflectivity, ambient, confidence level |
| Working mode            | Free running                                        |
| SDK supported platforms | Windows (x86-64), Linux (x86-64, ARM)               |
| SDK language            | C++                                                 |

## Operating Conditions Lidar

|                       |                        |
|-----------------------|------------------------|
| Operating Voltage     | 12 – 24 V              |
| Power consumption***  | 15 – 23 W              |
| Operating temperature | 0°C to +45°C (ambient) |
| Storage temperature   | -20°C to +75°C         |
| Ingress protection    | IP65                   |

\*Value depends on LiDAR configuration: 10 m or 140 m detection range, 10 Hz or 20 Hz frame rate. Values noted here correspond to a 140 m, 20 Hz LiDAR.

\*\*Value valid on a Lambertian target at an ambient operating temperature of 25°C.

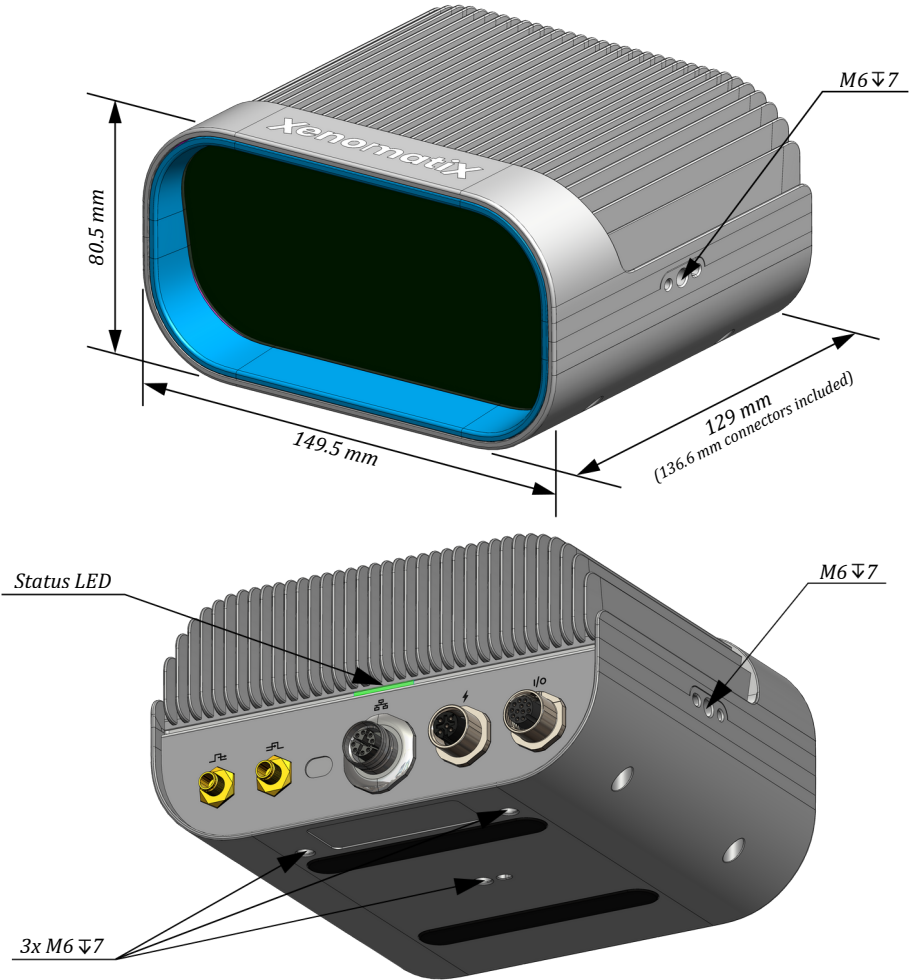
\*\*\*Value depends on LiDAR configuration. Power consumption averages 15 W for a 10 Hz LiDAR without Advanced Reflector Handling, while it averages 23 W for a 20 Hz LiDAR with Advanced Reflector Handling.

Interfaces Lidar

|                                                                                   |                            |                            |
|-----------------------------------------------------------------------------------|----------------------------|----------------------------|
|  | High-speed trigger out**** | SMA, female                |
|  | High-speed trigger in****  | SMA, female                |
|  | Ethernet connector         | M12 X-coded 8 pin, female  |
|  | Power connector            | M12 A-coded 5 pin, female  |
|  | GPIO connector             | M12 A-coded 12 pin, female |

Mechanical Characteristics Lidar

|                        |                                  |
|------------------------|----------------------------------|
| Dimensions (W x D x H) | 149.5 mm x 136.6 mm x 80.5 mm    |
| Weight                 | 1.3 kg                           |
| Mounting               | Bottom: 3x M6. Left/Right: 1x M6 |



\*\*\*\*Not supported in current product release.

2D Camera

|                                                                                                       |                                                            |
|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Field-of-view                                                                                         | 65° x 51° (horizontal x vertical)                          |
| Camera resolution                                                                                     | 1440 x 1080 pixels, 12bit                                  |
| Data Connection                                                                                       | 1000 BASE-T GigE                                           |
| Time synchronization protocol                                                                         | PTP                                                        |
| Synchronization to LiDAR                                                                              | Triggered by Lidar                                         |
| Supply voltage                                                                                        | 12 - 24 V, provided by Lidar                               |
| Power consumption                                                                                     | 2.5W                                                       |
| Operating temperature                                                                                 | -20°C to 55°C (ambient)                                    |
| Storage temperature                                                                                   | -30°C to +60°C                                             |
| Ingress protection                                                                                    | IP67                                                       |
| Dimensions (W x D x H)                                                                                | 57 mm x 86 mm x 43 mm                                      |
| Weight                                                                                                | 230 g                                                      |
| Mounting                                                                                              | Mounted on right side of Lidar by manufacturer, by default |
|  Ethernet connector | M12 X-coded 8 pin, female                                  |
| I/O  GPIO connector | M8 A-coded 8 pin, female                                   |

