APTIV CONNECT QUALIFIER

ADAS Solution



Streamline your validation processes with analytics, video classification, vehicle tracking, and services designed specifically for advanced driver-assistance systems (ADAS).

Reduce the time and expense of validating ADAS systems

Lower your warranty costs

Improve the quality and performance of ADAS vehicles

Today's drivers want vehicles with ADAS features. In addition, some regulators are beginning to require some ADAS capabilities. And if you're an engineer, you know that troubleshooting, validating, and reporting these complex systems can be incredibly difficult and time-consuming.

The Aptiv Connect Qualifier ADAS Solution can reduce the time and effort involved in ADAS validation, while also improving vehicle quality and reducing warranty expenses and development costs. Built on top of Aptiv Connect Qualifier, the complete ADAS Solution includes

- Qualifier Analytics with a special dashboard for tracking ADAS KPIs
- Environmental Insights, which includes road, weather, and traffic data
- Video Insights with event recording and object recognition
- Command Center for a live streaming view of vehicle location and health
- Data transmission and support

You can purchase the individual components separately or as a complete integrated solution.

Analytics Designed for ADAS

Because more than 70% of the world's leading vehicle manufacturers use Qualifier, Aptiv has extensive experience with ADAS validation. Leveraging our expertise and industry best practices, Aptiv will tailor your ADAS dashboard to the specific ADAS features on your vehicles and your organization's goals. Qualifier can track metrics related to collision warnings, emergency steering, emergency braking, adaptive cruise control, highway assist, traffic sign recognition, and more, and the list is growing all the time.

> By 2030, more than 75% of new vehicles sold will have ADAS features.

To ensure adequate performance, manufacturers need to test vehicles in a multitude of scenarios, involving

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different objects, scenery, and environmental conditions. But manual processes for tracking test environments can be cumbersome and inaccurate. The Qualifier Analytics ADAS dashboard automatically incorporates Environmental Insights (weather, road, and traffic data) so that you can see accurate test coverage data at a glance. You have the option of accessing Aptiv's data science models to automatically characterize routes as urban, highway, mountain, etc. And you can also access Environmental Insights data through the Events page or the AC-Graph visualization tool.

Video Integration and Classification

Many ADAS features rely on computer vision, radar, or lidar. To test and troubleshoot these features, you need ground-monitoring video that shows what is happening in and around the vehicle.

The ADAS Solution includes Aptiv's Four-Camera Video System, which uploads video directly into the Qualifier web application. Engineers can watch video related to specific events or DTCs and can even synchronize all four video feeds with graphs of vehicle signals and a GPS-based map.

In addition, the ADAS Solution uses machine learning algorithms to recognize and classify objects in the video files. This metadata becomes available through Qualifier and can feed the Analytics dashboard, automating performance assessments of your ADAS systems when encountering pedestrians, bicycles, motorcycles, emergency vehicles, construction barriers, and a host of other objects.

Real-Time Health Monitoring and Location Tracking

Aptiv's ADAS Solution also includes Qualifier's Command Center add-on, which allows you to see the location and status of your entire fleet in real time. By clicking an individual vehicle, you can also drill down into details about vehicle health, and you can add custom widgets and stream key data signals.

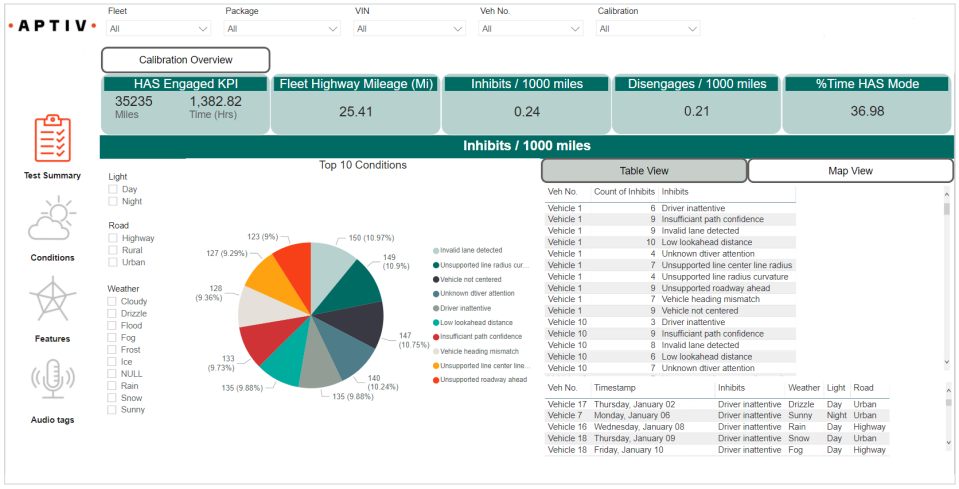
Optionally, Command Center can incorporate weather, road, and traffic data, enabling you to re-route vehicles as desired. And live-streaming video is available.

