

## Auriel Real-time



3D LiDAR system to scan the environment and stream a point cloud in real-time.

For permanent installations.

[Auriel Real-time product page.](#)

### Applications



#### Smart city

Volume, flow and classification of road traffic.

Footfall in pedestrian zones, pavements, parks.

Intelligent Transportation Systems (ITS).



#### Transportation hubs

Footfall and flow in airports, railway and bus stations, ferry terminals.



#### Maritime and waterways

Smart marinas – quantity, vessel length and type classification in and out of ports and harbours.

Volume, flow and classification of vessel traffic along rivers, at bridges, locks and docks.



#### Industrial

Stock pile monitoring, such as aggregates, woodchip and waste.

### Outcomes

- Real-time monitoring of traffic and pedestrians.
  - Aiding the real-time analysis of air quality.
  - Toll booth traffic management.
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- Real-time monitoring of queues formation to identify bottlenecks.
  - Real-time crowd monitoring to ensure public safety
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- Real-time monitoring of marina capacity.
  - Real-time monitoring of traffic in ports and harbours.
  - Real-time monitoring of marine traffic to ensure the safe navigation of waterways.
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- Real-time monitoring of stock pile volumes to manage production and order fulfilment.

## Benefits of Auriel Real-time

Permanent remote sensing technology incorporating edge computing. Designed and manufactured in Scotland to withstand harsh environmental conditions for permanent outdoor installation.

|                                                                                     |                                           |                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <b>Ease of use</b>                        | <p>Self-contained compact system including LiDAR sensor, processor, software and storage to stream LiDAR point clouds to a central server.</p> <p>Simple to configure and operate via a web interface. Connect to the system via Ethernet.</p> <p>External LED provides the status of the unit.</p> <p>No need for a separate laptop!</p> |
|   | <b>Data transfer</b>                      | <p>Point Cloud streamed via TCP/IP or UDP to a central server in a simple x,y,z and intensity format.</p> <p>Optional logging of the raw LiDAR data for post analysis.</p> <p>Download raw data files via Ethernet or Wi-Fi for review and analysis in <a href="#">Purepoint Pro</a> LiDAR software.</p>                                  |
|  | <b>Rich data capture</b>                  | <p>360° panorama: captures a 3 dimensional point cloud allowing 3D modelling and spatial analysis.</p> <p>Rich high resolution datasets for processing using Spatial or Artificial Intelligence.</p>                                                                                                                                      |
|  | <b>Quick deployment</b>                   | <p>Speedy installation to fix to a structure.</p> <p>Powered from an external power supply.</p> <p>Access managed by a central server.</p>                                                                                                                                                                                                |
|  | <b>Timestamp and position referencing</b> | <p>LiDAR data synchronised to GNSS time: enables correlation with independently collected data from other sensors e.g. air quality monitor.</p> <p>GNSS time &amp; position is transmitted in real-time.</p>                                                                                                                              |
|  | <b>Anonymous</b>                          | <p>No personal, identifiable, details of an individual are captured ensuring compliance with many International Privacy laws.</p> <p>No need to "blur" images!</p>                                                                                                                                                                        |
|  | <b>Scalable</b>                           | <p>Deploy multiple units on a network with data uploaded to a central location.</p>                                                                                                                                                                                                                                                       |
|  | <b>Minimal supervision</b>                | <p>Self-reliant with low intervention.</p>                                                                                                                                                                                                                                                                                                |

## Specialists in LiDAR integration

Mapix technologies are LiDAR experts in mapping, autonomous vehicles, industrial, robotics and marine applications. An early adopter of LiDAR in 2008, today we are a leading authority in LiDAR solutions and system integration. We focus on developing turnkey solutions for static, vehicle and drone mapping including hardware and desktop post-processing software.

Utilising the framework and building blocks we have developed since 2013 we create industry and/or customer specific solutions. We integrate the most appropriate LiDAR sensor for your application, performance and price requirements.



**SIDE VIEW**

## Auriel Real-time technical specifications

Integrated LiDAR system for the real-time streaming of processed LiDAR data

| Auriel Real-time      |                                                                           |
|-----------------------|---------------------------------------------------------------------------|
| Real-time             | Streaming of processed raw LiDAR data in a point cloud (x,y,x, intensity) |
| External Interface    | Ethernet, streaming via TCP/IP or UDP                                     |
| Ethernet Speed        | 100Mbps                                                                   |
| Storage capacity      | Optional logging of approx 10 hours of data on internal storage           |
| GNSS                  | 66 channel GNSS receiver provides timestamp and position                  |
| Operating voltage     | 10 - 18V                                                                  |
| Power consumption     | 12W (Typical)                                                             |
| Weight                | 2.1kg (1.55kg when fitted with Dome LiDAR sensor)                         |
| Dimensions            | 220 (height) x 105 (diameter) mm                                          |
| External mounting     | 2 x M5 fixings in handle or using 2 x Jubilee hose clamps                 |
| Operating temperature | -20°C to +65°C                                                            |

### LiDAR sensor options

Select the most suitable for your application based on resolution and budget:

| LiDAR sensor                           | Low Resolution         | High Resolution        | Dome                   |
|----------------------------------------|------------------------|------------------------|------------------------|
| Number of channels                     | 16                     | 32                     | 128                    |
| Vertical Resolution                    | 2.0°                   | 1.0°                   | 0.8°                   |
| Range                                  | Up to 120m             | Up to 120m             | Up to 60m              |
| Range accuracy                         | ±1cm (Typical)         | ±1cm (Typical)         | ±3cm (Typical)         |
| Horizontal Field of View               | 360°                   | 360°                   | 360°                   |
| Vertical Field of View                 | 31° (-16 to +15)       | 31° (-16 to +15)       | 93.5° (-3.5 to +90.5)  |
| Horizontal resolution                  | 0.09° / 0.18° / 0.36°  | 0.09° / 0.18° / 0.36°  | 0.4° (finest)          |
| Points per second (Single Return Mode) | 640,000                | 640,000                | 1,152,000              |
| Refresh rate                           | 5 / 10 / 20Hz          | 5 / 10 / 20Hz          | 10 / 20Hz              |
| Laser                                  | 903nm Class 1 eye safe | 903nm Class 1 eye safe | 903nm Class 1 eye safe |
| Water resistance                       | IP67                   | IP67                   | IP67                   |

Rapid and straightforward smart 3D data  
capture and processing to save time.

**Want to know more?**

**Contact us at**

**E** [sales@mapix.com](mailto:sales@mapix.com)

**T** +44 (0)131 513 9608