

USE CASE

# From Manual to One-Click

Identify Software's Country of Origin With xZETA



## **Overview of US Rule on Connected Vehicle Technologies From 'Countries of Concern'**

Regulatory framework	US Code of Federal Regulations Title 15 Part 791 – Securing the Information and Communications Technology and Services Supply Chain (Effective January 2021) <sup>L</sup> Subpart D: ICTS Supply Chain: Connected Vehicles (Effective March 2025)
Covered vehicles	<ul> <li>Passenger vehicles weighing less than 10,001 pounds (approximately 4,500 kg)</li> <li>Commercial vehicles are expected to be included in future regulatory phases. Construction equipment, agricultural machinery, and rail systems are currently excluded.</li> </ul>
Covered systems	Software and hardware that enable the following systems: • VCS: vehicle connectivity system • ADS: automated driving system
Regulated model years	<ul> <li>Software: applies to model year 2027~</li> <li>Hardware: applies to model year 2030~</li> <li>For vehicle types without a designated model year, the rule applies starting in 2029.</li> <li>Exemption: Software that was designed, developed, manufactured, or supplied before March 17, 2026, is excluded from the regulation.</li> </ul>
Approval process	Annual declaration of compliance: • Due diligence • Documentation and recordkeeping of supporting evidence
Penalties	<ul> <li>Subject to criminal enforcement</li> <li>Willful violations might result in up to US\$1 million in fines or 20 years in prison, or both.</li> </ul>

## **Affected Parts**

#### Application

Middleware

System software

Open-source software components that have been modified for proprietary purposes and are not redistributed or shared

Exclusion: open-source software

Exclusion: firmware

#### VCS

Installed in/on connected vehicles

Systems that enable RF transmission or processing over 450 MHz

Exclusions: automotive sensors, ultrawideband communications, unidirectional RF bands, and components that supply or manage power for the VCS

#### ADS

Systems that directly enable SAE Level 3 or higher autonomous driving capabilities

## **SBOM-Related Requirements**

Under the US connected vehicle technologies rule, there is a requirement to record partial elements of the software bill of materials (SBOM) either through an SBOM itself or other methods.

Regulation	EU Cyber Resilience Act	US Executive Order 14028 (Improving the Nation's Cybersecurity)	US Connected Vehicle Regulations (15-CFR Part 791 Subpart D)		
Purpose	Protecting users and consumers from a cybersecurity perspective	Strengthening the security of US government infrastructure and critical infrastructure	Regulating the import of products from "countries of concern" to protect national security		
Definition of SBOM	Covering at least the highest-level dependencies of the product, in a commonly used machine-readable format	An official record detailing the various components used in software construction and their relationships withi the supply chain			
Requirements	<ul> <li>SBOM creation requirements:</li> <li>Highest-level dependencies: the main component and its first-level dependencies</li> <li>Common formats: SPDX, CycloneDX, etc.</li> </ul>	<ul> <li>Practical requirements for SBOM creation:</li> <li>Component records</li> <li>Author name</li> <li>Supplier name</li> <li>Timestamp</li> <li>Component name</li> <li>Component version</li> <li>Unique identifier</li> </ul>	<ul> <li>Practical requirements for SBOM creation:</li> <li>Component records</li> <li>Author name</li> <li>Supplier name</li> <li>Timestamp</li> <li>Component name *Recorded via SBOM or other methods </li> </ul>		

## Key Requirements for Compliance Declaration Regarding Covered Software

The primary responsibility lies with the OEM. Suppliers are required to cooperate with due diligence efforts, maintain and document necessary records, and, in some cases, submit information directly to the US Department of Commerce.





## But There's a Smarter Way: With xZETA, Software Origin Is Just One Click Away



## xZETA: Automotive Vulnerability and SBOM Management System

As a vulnerability and SBOM management tool tailored for the automotive industry, xZETA rapidly adapts to industry-specific needs and continuously updates features to keep pace with evolving requirements.



