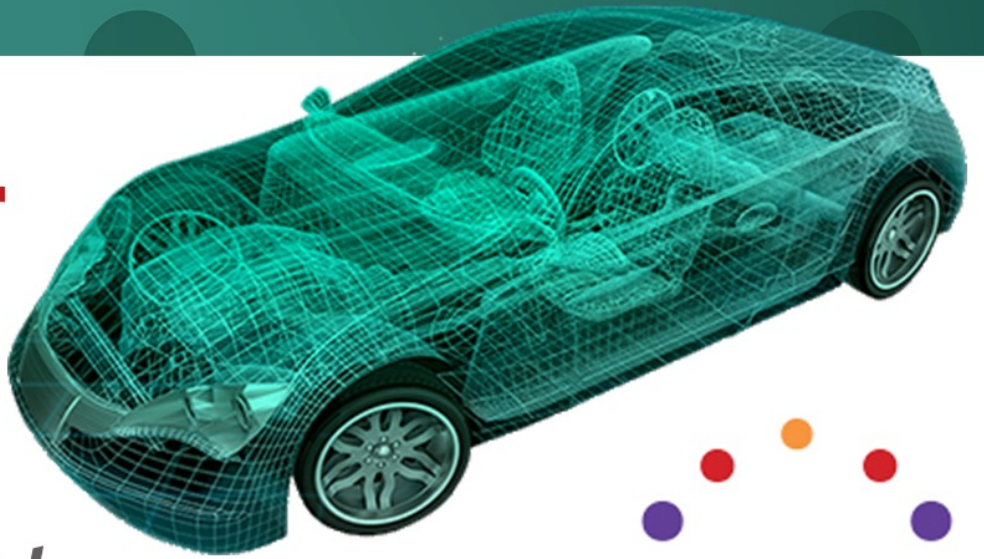
MIPI Automotive Workshop

15 November 2022



Live Virtual Event

mipi alliance

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IF IT'S NOT MIPI, IT'S NOT MOBILE

