aura is designed to ease the development process of Augmented Reality applications, giving priority to performance, stability and flexibility. It’s a useful and effective tool both for expert designers, thanks to its programming interfaces, as for end users as it includes simple and intuitive configuration editors.

Its main features are:

- **Multiplatform** (Windows, iOS, Android, Linux)
- **High performance**: optimized for mobile devices
- **Flexible**: designed to perform tracking by different artificial vision methods (natural markers, CAD models, SLAM) and to use different image descriptors (based on texture, edges…)
- **Efficient**: possibility to perform cloud computing transparently to the user

**Use Cases**

**LeARning**
Advanced tool to create training courses supported by Augmented Reality

**avatAR**
Enriched tour guiding app through storytelling and avatars

**CoolTour**
Engine for markerless augmented cultural experiences

**FlexmARker**
Flexible and scalable product configurator based on markers

**Applications**

- Educational/Training environments
- Tourist guides
- Industry
- E-commerce
- Gaming
- Architecture/design
- Advanced services
## Aura Modules and Architecture

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
<th>Platforms</th>
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<tr>
<td>aura_keypoints</td>
<td>Function set to detect the features of an image and to describe the descriptors</td>
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<tr>
<td>aura_trackable</td>
<td>Function set which abstract the designer from the vision technique to use, allowing natural markers, SfM and SLAM homogeneously</td>
<td>Android 4.0, IOS 7.0, Windows XP, Linux</td>
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<tr>
<td>aura_sfm</td>
<td>Function that allows 3D reconstruction of an environment from images to be used with SfM and SLAM algorithms</td>
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<td>aura_fastViu</td>
<td>Augmented vision functions optimized to run on ARM processors</td>
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<tr>
<td>aura_server</td>
<td>Server features and utilities for applications running in client-server mode</td>
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<tr>
<td>aura_client</td>
<td>Client features and utilities for applications running in client-server mode</td>
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![Diagram](https://via.placeholder.com/150)