



Flash Memory Summit

Panel on Automotive Memory Requirements



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Data Centers on Wheels



Flash Memory Summit



**Automotive electronics
used to be a second
consideration...**

Market	2019 market size (\$bn)	2024 market opportunity (\$bn)	CAGR (%)
Smartphone	106	155	7.9%
Personal computing	86	99	2.8%
Consumer electronics	42	61	7.7%
Automotive	41	65	9.5%
Industrial electronics	49	71	7.8%
Wired and wireless infrastructure	34	45	5.5%
Servers, datacenters and storage	61	102	10.6%
	419	598	7.3%

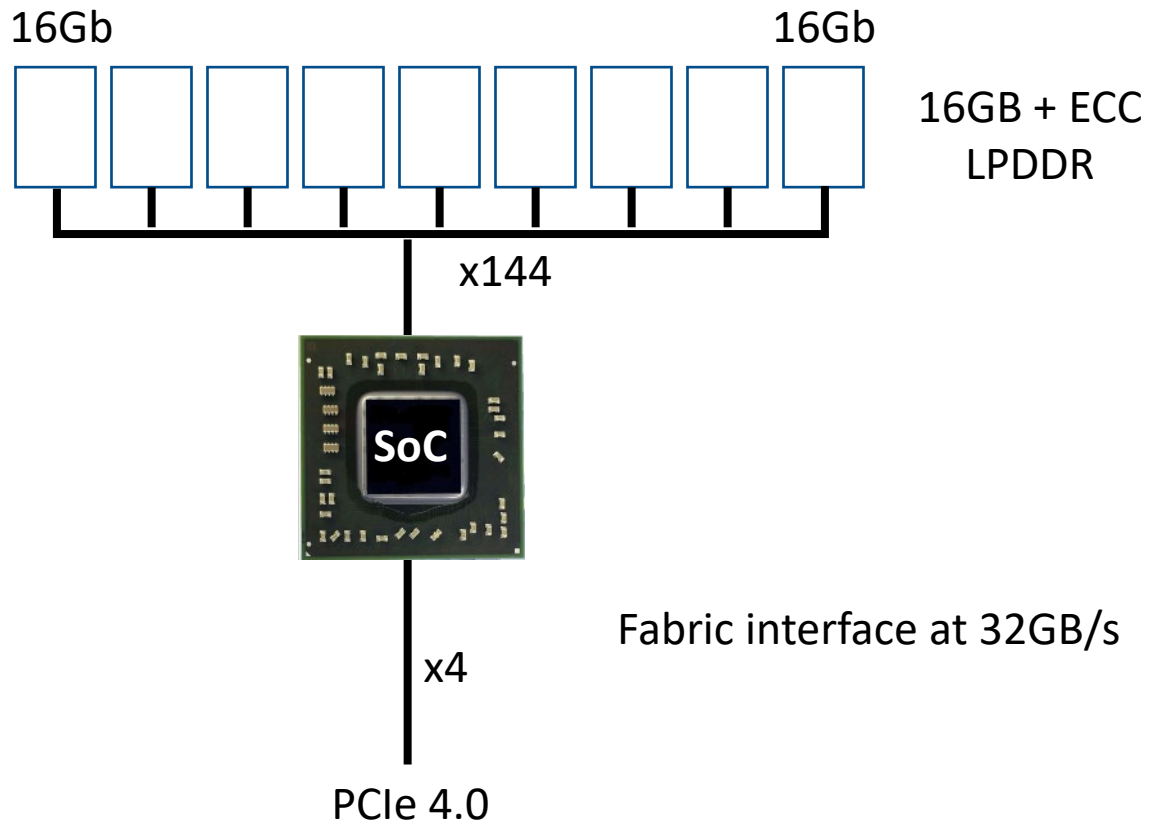
