



ACCESS TWINE™ 4 CAR



# ACCESS Twine™ for Car

Automotive Services Platform  
for Connected Car Infotainment



ACCESS™

# Automotive Services Platform for Connected Car Infotainment

Delivering entertainment to connected cars is about more than technology. Automotive OEMs need to provide a wide content choice to their customers and navigating this new frontier is challenging. Augmenting traditional audio services such as FM and DAB with streaming audio and video requires new business relationships and new technologies.

ACCESS Twine™ for Car (Twine4Car) enables automotive OEMs to provide branded entertainment services on the car head unit (HU) and rear-seat entertainment (RSE) units. Plus, with software development kits for Android and iOS, OEMs can extend to customer brought in devices (BYOD). Twine4Car spans the gap between the automotive and the content industries by enabling a content portfolio and helps increase the safety, the comfort, and the flexibility of content consumption for drivers and passengers. Through our extensive contacts and experience, ACCESS can also act as the single point of contact for the OEM engaging with broadcasters, media owners and the OEM's Tier-1 suppliers to enable the integration and provisioning of state-of-the-art content and streaming services.

ACCESS Twine™ for Car supports automotive OEMs in creating successful multi-device in-car platforms and facilitates driver and passenger consumption of media services. It enables exploration of new customer engagement approaches through the HMI and business models to create recurring revenue streams. Twine4Car allows OEMs to start with the services they wish to deploy today and add new services over time as the industry moves towards the various levels of autonomous driving.

Twine4Car connects the in-car infotainment system components seamlessly with BYOD devices via the in-car Wi-Fi network. It provides a decentralized control of content that enables a multi-device user experience far beyond common single device streaming applications or screen mirroring technologies. A key value is that ACCESS Twine™ for Car fully supports the OEM's brand experience across all devices.