## 1. Generate an SBOM from firmware.

#### Click on "+ Add firmware".

Ú	xZETA	Products → CP								
	default CP + Add firmware Phase: All									
(@' [8]]	Firmware	Phase	Processor	Operating system						
ŝ		Development Development	ARM 64-bit	Linux 64-bit						
	•									

#### Configure the settings and select the file.



## Quickly generate an SBOM just by uploading a binary.

#### Export the SBOM in SPDX or CycloneDX format as a JSON or CSV file.

#### The SBOM is successfully generated.

xZETA Pro	xZETA Products · CP · UX 1.0.0 O 2005-05-23 140										
Development	Development O'UX100 Group default Provider SUP-1 Destination: O'O-1M1 Show submerabilities detected in: All time										
Valnerabilities	Vature abilities Westerson Software bit of materials Pyptography bit of materials Hardware bit of materials Interfaces Configurations										
+ Add packa	ge Package: A		ense: Sølect - Supplier: A				🔀 More filter				
Package	Source packa	ge Version	File path	License	© Supplier	Origin ()	Vulnerabilities	Last detected 4 Act			
linux,kernel			/zimage					2025-02-16 23:37:04			
curl .	🛆 curl		Aust/lib/libcurl.so.4.7.0					2025-02-15 23:37:21			
OpenSSL	openssl		Aust/lib/libcrypto.so.1.1	Apache	-2.0 openssl			2025-02-14 23:37:39			
OpenSSL	openssl		Aust/lib/libssl.so.1.1	Apache	-2.0 openssl			2025-02-14 23:37:39			
libuv			Aust/lib/libuv.so.1.0.0					2025-02-14 23:37:39			
пупс ,	🛆 гаупс		/ust/bin/rsync					2025-02-12 23:36:59			
libexpat	expat		/usr/lib/libexpat.so.1.8.3		Respat			2025-02-11 23:37:22			

#### Choose the desired format and proceed to export.



# 2. If firmware is unavailable, import an existing SBOM.

		Import mul	ltiple SBOMs via drag and drop.
ั <b>บ</b> จา	xZETA Products > CP > LX 1.0.0		Provider SUP-1 Destination: CPO-1 M1. Multiple nackanes
	Development CP LX 1.0.0 Group: defau	It Provider: SUP-1	<ul> <li>You can import new packages or update the license and supplier information of existing packages in a file.</li> </ul>
(ب ۱۳۵۳	Vulnerabilities Weaknesses Softwa	re bill of materials	File*
<u>ت</u>	+ Add package     Package: All       Package     Source package	Version	Dring file to upload or browse file Supported file types: SPDX v2.3 - JSON, CycloneDX v1.4 to v1.6 - JSON, and CSV. Minimum file size 1 MB
	linux_kernel -	4.14.78	
	curl 🛕 curl	7.79.1	Submit Cancel

## Add packages and edit the SBOM.

Edit the SBOM.									
Package	Source package	Version	File path	License (i)	Supplier	Origin	Vulnerabilities	Last detected ↓	Actio
linux_kemel		4.14.78	/zlmage	GPL-2.0-or Use commas to separate multiple licenses	linux		2126	2025-02-16 23:37:04	~
curl 🔺	curl	7.79.1	/usr/lib/libcurl.so.4.7.0	curl	haxx	-	36	2025-02-15 23:37:21	ø
OpenSSI	openssl	1 1 1m	/usr/lib/libco/nto.so.1.1	Apache-2.0	openss	-	38	2025-02-14	

## 3. Identify the software's country of origin — with one click.

	Filter components by country of origin.										
Ų	xZETA Vulnerability Management >										
() ()	Development         Group:         Provider: CN-Supp1         Destination: US-OEM-1 MD1           Vulnerabilities         Weaknesses         Custom intelligence         Software bill of materials         Cryptography bill of materials         Hardware bill of materials									Detecter	d in: All time
) (I	+ Add package	Package: All 🗸 🗸	License: Select ~	Supplier: All 🗸	Origin: China	~	Q Search keyword	TA More filter			
5	Package	Source package	Version	File Path		License 🛈	Supplier	Origin (j)	Vulnerabilities	Last Updated ↓	Actions
				/update/mdm9607-perf-sysfs.u perf-sysfs.ubi/img-409519862_ rootfs.ubifs/usr/bin/	ıbi/mdm9607- vol-	Commercial		China		2024-10-14 07:07:12	1
				/update/mdm9607-perf-sysfs.u perf-sysfs.ubi/img-409519862_ rootfs.ubifs/usr/bin/	ıbi/mdm9607- vol-	Commercial		China		2024-10-14 07:07:12	1
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**REQUEST A DEMO** 

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