

PRE-PRODUCTION VALIDATION AND ANALYTICS



# APTIV CONNECT QUALIFIER



**USED BY MORE THAN 70% OF THE WORLD'S LEADING VEHICLE MANUFACTURERS,** APTIV CONNECT QUALIFIER DRAMATICALLY REDUCES THE TIME IT TAKES TO FIND AND FIX VEHICLE PROBLEMS, HELPING SAVE MILLIONS OF DOLLARS.



**Save millions by quickly finding and fixing issues**



**Shave months off warranty resolution time**



**Improve vehicle quality by analyzing thousands of signals at 200 Hz**



**Decrease costs associated with recalls and repairs**

### **Faster Troubleshooting**

Without Aptiv Connect Qualifier, manufacturers typically need to wait for a malfunction indicator light (MIL) or other obvious sign to let them know that a problem has occurred. After that, it might take weeks or months to collect and analyze data before finding the root cause.

But with Aptiv Connect Qualifier, you'll learn about potential problems before seeing an MIL or other warning, and Aptiv's Edge hardware will immediately begin collecting, processing, and transmitting data to the cloud. Your engineers can then use Qualifier's issue management, reporting, and analysis capabilities to find the root cause quickly.

### **Advanced Analytics and Reporting**

Qualifier also includes powerful reporting tools that allow you to

create pareto charts, scatterplots, histograms, and other visualizations of your parameter data. Also, if you like, Qualifier can run your reports on a recurring basis and deliver them to your inbox.

Fine-grained filtering capabilities allow you to narrow down your report results, and package-specific thresholds allow you to track metrics for specific vehicles. You can plot vehicle locations and trips on a map, and you can sync maps and parameter graphs with video from up to four cameras. In addition, you can set up custom alerts to receive an email or text message when specified events occur.

• **APTIV** •

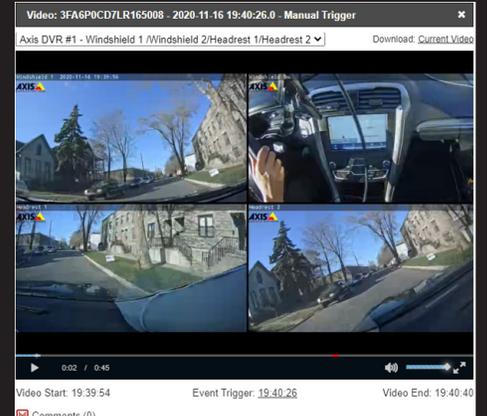
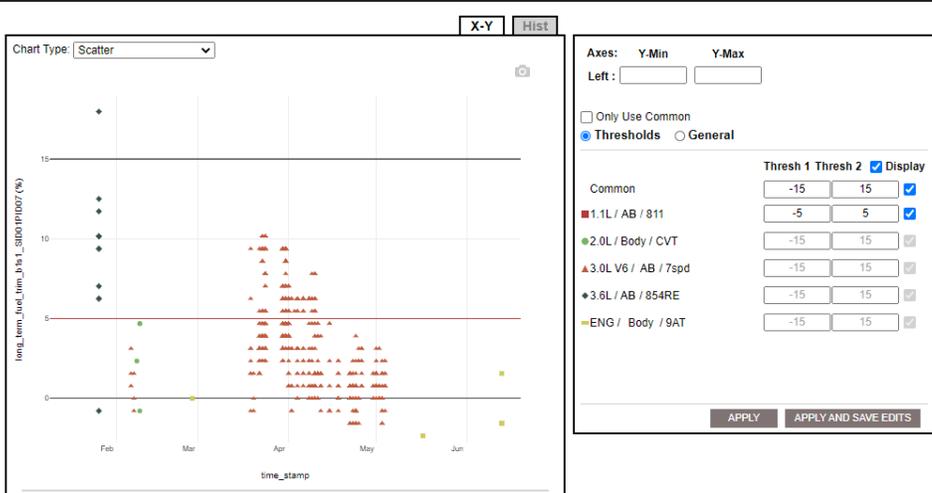
Package: All Packages Vehicle #: All Vehicles Fleet: All Fleets Status: New, Fix Pending, Verify, Closed, False Event Type: -General, -not reqd, Control-Tec, Cruise, CT Diagnostic Assignee: 123456789 Test, Akash P, Akash P, Alex B, Ammar M

Switch View Min Date: 2020-08-21 00:00 Max Date: 2020-08-31 23:59 Apply Filters Keyword Search CLEAR FILTER

Event	Event Name	Status	Events	Vehicles	Package	First	Last	Comment	Assignee
970	GeoFencingTest_1	New	44	1		2020-08-21	2020-08-31		
1079	High Engine Increase	New	4	1		2020-08-29	2020-08-31		

ID	Status	Date	Odo	Config	Location	Type	Issue #	Analysis	Assignee
VIN: FFFFFFFF (Unknown), Veh No: LN171938, Package:									
1	New	2020-08-31 21:14:29		4.34-14065	Clarkston, MI	-General-			
2	New	2020-08-30 23:47:39		4.34-14065	Clarkston, MI	-General-			
3	New	2020-08-29 22:00:26		4.34-14065	Elmhurst, IL	-General-			
4	New	2020-08-29 14:10:22		4.34-14065	Waunakee, WI	-General-			
5	New	2020-08-23 23:08:54		4.34-14065	New Lisbon, WI	-General-			

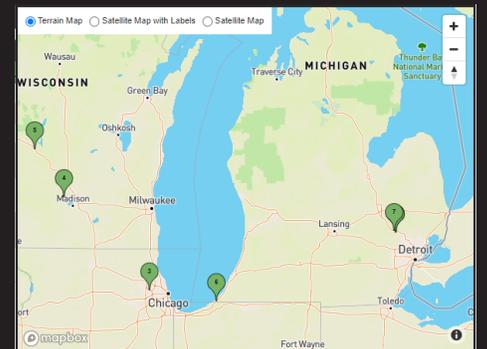


Map: Lymona, Dearborn, Garden City, Dearborn

Graph #1: Line chart showing data over 1600 units.

