



## IRYStec Perceptual Display Platform Vision (PDP Vision)

IRYStec Perceptual Display Platform Vision (PDP Vision) is the first ever generic, customizable and scalable image processing software that can run multiple perception related algorithms simultaneously. Based on the three different influencers of display perception (see Figure 1 below), it allows for the best possible user experience and integrates seamlessly on the primary automotive display systems – instrument clusters and infotainment displays.

This first generation of IRYStec PDP accounts for all three influencers of perception: intelligently adapts the displayed content to the ambient light, to the panel technology, and it is personalized according to the driver's unique vision; delivering a safer and more power efficient in-car viewing experience. Because the PDP algorithms run simultaneously, it is faster and more efficient than using several point solutions sequentially. Also, because all parameters are considered at the same time, the resulting image quality is the best possible for a given set of conditions. When combining all products available in the IRYStec PDP framework, the driver can experience all following benefits:

1. Improved visibility (up to 30% measured improvement)
2. Reduced eye strain for a healthier screen
3. Display power reduction (50% and more)

### OEMs and Tier-1s Benefits



#### Frontline Technology

IRYStec PDP is the first technology in the market that replicates the way the human visual system processes and perceives information. It renders images in real-time to match the unique interaction between the driver and the display, delivering the best viewing experience possible.



#### Scalable OEM Investments

Leveraging on its platform development approach, IRYStec PDP is fully scalable and customizable, as it allows for growth based on customer's needs, leading to lower maintenance and implementation costs and it future-proofs OEM investments.



#### Faster Time to Market

IRYStec PDP, is a software-based solution that seamlessly integrates into the OS of any applications processor platform. It can be deployed as an update to a production system thus reducing the time of release cycles and implementation.

To learn more about IRYStec PDP and/or to request our demo, contact [customer@irystec.com](mailto:customer@irystec.com)

# IRYStec™ Perceptual Display Platform Vision (PDP Vision) Software Development Kit (SDK)

IRYStec PDP Vision is a software platform shipping as an SDK that can run on any GPU platform, providing runtime support for IRYStec’s perceptual image processing products. IRYStec’s PDP Vision implementation is written in C and OpenGL and designed to be computationally light. The PDP Vision SDK monitors the environment and feeds this information to the associated algorithms that have been added to the platform. It is effective on all content and in all types of personalized screens whether the content is mobile applications, back-up camera video, surround view video, maps, control console info or videos playing for car passengers.

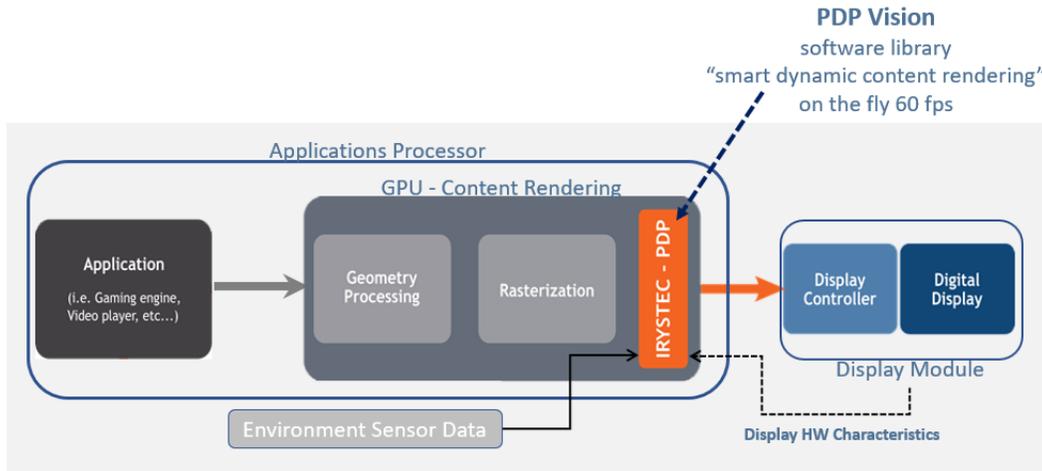


Figure 1 PDP Vision Smart Dynamic Content Rendering

**Implementation:** IRYStec PDP Vision is OS agnostic and can be ported to various OS platforms used in different verticals such as Android, iOS and Windows for automotive devices such as Linux, Green Hills Software Integrity OS and QNX Neutrino OS. As a software-only platform, PDP Vision can run on any OS and GPU combination if the hardware and software requirements are met. It is packaged as a library that runs on rendered content as the last stage of the display pipeline (see Figure 1).

## AVAILABLE PRODUCTS

In its current generation, PDP Vision can benefit from the following two algorithms, packaged as separate products:

- **IRYStec DRIVEvue**, a set of algorithms which adapt to ambient light, drastically improving display visibility in bright and dark conditions. It also enables power savings in bright conditions.
- **IRYStec MYvue**, a set of algorithms which compensate for the loss of contrast sensitivity as well as yellowing of the cornea when the viewer’s eyes age.

IRYStec Perceptual Display Platform Vision (PDP Vision)	
<b>IRYStec DRIVEvue</b> Improved Visibility: 30% more visible Power Savings: 25-50% on LCD 15-30% on OLED	<b>IRYStec MYvue</b> Color Improvement for aging eyes Contrast Improvement for aging eyes
Single pass combined processing	

Figure 2 IRYStec PDP Vision Products

## PLATFORM EVALUATION

For qualified developments, IRYStec will provide the PDPvue Android Evaluation tool, a self-contained application implementation, on an Android tablet. IRYStec PDP will enable customers to conduct a free low effort preliminary evaluation of PDP Vision.