ASML Annual Report, Feb 2021

**...but have emerged
as a crucial and
growing market**

How Nerds View a Car



Typical SoC Configuration



Memory interface at 100GB/s

Fabric interface at 32GB/s

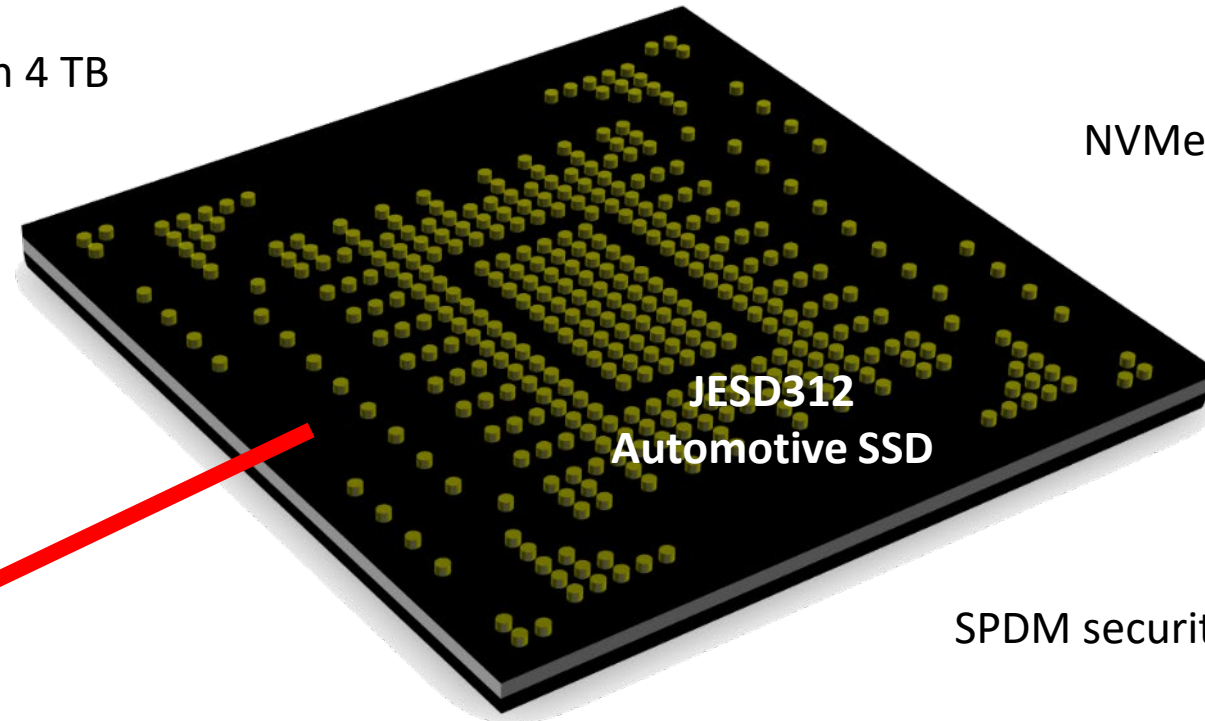
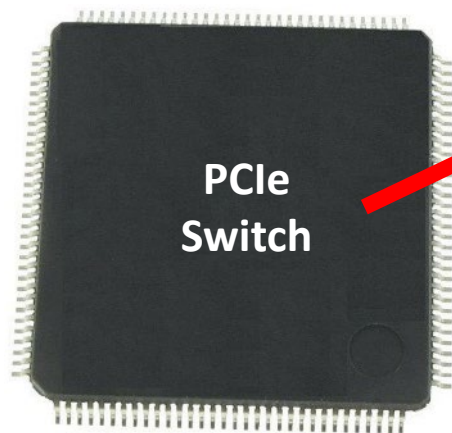
4 to 8 SoCs per car depending on vehicle type

JEDEC JESD312 Automotive SSD

Storage capacity range from 128 GB through 4 TB

NVMe protocol

Fabric interface at 32GB/s



SPDM security

Optional high reliability system storage region 32-64 GB



(and no, THIS wasn't my rental car...)

Help!

