



iviLINK Automotive Connectivity Framework Overview

Saint-Petersburg

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- MirrorLink
 - iviLINK
 - Ford AppLink
 - Pandora link
 - iLivio
 - Panasonic Link-to-Cell
 - Apple AirPlay
 - ...
- Head unit is still very expensive
 - Many of head unit functions are redundant and duplicating smartphone ones
 - People like their gadgets and want continue using it in the car
 - People don't want additional configuring of in-car devices
 - Value is in apps, but not in devices

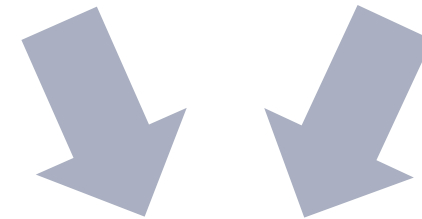
It's a time of
"x-links"

What is iviLINK?

- iviLINK is the technology to connect mobile devices to in vehicle infotainment
- It lets you use tablet or smartphone in a synergy with head units providing seamless multimedia, connectivity and car functions control scenarios
- It combines generic “mirror link” approach and custom “app link” approach in one technology

**“MirrorLinks” –
generic content
sharing**

**“AppLinks” –
custom
applications
sharing**



**iviLINK – API-
centric
approach**



- Framework-oriented technology delivered in SDK form
- Profile-centric approach
- Focus on apps developers
- Fanatically architected as a universal approach
- Natively symmetric
- Natively secure

To enable headless units

- iviLINK allows touch screen mobiles and tablets to be used as external screens to screenless vehicle modules





Apps Sharing

- iViLINK provides API to use vehicle IVI as a remote HMI for mobile apps.
- And vice versa. It is absolutely symmetric.
- Direct raster transfer also supported if necessary.

Hardware Agnostic

- iViLINK works over any type of [serial] link
- Standard packaging covers Bluetooth, USB and WiFi
- No strong dependencies on hardware performance due to no media repackaging

Protocol Abstraction

- iViLINK is profile based. Every data exchange protocol is packaged to profile
- Profiles are selected automatically by high level services mechanism
- Application inquires service with no regards to the data transfer approach



Remote Car Control

- iViLINK lets control your vehicle from the mobile. It makes your mobile like a 'light' version of the head unit.
- Whether you have the head unit installed or not.

Partial Software Upgrade

- By design iViLINK is capable to upgrade the set of profiles and implementation versions. For older cars it can download newer versions of profiles through or from the connected mobile.
- Only if allowed.
- With no firmware and apps reload. Even with no reboot.