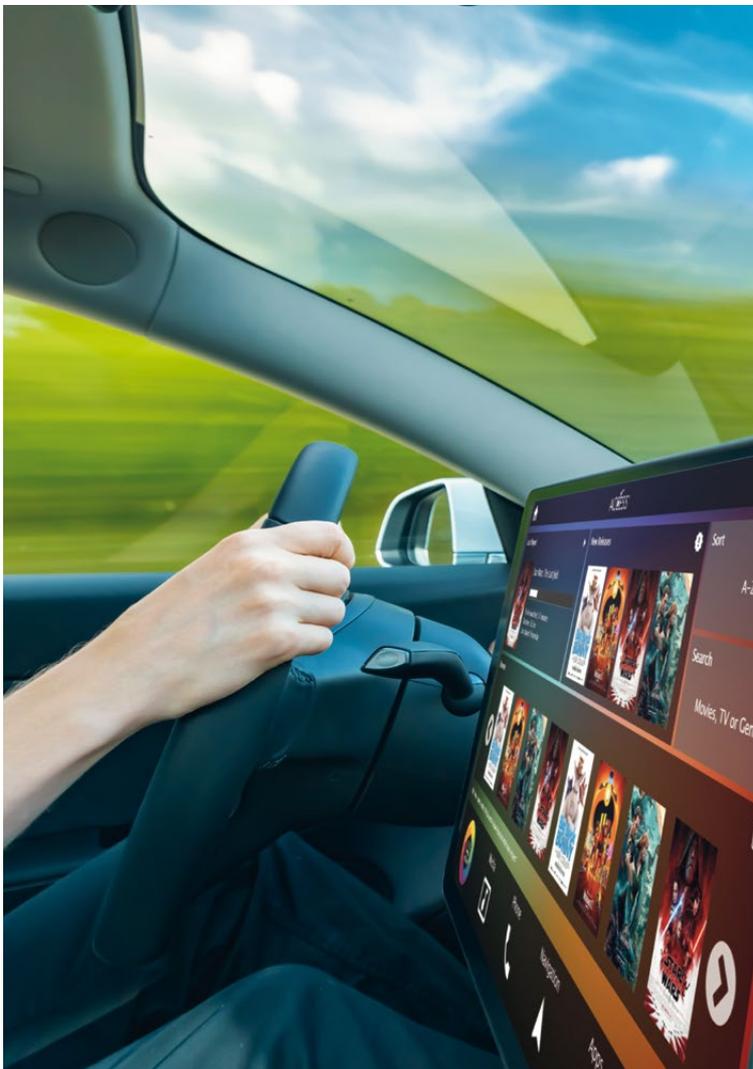
## Feature highlights & advantages

Being able to deploy a service delivering information and entertainment requires more than just a set of technology components. ACCESS Twine™ for Car enables automotive OEMs to deliver OTT content services, enabling reinforcement of the automotive OEM's brand experience and their customers' brand engagement.

### CONTENT

Extending the traditional in-car broadcast content offering can start by taking advantage of the in-car Wi-Fi network. ACCESS Twine™ for Car can index music from all devices, including USB drives, smartphones and tablets, within the car and allow playback on any Twine4Car enabled device such as RSE units, tablets and smartphones. Each individual device can listen to different content, providing an aggregated, yet personal, journey experience.

Expanding to use the mobile data connection (3G/4G/5G) further broadens the options for the automotive OEM to streamed over-the-top (OTT) linear audio content such as Internet radio. On-demand streamed audio services, such as music services and podcasts, can be added to provide drivers with the widest range of audio options.



ACCESS Twine™ for Car  
Automotive Services Platform  
for Connected Car Infotainment



Utilising screens in the car for additional services for passengers ACCESS Twine™ for Car provides automotive OEMs with new options to stretch their brand engagement and move beyond driver focused audio-only services. As with audio, Twine4Car supports in-car sharing, enabling viewing of videos and photos from BYOD devices between passengers and to RSE units, again using the in-car Wi-Fi.

TV channels can be offered via OTT streaming, with options to access via an integrated electronic program guide (EPG) or via an “app” style approach depending on the automotive OEM’s preference.

Video entertainment choice can be extended further by adding access to on-demand content such as video-on-demand services (“VOD”) and broadcasters’ catch-up TV content. Twine4Car supports HTML5 and therefore is ideal for accessing online video portals.

A new area for automotive OEMs - when adding video to their entertainment portfolio - is content protection.

To address piracy concerns, content rights owners will mandate end-to-end protection of their assets before in-car viewing is allowed. To address this, ACCESS Twine™ for Car supports Digital Rights Management (DRM) within the car’s built-in devices and brought-in devices for secure playback.

Expanding beyond audio and video services is another area for automotive OEMs to explore. Twine4Car can enable:

- location aware services for local information and retailer offers
- online weather services
- payment services, e.g. for parking and fuel
- convenience apps, e.g. fast food or coffee purchases
- flight information and tracking
- stock market information and updates
- casual games for in-car gaming

## TECHNOLOGY

ACCESS Twine™ for Car includes a portfolio of technology components to enable automotive OEMs to deliver the services they require today and extend to new services in the future. Streaming services utilize Wi-Fi and mobile Internet connectivity and is therefore independent from changes in broadcasting infrastructures so there will be no need to change physical components such as hardware tuners in the future.

ACCESS Twine™ for Car features a modular in-vehicle product suite with components for:

- head unit (Linux and Android)
- rear-seat entertainment (Linux and Android)
- smartphones (Android and iOS)
- tablets (Android and iOS)

Additionally, Twine4Car includes cloud-hosted components for operations and business support services (OSS/BSS) to help automotive OEMs build and refine the entertainment packages that suit their customers, log usage information, register in-car devices, and more.