I'd **like** to think car designers
prioritized braking and steering



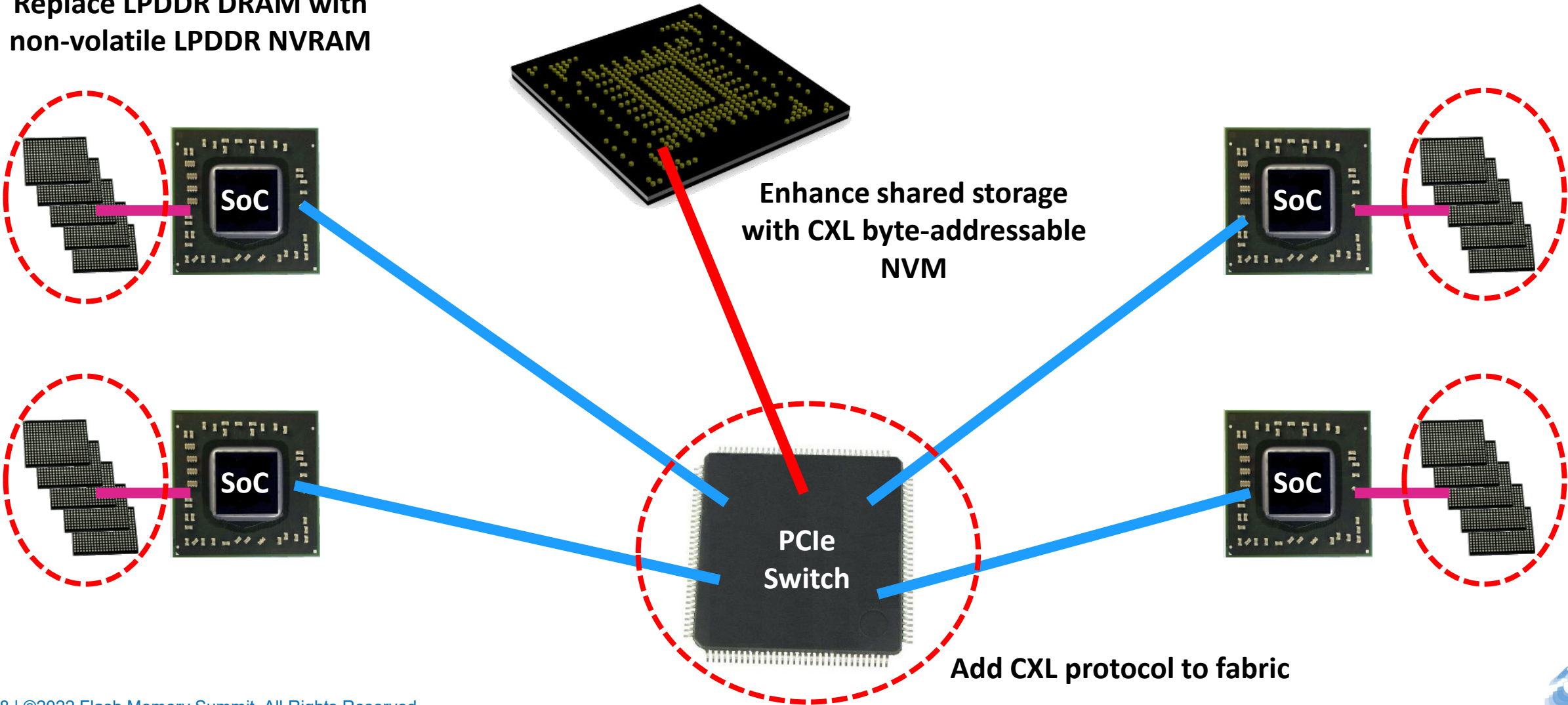
But do I **know** that's true?

And that my car was **functional**
in far less than **seven seconds**

I WANT INSTANT ON

Realizing Instant On

Replace LPDDR DRAM with
non-volatile LPDDR NVRAM



Save the Date: October 21, 2022



Flash Memory Summit

Shameless plug for
BRDG
Bridge to Connect
Education non-profit

Please visit the
booth

BRDG BRIDGE TO CONNECT'S 2022

BE THE SHARK

JOB FAIR
#BETHESHARK

@bridge_to_connect
 @brdg-bridge-to-connect

Location:
Irvine, California

Scan Me!

<https://www.bridg-e-to-connect.org>

The poster features a shark's open mouth at the top right, a large blue wave at the bottom, and a QR code on the wave. The text is in various colors and fonts, including blue, black, and purple.



Thank You

Bill Gervasi

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