Welcome and Introduction to MIPI Alliance

Peter Lefkin
MIPI Alliance Executive Director

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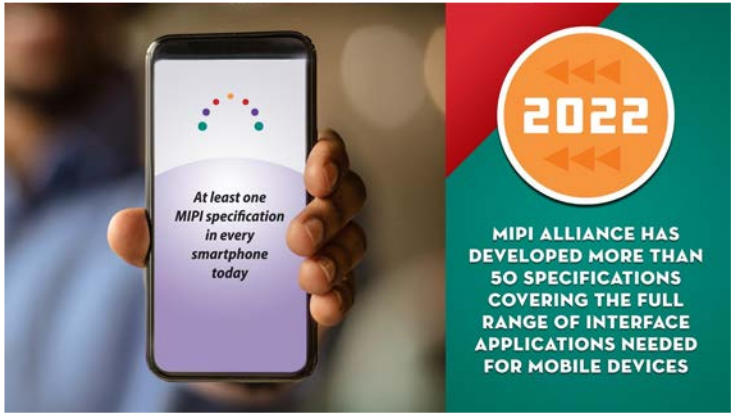
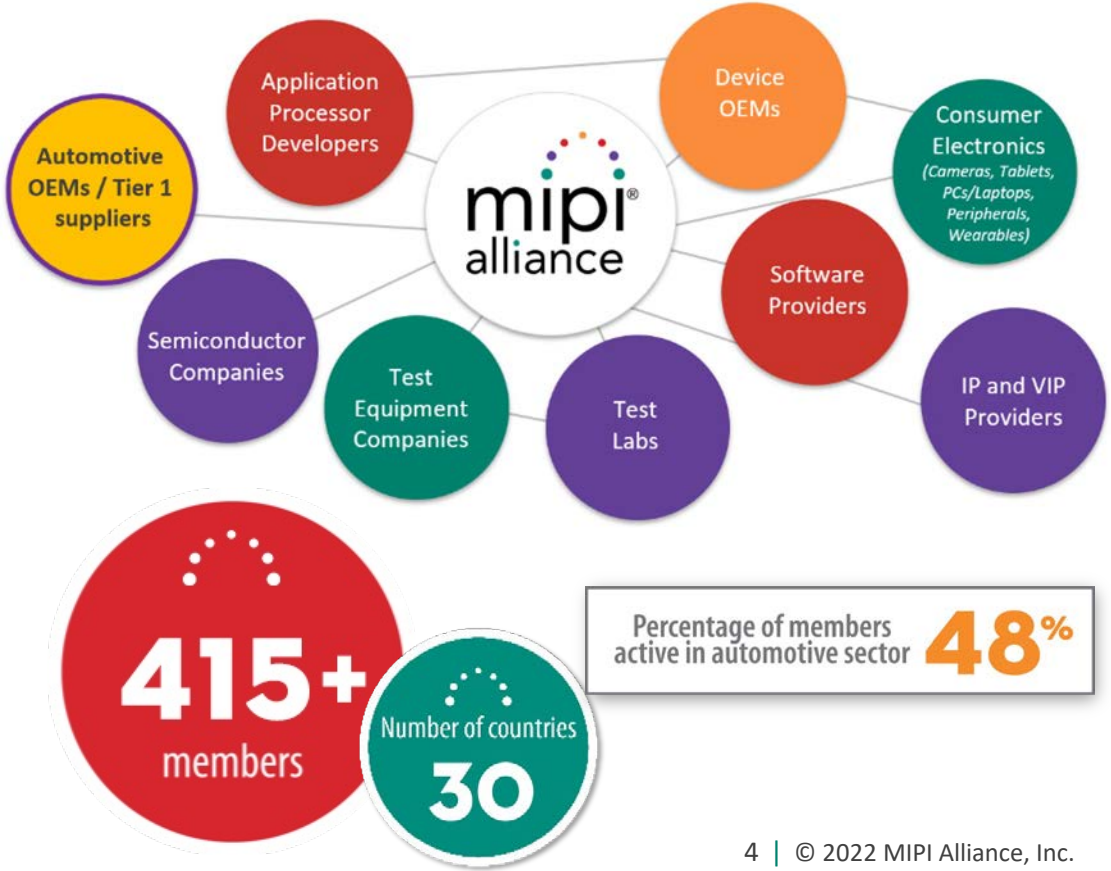
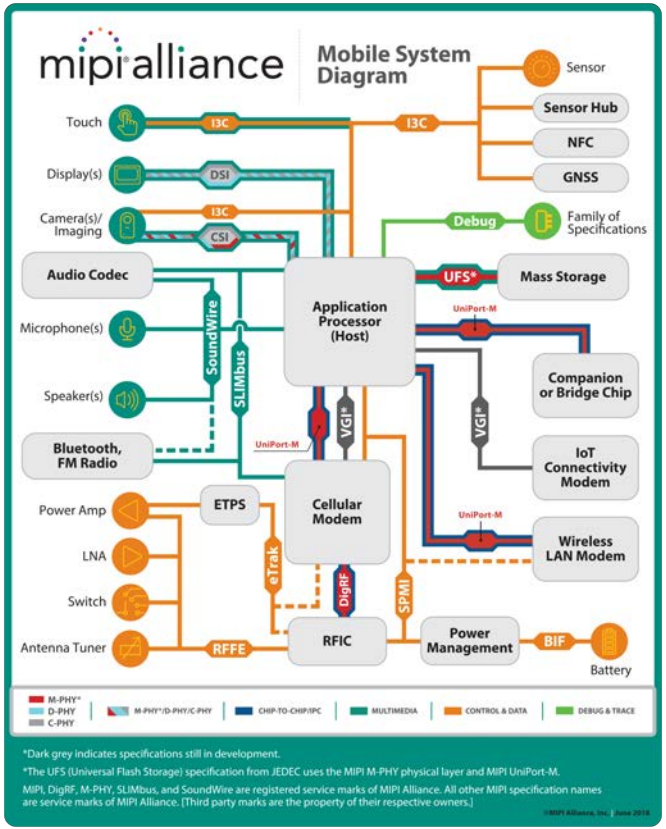
About MIPI Alliance