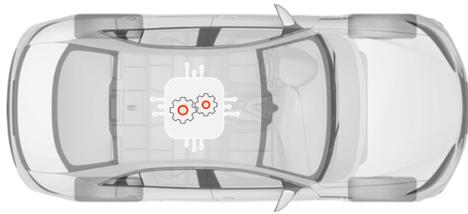
Graph #2: Line chart showing data over 1600 units.

Graph #3: Line chart showing data over 1600 units.



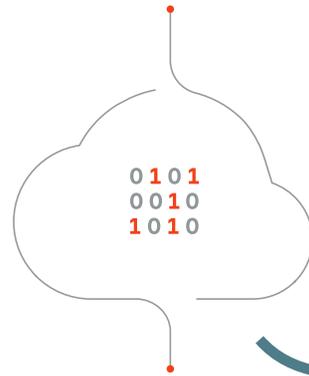
Aptiv Connect Qualifier's capabilities include issue management, reporting, custom visualizations, offline analysis, mapping, video, and much more.

Edge Hardware &  
Connect Edge Software



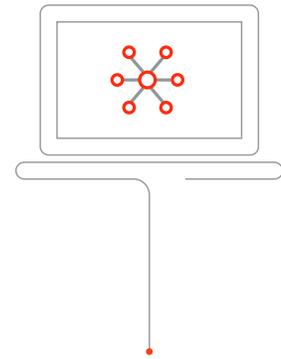
# Aptiv Connect Qualifier for Pre-Production Validation

Flexible Cloud



Qualifier Web Application

- Issue Management
- Reporting
- Root-Cause Analysis
- Visualizations
- Fleet Management
- Analytics



## Built for Enterprises

Vehicle manufacturers often have many different engineering groups, each interested in different vehicles and different types of data. Qualifier's fine-grained role-based access control, combined with its group and fleet filters, allows each person in your organization to see only the data and reports of interest to them. It standardizes data collection and reporting across your organization while meeting each group's unique needs.

In addition, Qualifier keeps your data protected thanks to features like encryption, continuous vulnerability scanning, and robust security protocols.

## Aptiv Connect for Pre-Production Validation

Part of the complete Aptiv Connect solution for pre-production validation, Qualifier is tightly integrated with our Edge hardware and Connect Edge software, which collect and begin analyzing data in the vehicle. The solution also includes Aptiv's Customer Success Engineers, who work as an extension of your team to refine your vehicle data strategy. Competing solutions provide data acquisition, but stop there. Aptiv Connect goes a step farther, turning data into valuable insights that help you solve your most pressing challenges. To schedule a demo, visit [www.aptiv.com/solutions/connectedservices](http://www.aptiv.com/solutions/connectedservices).

## About Aptiv

Aptiv is a global technology leader with more than 160,000 people across more than 125 manufacturing facilities and 15 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.

## ISSUE MANAGEMENT

Features	Benefits
Set up pre-defined triggers to capture data in rich detail	Solve the problems that you are interested in, instead of collecting data you don't need
Access data from thousands of different parameters recorded with microsecond precision	Ensure you never miss an anomalous event because you aren't sampling frequently enough
View aggregated data from events and DTCs, then drill down into individual occurrences	Streamline the process of determining the root cause of issues
Receive real-time alerts about events or DTCs	Know immediately when an anomalous event occurs so that you can start investigating right away
Assign events and DTCs to team members	Improve collaboration among your engineers
Record comments about issue investigations	Save organizational knowledge so you don't waste time re-investigating issues
Watch video from up to 4 cameras before, during, and after an event (optional)	See at a glance how conditions in or around the car contributed to an event
Access full CAN logs for additional troubleshooting	Retain raw data for occasions when it is useful

## ANALYTICS

Features	Benefits
Generate pre-built and custom reports	Track trends and monitor vehicle tools with automated tools that simplify reporting
Create pareto charts, scatterplots, histograms, and other visualizations	Spot potential issues at a glance
Capture a snapshot of parameter data at a specific point in time	Understand everything that was happening in the vehicle when an event occurred
Set package-specific thresholds to track metrics, including Cpk, average, standard deviation, etc.	Determine when signals are outside desired limits, even if they aren't significant enough to trigger the MIL
Create time-based parameter graphs through AC-Graph	Sync multiple data signals with maps and video to learn more about what happened before and after an event
Plot vehicle trips on a map	See whether location or geographic features might be contributing to an issue
Conduct offline analytics with DATALAB	Perform statistical analysis, create visualizations, and join files to better understand issues occurring over time and/or across multiple vehicles
Subscribe to reports to receive them in your inbox on a recurring schedule	Save time and improve productivity

## FLEET MANAGEMENT

Features	Benefits
See vehicle locations at a glance	Streamline management of your testing program
Track hardware and software part numbers	Keep your testing operations organized
Monitor status of VDR hardware	Track the number of VDRs you have running in the field

## ADDITIONAL CAPABILITIES

Features	Benefits
Export data as CSV, MDF, or PDF files	Integrate your Qualifier data with other tools
Set up geofences	Monitor incidents that occur on your proving grounds or during highway or city driving conditions
Access data 24/7 worldwide	Work together with colleagues in any time zone