### Key in-car features include:

- device registration and removal
  - family devices are registered with the head unit and cloud
  - unregistered devices will not receive service providing an additional layer of security above Wi-Fi encryption
- automatic discovery of Twine enabled devices in the in-car Wi-Fi
- aggregated indexing of content across devices
- media playback on in-car devices
  - “push” from head unit
    - › driver can safely initiate playback of content to devices in the rear of the car
    - › driver can control playback, e.g. play/pause/stop/skip
  - “pull” from RSE or BYOD
    - › passenger can initiate playback of content
    - › passenger can control playback
    - › control of playback from head unit or BYOD, e.g. play/pause/stop/skip
  - “follow me” functionality
    - › content can be paused on one device and continued on another
    - › driver could start playback on head unit, skip to an appropriate position and then continue from that position on a passenger’s device in the rear seat
- remote control
  - › manage playback from 3rd device, freeing head unit for navigation and other driver based functionality
  - › driver could initiate playback of content in rear of car and resume navigation



- › front seat passenger can discover playback content and device and then control the playback as needed
- universal search
  - › quickly find content on any device in the vehicle, and even on enabled cloud based content services
- HMI development framework

- › quickly add new services to an existing HMI
- › enables delivery of new services over-the-air (OTA)

The cloud components of ACCESS Twine™ for Car can be installed within the public cloud or the OEM’s cloud or back-end infrastructure. ACCESS Twine™ for Car is integrated with the OEM’s customer management platform ensuring that the OEM is always in control of the data exchanged with the car.

## Benefits for OEMs and Tier 1s

ACCESS Twine™ for Car enables the next generation of In-Vehicle-Infotainment solutions for the automotive industry by providing

- in-vehicle software components for head units, supporting Linux and Android
- content streaming service that can be branded and managed by OEMs
  - audio and video services support
    - › live streaming
    - › on-demand content
  - media industry standard content protection and Digital Rights Management (DRM)
- open HMI enabling OEMs to build a brand experience for their customers
- brand extension beyond the head unit to BYOD devices running Android and iOS
- content aggregation across all enabled and registered in-car devices
- data collection for media consumption and IVI operation allowing OEMs to focus

- OSS and BSS integration with existing OEM infrastructure and services

ACCESS Twine™ for Car is based on **open standards** for device discovery and management, extended with support for DRM technologies that provide the **latest levels of content security** demanded by content owners.

ACCESS are experts in delivering connected media and multiscreen components, with over 20 years of experience in the automotive and media consumer electronics industries, making us ideally placed to bridge the gap between the media industry and the automotive market. Our knowledge and experience enables OEMs to launch the entertainment services their customers are asking for, maintaining brand engagement by offering a truly multi-device experience compared to mobile device screen sharing solutions.

With offices worldwide, we offer global coverage and multi-language support for OEMs and Tier-1s.

## Typical Use Cases

### Audio and Video

- Linear / Live radio and TV
- On-demand audio and video services
- Catch-up TV and podcasts
- Adaptive streaming support
- Local Playback on Head Unit
- Supports DRM protected & unprotected content
- Playback control: Play, Pause, Resume, Stop, etc.
- Control HMI / UI with content owners' brands shop-in-shop system option

### Devices

- Head Unit (Linux, Android and embedded RTOS)
- Rear Seat Entertainment Units
- Smartphones (iOS and Android)
- Tablets (iOS and Android)

### Secure BYOD

- Head Unit / master user registration
- Additional device registration and removal
- Optional user registration and removal
- Can be included in OEM branded apps

### Automatic discovery

- As soon as they connect to in-car Wi-Fi
- Vehicle wide content discovery and indexing

### Rear Seat Entertainment / Infotainment Units

- Wired or wireless connection
- Linux, Android or embedded RTOS supported

### Remote Control

- "Push" content to BYODs and/or to additional units/RSE
- Safe and comfortable playback control from head unit

- Local BYOD/RSE playback control can be enabled/disabled

### True Multi-Zone playback support

- Different content on different devices in the car
- Control of all content from head unit
- Streaming only limited by bandwidth of Internet connection and in-car WiFi