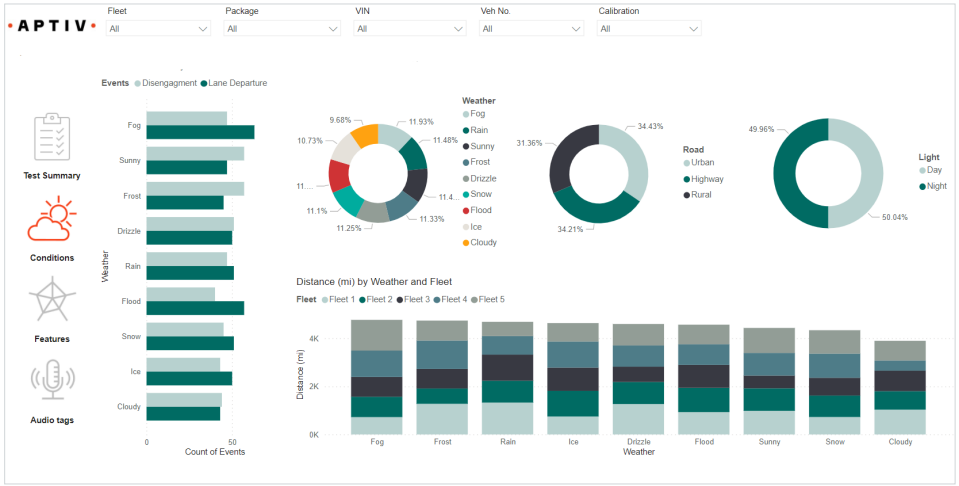
Dedicated Support from ADAS Engineers

When you deploy the Qualifier ADAS Solution, you also get support from our customer success engineering (CSE) team. You'll have ADAS experts on hand who will help you configure your dashboards and assist with troubleshooting as needed. It's like adding highly qualified staff members to your engineering team.

> Warranty expenses for vehicles with ADAS features are about twice as high as for vehicles without ADAS features.

If your company is working on vehicles with ADAS features, don't delay. Contact your Aptiv representative today to learn more about how the Qualifier ADAS Solution can help you save time while reducing your costs and improving quality.





For more information, see www.aptiv.com/connected-services.

Aptiv Connect Qualifier ADAS Solution

Features	Benefits
Qualifier Analytics Test Coverage Dashboard	Validate vehicle systems faster and save money on vehicle tests thanks to a near-immediate comprehensive and coherent view of you vehicles' test performance.
Qualifier Analytics ADAS Dashboard	Deliver improved customer satisfaction with feature-level knowledge and consistent reporting during ADAS validation.
Environmental Insights	Understand how your systems are performing in various weather, road, and traffic conditions.
Video Insights	Assess your vehicle systems' behavior and performance in a wide variety of situations without having to manually analyze every vehicle event video.
Command Center	View live data about your entire fleet's status at a glance and efficiently drill down into an individual vehicle's information.
Issue Triage Support & Toolchain	Receive increased assistance and resources to quickly root cause and resolve ADAS problems prior to vehicle launch, helping ensure you meet ADAS-related regulatory compliance regulations and reduce warranty costs.



The Qualifier ADAS Solution includes Aptiv's four-camera video system and the next-generation EP-2000 vehicle data recorder (VDR).



About Aptiv

Aptiv is a global technology leader with more than 180,000 people across 124 manufacturing facilities and 12 major technical centers worldwide. With a presence in 44 countries, we address mobility's toughest challenges through our deep software and systems integration expertise, delivering market-relevant solutions for our customers.

Our mission is to make the world safer, greener, and more connected than ever before. As these trends converge and the world of mobility changes, we will lead this change.

Mobility has the power to change the world, and we have the power to change mobility.