TODAY'S MIPI MEMBER ECOSYSTEM



MIPI Specifications Leveraged Beyond Mobile

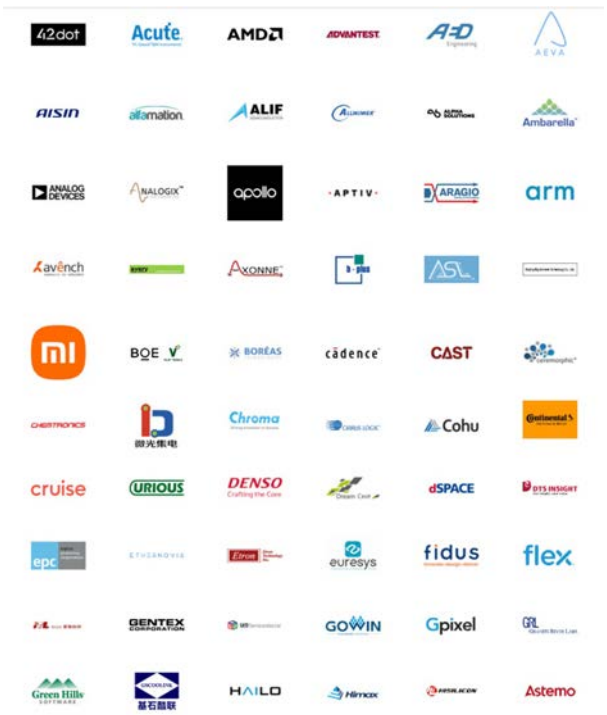


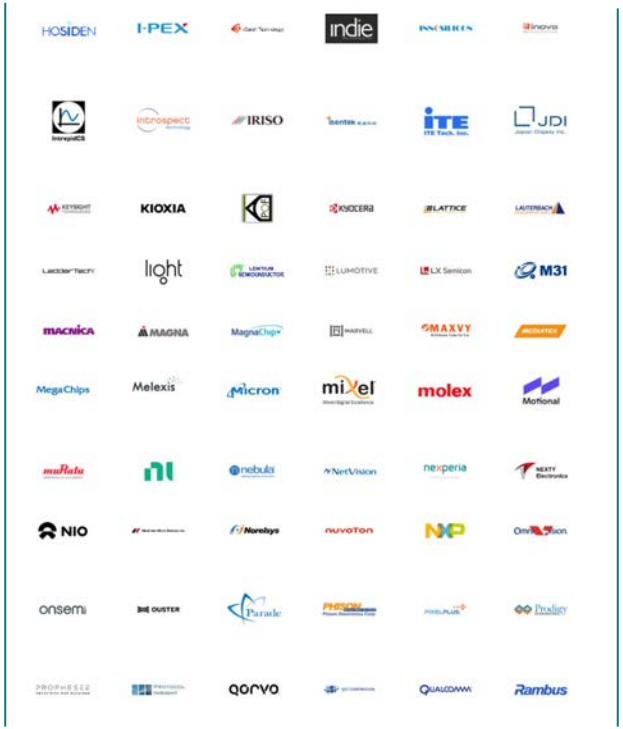
50+
Current specifications

Fundamentally, usage rights are granted to members royalty free for implementation of MIPI specifications from all MIPI members

MIPI Members in Automotive

https://www.mipi.org/members-in-automotive





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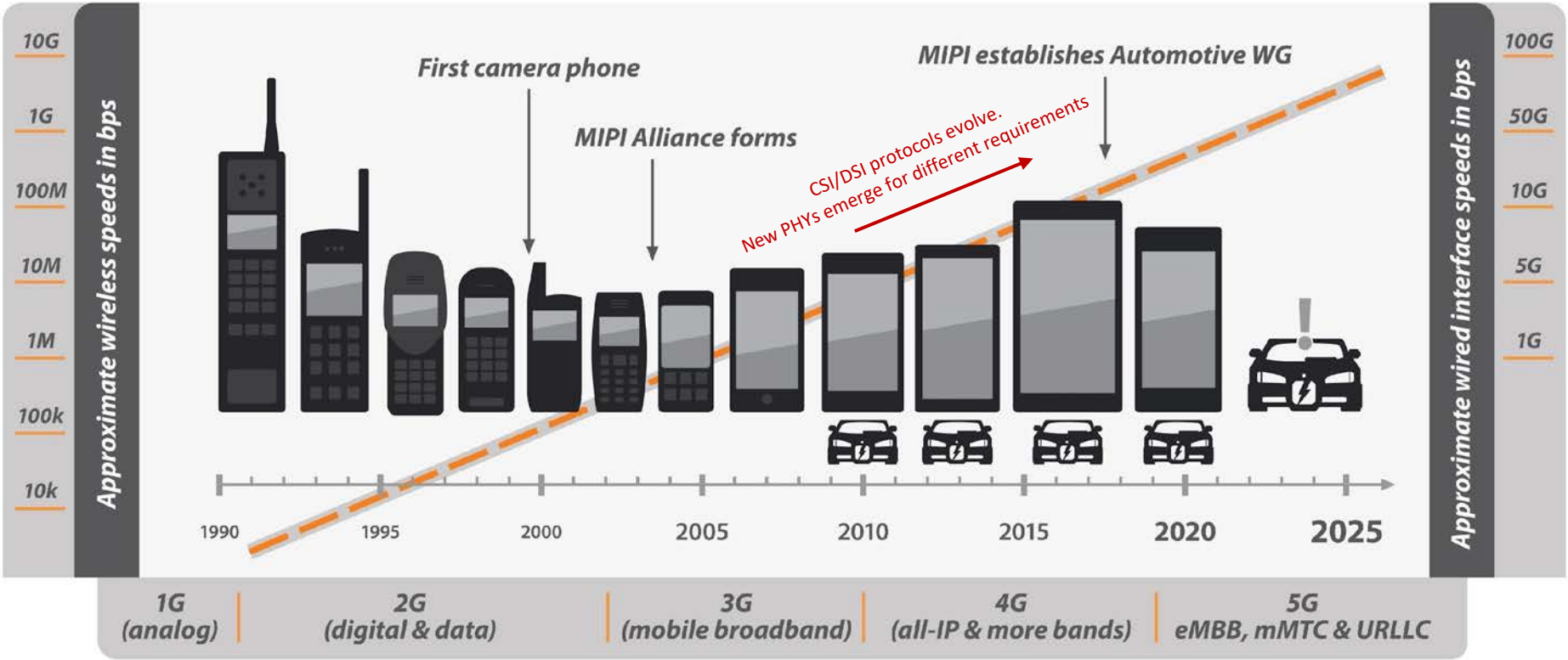
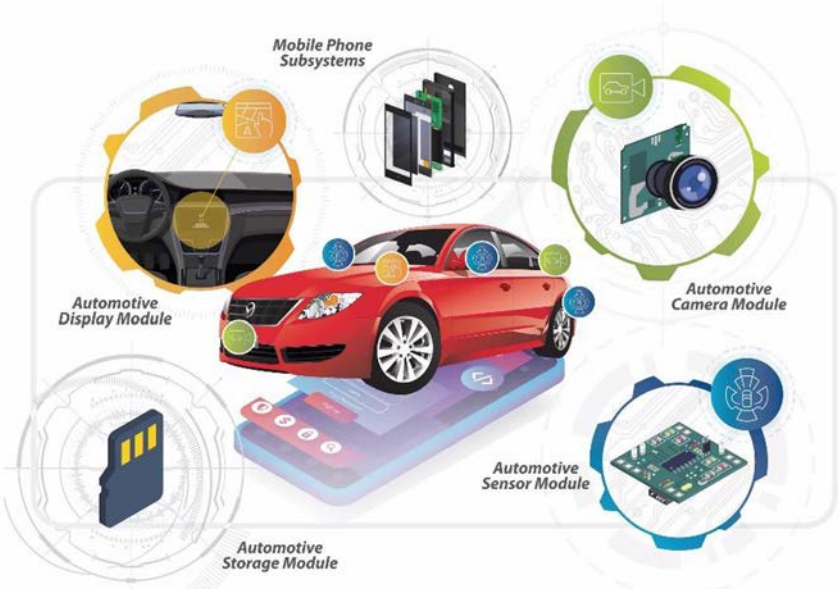
MIPI and the Mobile Gs . . . Including Automotive