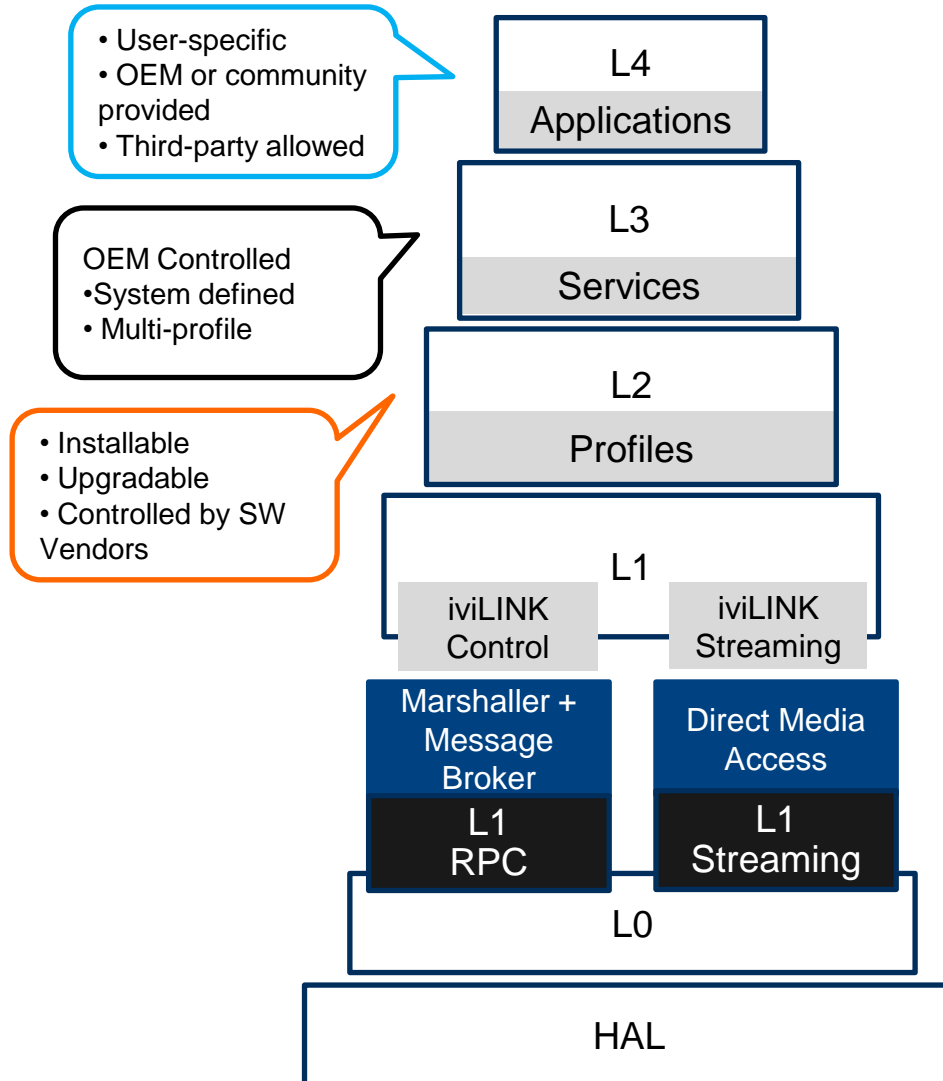


No media repackaging

- iviLINK supports native media streaming
- No decoding-encoding required on server side
- No MIPS and memory spent for screen capturing, no media codecs on streaming side, true video resolution and FPS supported by design

“Out-of-the-band” supported

- iviLINK is capable to operate over any serial link like Bluetooth, WiFi or USB
- But it doesn't use tunneling for existing data and media transfer protocols
- It can be used as an umbrella over Bluetooth, DLNA or MirrorLink. Or all together.

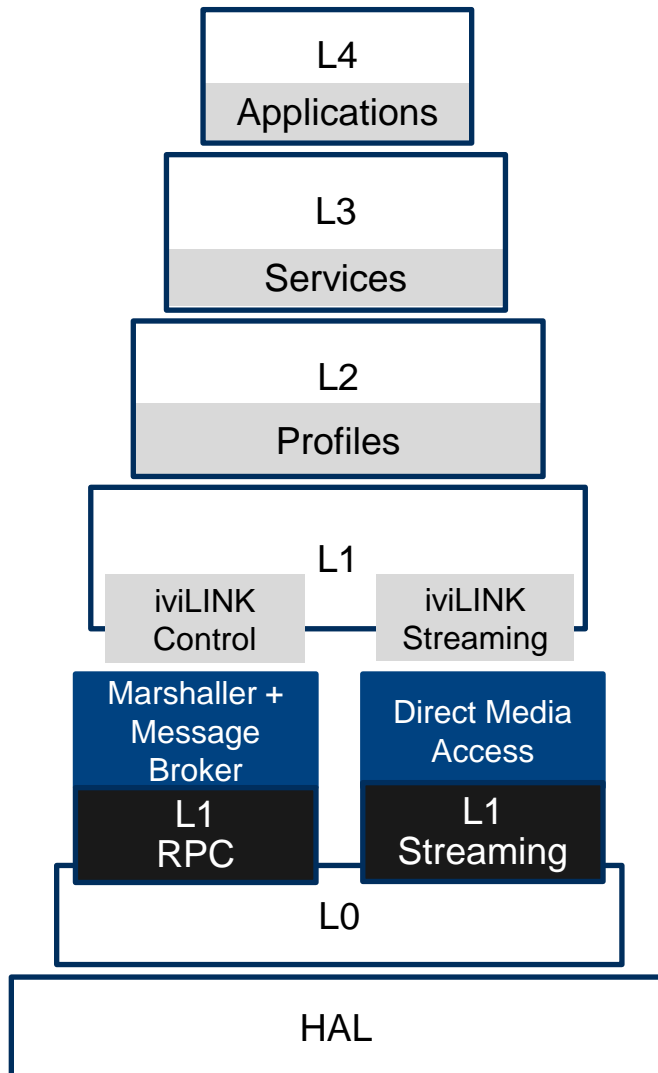


Well Designed

- iviLINK is architected with a lot of care to cover needs of end users, device and vehicle manufacturers.
- And it is easy in use: everybody controls its own area.

Full control and flexibility

- iviLINK has 'by layer' controllability
- Each level is controlled by its owner, it makes the technology fully manageable by OEM, without sacrificing community-driven applications development
- OEM selects the functionality and allows applications and profiles use



Services are preinstalled. If your OEM wants your device to provide some service, it enables it. If not, nobody can add it and modify your device behavior. All is under control.

Profiles are downloadable and upgradeable. Tier 1 or technology vendor may create new profiles even for existing devices to support new technologies after device goes off to the market.

iviLINK stack abstracts all the high level modules from how data transfers to the peer side. iViLINK contains multimedia package scheduler, handover and recovery mechanism.



Apps Friendly

- SDK for applications and profiles development
- Sample applications for Linux, Android and iOS
- Professional service
- MirrorLink compatibility

**iviLINK is not
an application.
It is an SDK!**



Secure

- RSA driven pairing mechanism for device authentication and identification
- DRM and “no catch / no store” approach available for streaming profiles
- Signature-based profiles approval



Thank you!

