

ENGINEERING SERVICES

Bring your products to market faster. Aptiv Engineering Services helps automotive, heavy-duty, and off-highway teams simplify development, from application integration to full system validation.

Aptiv supports OEMs and suppliers in system design, interior and exterior sensing, connectivity, software, and functional safety. That expertise comes from high-volume automotive programs and demanding regulatory environments.

SCALE ACROSS VEHICLES AND EQUIPMENT

Bring automotive engineering experience to off-road equipment. Aptiv helps you improve operator safety, uptime, and remote visibility. Common software platforms make it easier to manage complex machine functions and scale across product families.

BUILD AND MAINTAIN YOUR SOFTWARE

Build and maintain Android, Linux, and Zephyr platforms, or improve your Android apps. We also help you design and migrate to software-defined vehicle (SDV) systems.

Maintain platforms with board support package (BSP) integration, vulnerability assessments, and security patches. Application support covers requirements, design, testing, and deployment, with software reuse across product families.



BENEFITS

- **Develop software faster**
- **Validate hardware and software against your requirements**
- **Reduce warranty costs and improve uptime**
- **Address security and functional safety requirements early**

DESIGN AND VALIDATE YOUR SYSTEMS

Work with Aptiv to define system requirements and design electrical/electronic (E/E) architectures. Get advice on system on chip (SoC) selection and hardware bring-up. Validate hardware and software through software-in-the-loop (SiL) and hardware-in-the-loop (HiL) simulation, lab tests, and in-vehicle tests. Aptiv can complete functional safety and cybersecurity testing and documentation.

PUT FIELD DATA TO WORK

Record vehicle and equipment data with Aptiv's Qualifier tools to investigate warranty issues, spot failure patterns, and validate corrective actions. Reliability analysis and predictive maintenance models help reduce quality costs and improve uptime.

START WITH WHAT YOU NEED

Tell us where your team needs support. Together, we'll define the scope and deliverables around your priorities.



ENGINEERING SUPPORT FOR YOUR PROGRAM

SERVICE AREA	HOW APTIV CAN HELP	EXAMPLE OUTPUTS
Software lifecycle updates and maintenance	Keep Android, Linux, and Zephyr platforms current. Develop Android apps and improve performance.	Common Vulnerabilities and Exposures (CVE) reports, security patches, integrated BSP updates, release notes, and application packages with design and application programming interface (API) documentation.
Vehicle intelligence	Investigate warranty issues and predict failures with artificial intelligence (AI). Plan data collection and support off-road Video-on-Edge applications.	Data collection strategies, root-cause reports, cost-of-quality projections, trained AI models with integration documentation, and smart-hydraulics architecture designs.
Validation and verification	Validate hardware, software, over-the-air (OTA) updates, and AI models. Use simulation and Synthetic Cockpit Data to test reliability and scenario coverage.	OTA readiness sign-off with rollback and package-integrity checks; AI accuracy, bias, and robustness reports; synthetic datasets with ground-truth annotation; automated regression suites and HiL replay setups.
Architecture and engineering	Define E/E architectures, evaluate and advise on SoC selection, and develop BSPs. Get support for SDV strategy, platform design, system integration, and functional safety documentation.	BSPs, SoC scoring matrices and recommendations, requirement traceability matrices, architecture documents, SDV roadmaps, failure mode and effects analysis (FMEA) and fault tree analysis (FTA) reports, and certification documentation.
Operational excellence	Assess supplier performance and recall readiness. Improve engineering processes, validate corrective actions, and identify cybersecurity and compliance gaps.	Penetration test reports, security architecture documents, compliance gap analyses and remediation plans, recall tabletop results, and benchmarking analyses.

LET'S DISCUSS YOUR PROGRAM

Contact your Aptiv representative or visit aptiv.com/contact to get started.

About Aptiv

Aptiv PLC (NYSE: APTV) is a global industrial technology leader delivering advanced solutions people trust when it matters most across automotive, commercial vehicle, aerospace and defense, telecom and datacom, and other diversified industrial end markets.

Our differentiated portfolio enables devices and systems to sense, think, act, and continuously optimize performance. Building on decades of innovation, Aptiv brings global scale and a resilient, localized value chain to customers across the globe. Learn more at Aptiv.com