MIPI in Automotive



Cameras, displays, audio, sensors, storage, RFFE for 5G, Wi-Fi, Bluetooth, NFC

Reuse & extend well-proven protocols == reduced NRE/cost

Intra-box usage has been limited due to lack of native long-reach PHY

SPECIFICATIONS IN AUTOMOTIVE

Most MIPI interfaces are implemented as "*short reach*" (~15 to ~30cm+)

CSI-2
Camera Serial Interface protocol
Protocol for cameras, lidar, radar sensors

DSI-2
Display Serial Interface protocol
Protocol for smartphone, IoT and automotive displays

C-PHY SerDes
3-phase physical layer for CSI-2 & DSI-2
Short-reach physical layer for cameras and displays

D-PHY SerDes
Differential physical layer for CSI-2 & DSI-2
Short-reach physical layer for cameras and displays

I3C
Control and data bus protocol and interface
Sensor and general-purpose data and control interface within a module

RFFE
RF control protocol
Front-end control within a wireless module

UniPro for JEDEC UFS
Data transport protocol for UFS over M-PHY
Transport protocol for UFS storage

M-PHY SerDes for JEDEC UFS
Differential physical layer for UFS storage
Short-reach physical transport for UFS storage

A-PHY SerDes
***Long-reach** (up to 15m) asymmetrical physical layer (released Sep 2020)*

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Today's Presentations & Speakers

Introductions and Q&A	**Moderator** James Goel, Chair of the MIPI Technical Steering Group and Co-Vice Chair of the MIPI Display Working Group	
MASS (07:10-08:00)	**Session 1 + Q&A** **MIPI Automotive SerDes Solutions: What's New in the MASS℠ Connectivity Framework** Presented by Ariel Lasry, Vice Chair of the MIPI A-PHY Working Group	
A-PHY (08:15-09:30)	**Session 2 + Q&A** **MIPI A-PHY®: Continuing to Drive Innovation for In-Vehicle Connectivity** Presented by Raj Kumar Nagpal, Co-Chair of the MIPI A-PHY Working Group	
SECURITY (09:45-10:30)	**Session 3 + Q&A** **MIPI CSI-2® Security Framework: A New Approach for End-to-End Protection of Camera Data Streams** Presented by Rick Wietfeldt, Co-Chair of the MIPI Security Working Group	

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Many Ways to Learn More . . .

Ask questions

Join the Automotive Mailing List

www.mipi.org/automotive-news

Stay up to date on new MASS specifications, automotive resources and educational events.

Reach out to admin@mipi.org

Thank you for your time

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