### Content Aggregation

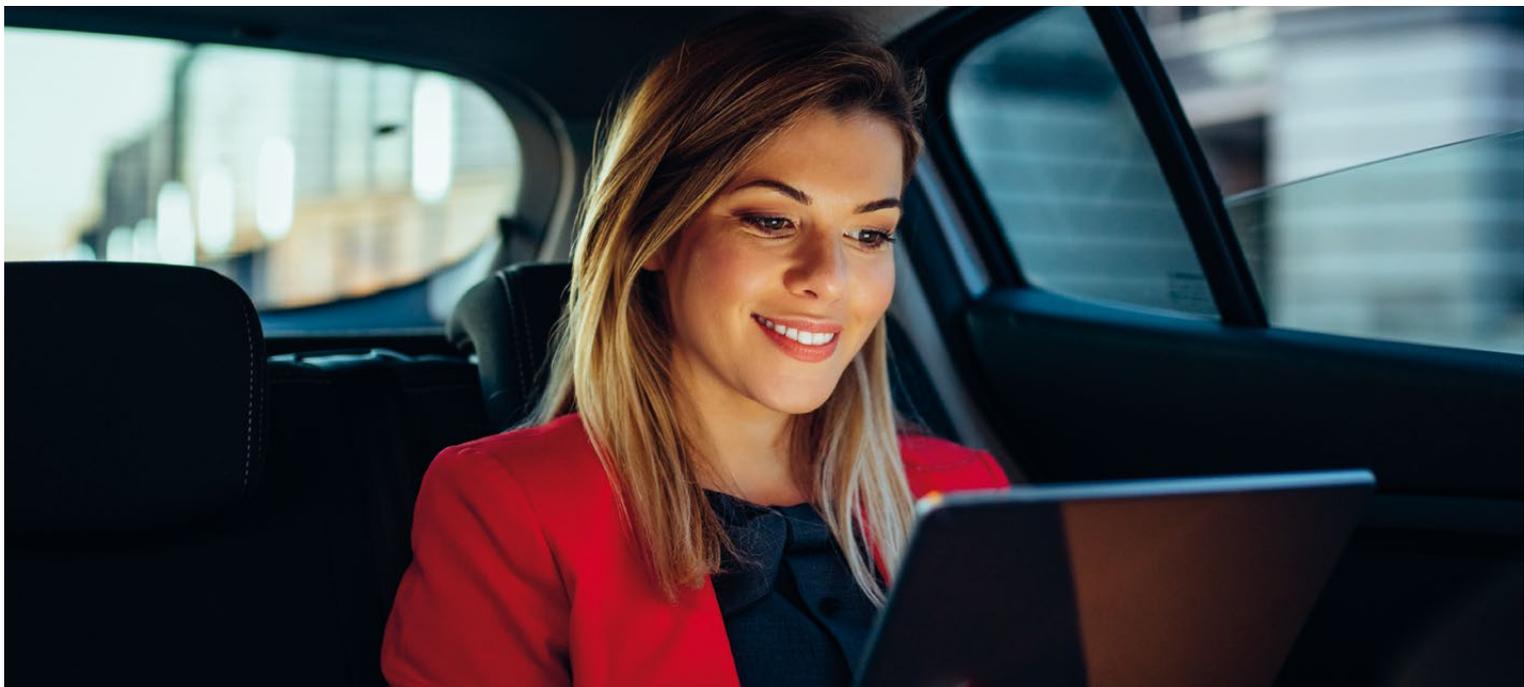
- Content shared from all discovered devices is automatically indexed
- Device owners determine content to be shared
- All shared content is available to all Twine enabled devices
- Universal Search across the whole index

### Place-Shifting

- Playback can be passed from one screen to another
  - Content plays immediately on receiving screen
  - Content continues from the same point
- No dangerous "handover" of physical devices within the car
- Supports all content types including DRM protected premium content

### Remote Media Access

- Securely access content stored within the home network
- Aggregated content index available to the car and accessible to all devices
- Integrates with 3rd party gateways and ACCESS Twine™ for Smart Home





## ACCESS Twine™ for Car Overview

### White label streaming service:

Automotive focused streaming service

- Worldwide content availability
- Tailored content portfolio

Services supported

- FM / DAB broadcast radio
- OTT linear radio
- OTT linear TV
- Online music services
- Video-on-demand
- Catch-up TV services

