

## Large area analytics

The PF-series is Xovis' purpose-built 3d sensor for large-area analytics. With up to 8x bigger coverage, it reduces sensor count, cabling, and overall TCO (total cost of ownership) while delivering high-quality tracking and complex detection tasks, thanks to significantly increased processing power.

PF-L for mounting heights 2-6m

## Physical design

### Models

- PF-L → 2-6m
- *PF-H* → 6m+ not yet available
- *PF-L-O* → 2-6m, *outdoor* not yet available
- *PF-H-O* → 6m+ *outdoor* not yet available

### Accessories

- Standard mounting plate → flat surface mounting (included)
- Pivot mount → tilted mounting (PC-series Pivot mounts are compatible)
- Flush mount → flush mounting not yet available

### Interfaces

- RJ-45, Ethernet + PoE → Primary power & data connection
- USB-C → Alternative power option

### Mounting

- PF-series devices are delivered with a standard mounting plate
- PF-series devices are designed for flat surface mounting with recessed RJ-45 and USB-C sockets

see also [Mounting instructions](#)

## Firmware 5

PF-series supports **Firmware 5.9.0** and later.

## New features (PF-series only)

| Feature                            | Benefits                                                                                                                                                                                                                                                                                         |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| New calibration algorithm          | <ul style="list-style-type: none"> <li>Automatic height detection</li> <li>Improved depth image</li> <li>Floor mask obsolete (still available for troubleshooting)</li> <li>Recalibration obsolete (still available for troubleshooting)</li> <li>Taboo mask obsolete (not available)</li> </ul> |
| HDR imaging                        | <ul style="list-style-type: none"> <li>Illumination mask obsolete (not available)</li> </ul>                                                                                                                                                                                                     |
| Next-generation tracking algorithm | <ul style="list-style-type: none"> <li>More robust detection</li> <li>More continuous tracking</li> </ul>                                                                                                                                                                                        |
| Advanced in-store metrics          | <ul style="list-style-type: none"> <li>Attention metrics (later in 2026)</li> <li>Additional on-board KPIs are planned</li> </ul>                                                                                                                                                                |

#### Feature limitations (PC-series only)

The following features are available only on PC-series sensors. Alternative solutions for these use cases are planned.

| Feature                   | Description                                          |
|---------------------------|------------------------------------------------------|
| Staff exclusion with tags | Not part of “People Attributes Bundle” for PF-series |
| Blocked Space             | Not available                                        |

#### Multisensor improvements

FW5.9 introduces the new “Space” stitching method, which is also applicable to PC-series sensors.

The PF-series supports on-device Multisensors with up to 15 devices and is compatible with all PC-series sensors and Spider SPI-PU1/PU2. *(connected devices require the same FW minor version)*

Multisensor setups must have overlapping tracking areas by min. 30cm. Configurations without overlap are currently not supported.

see also [Sensor planning | Multisensor planning](#)

| Improvement                           | Description                                                                     |
|---------------------------------------|---------------------------------------------------------------------------------|
| Spatial stitching points              | Stitching points are no longer restricted to floor                              |
| More stable sensor-to-sensor tracking | Performance is not depending on individually configured sensor mounting heights |
| Multilevel-Multisensors               | Sensors within a the same Multisensor can be on different floor l               |

### Tracking Area on PF-L

- The tracking area indicates the “measured” space projected to the floor. Scene geometries like lines and zones shall be placed within the tracking area. Tracks can also occur outside of the tracking area.
- Its size scales with the mounting height.
- Maximum supported tilt limits are 5° (roll) and 15° (pitch).
- PF-series only The tracking area is always a square and remains **centered perpendicular beneath the sensor**, regardless of any physical tilt.
- PF-series only If the pitch angle exceeds **14°**, the tracking area is **cropped on the far side**.
- PF-series only The maximum of **10×10 m (32.8×32.8 ft)** is achieved at a mounting height of **3.05 m / 10 ft**.

### Occlusion

**If a person is hidden behind an object or another person, the corresponding track is lost** - even within the tracking area. Sensor placement must consider scene dynamics to avoid such failures. Occlusion becomes more likely with

- lower mounting height
- larger height difference between people
- smaller distance between people
- higher density

Smaller person “hidden” behind taller person

