



# Visual Object Recognition

*Accelerator type: Accelerator Building Block*

A key task in image analytics is recognizing the presence of objects of particular application importance. In a video analytics solution, a detector is utilized to identify the location of objects that are likely to have importance with respect to the application. This process of localization is subsequently followed by recognition to assign the object to one of many application-specific classes or labels. Typical recognition tasks include person detection, grocery product identification, facial recognition, gender classification, vehicle recognition and license plate detection. Coupled with SiliconScapes' Region-of-Interest Detector and Visual Object Tracker, a complete video processing solution can be implemented.

**Accelerator detail:** This accelerator solution provides real-time object recognition capabilities. Once the location of an unknown object has been detected in an image or video sequence, the accelerator can be used to classify the object and assign it an application-specific label. This accelerator would typically be the second stage of an object detection and classification system, and is delivered as a hardware library and software API.

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## Competitive advantage

The Visual Object Recognition accelerator is capable of classifying up to 300 object regions per second. By comparison, a software-exclusive solution can only process 20 object regions per second, on average. Higher throughput also means more detailed scene analysis accuracy, as more object models can be detected in a fixed period of time.

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