### Automotive Service Platform

Software components

- Head Unit
- RSE / RSI
- BYOD

Operating systems & platforms

- Linux
- Android
- iOS
- RTOS

Services And Applications

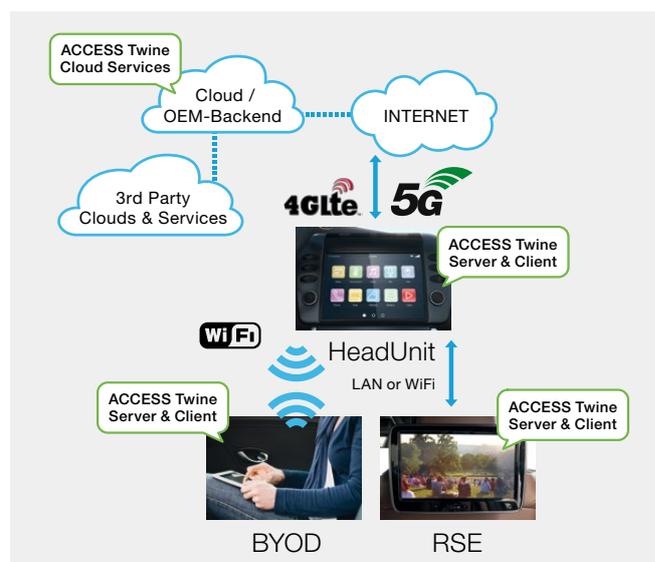
- Location Based
- Content Based
- HTML5

Cloud based components:

- Management Service
- Content Service
- Data Service
- OSS / BSS integration

### Complementary Modules (Add-Ons):

- Digital Rights Management
- Remote Media Access
- Cloud Content Metadata search & management



ACCESS Twine 4 Car – Infrastructure



[www.access-company.com](http://www.access-company.com)  
[eu.access-company.com](http://eu.access-company.com)

**Need further information?  
 Contact us!**

Mail: [automotive@access-company.com](mailto:automotive@access-company.com)  
 Web: <http://www.access-twine.com>  
 Phone: +49 208 8290 6464

© 2018 ACCESS CO., LTD. All rights reserved. ACCESS, the ACCESS logo, and ACCESS Twine are registered trademarks or trademarks of ACCESS CO., LTD. and ACCESS Europe GmbH in the United States, Japan, Europe and/or other countries. All other trademarks, logos and trade names mentioned in the document are the property of their respective owners. Specifications are subject to change without prior notice.

**ACCESS CO., LTD.**  
 Akihabara Office  
 Daito Building, Kandaneibeicho 3  
 Chiyoda-ku, Tokyo 101-0022, Japan  
 PHONE +81-3-6853-9088  
 FAX +81-3-6853-9089

**ACCESS (Beijing) CO., LTD.**  
 C206, Yeqing Plaza, No.9 Wangjingbeilu,  
 Chaoyang District, Beijing 100102,  
 People's Republic of China  
 PHONE +86-10-8478-2120

**ACCESS SEOUL CO., LTD.**  
 12F, Hansol Education Building, 361,  
 World Cup buk-ro, Mapo-gu,  
 Seoul, 03908, Korea  
 PHONE +82-2-3153-5200  
 FAX +82-2-3153-5210

**ACCESS AP TAIWAN CO., LTD.**  
 5F., No.4, Sec. 4, Ren'ai Rd., Da'an Dist.,  
 Taipei City 10684, Taiwan, R.O.C.  
 PHONE +886-2-2708-1969  
 FAX +886-2-2708-1989

**ACCESS Europe GmbH**  
 Essener Strasse 5  
 46047 Oberhausen, Germany  
 PHONE +49 208 8271010  
 FAX +49-208 8271025  
[eu.access-company.com](http://eu.access-company.com)

**IP Infusion Inc.**  
 3965 Freedom Circle, Suite 200  
 Santa Clara, CA 95054, USA  
 PHONE +1-408-400-1900  
 FAX +1-408-400-1500  
[www.ipinfusion.com](http://www.ipinfusion.com)