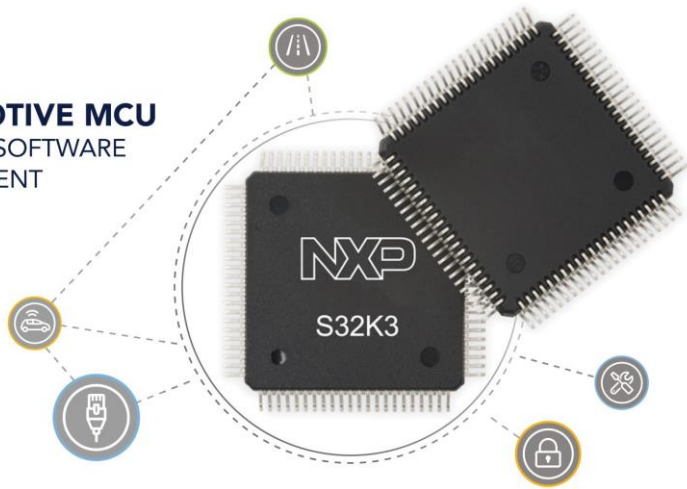


**S32K3
AUTOMOTIVE MCU**
SIMPLIFIES SOFTWARE
DEVELOPMENT



NXP BODY DOMAIN AND ZONAL CONTROLLER

Vincent Deng
Product Marketing Manager, GC & SAP
JAN 2021



SECURE CONNECTIONS
FOR A SMARTER WORLD

PUBLIC

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S32K3 APPLICATIONS

Target

Body, Info/Audio, T-BOX/ETC



BCM



Lighting




HVAC




Info IOC

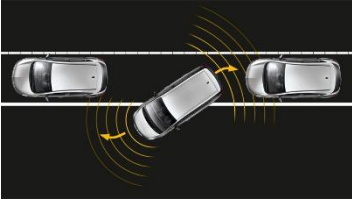
Electrification, Safety companion



BMS

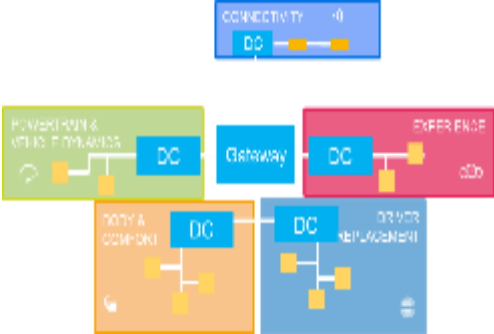


Gear shifter




ADAS Companion


Body Domain Controller Zone controller




Opportunistic




DCDC/ACDC




Inverter




EPS



Gateway

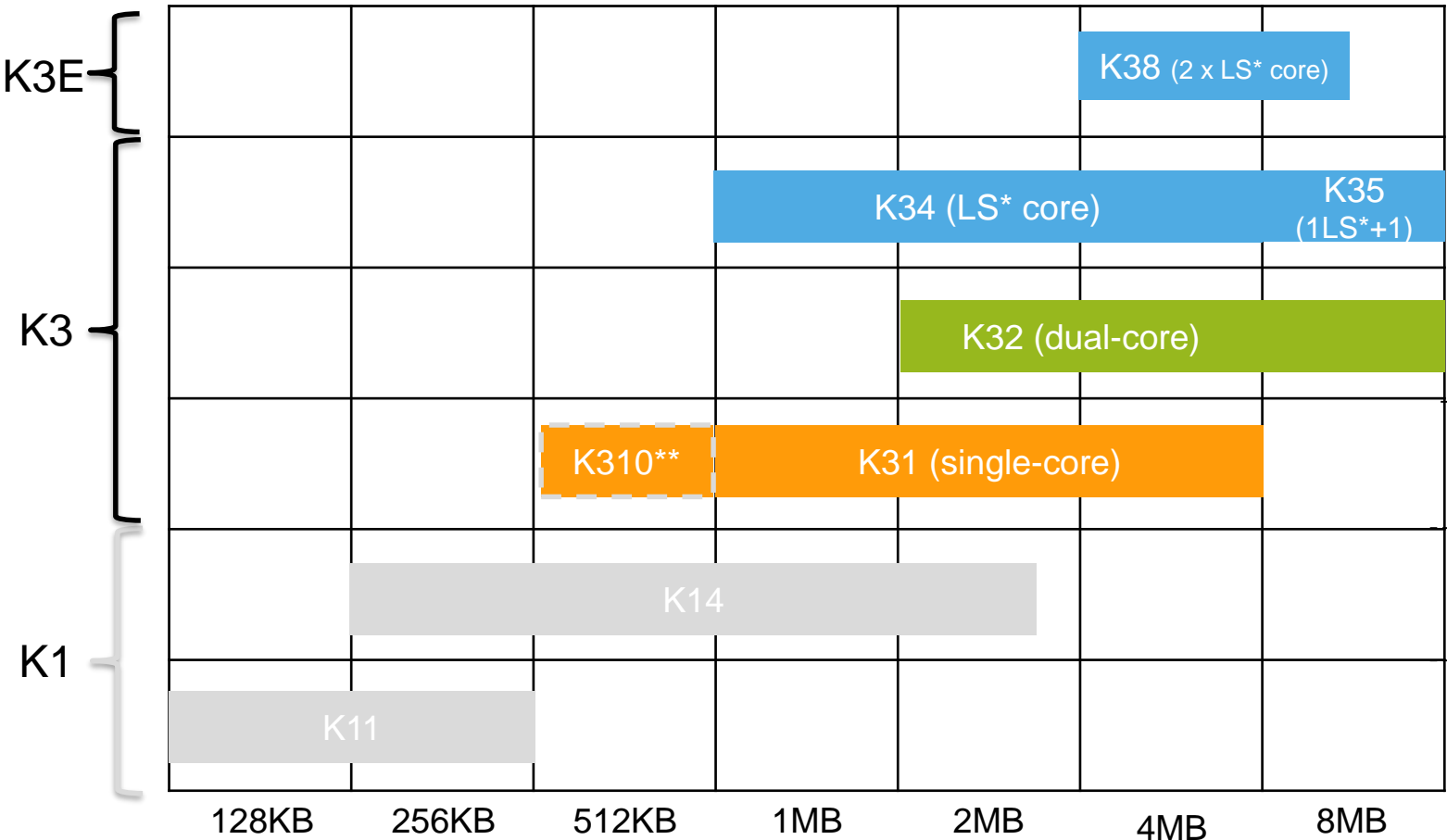


High Performance ESC/Suspension/Braking



Airbag

S32K PORTFOLIO AND APPLICATIONS



Typical Application

Arm Cortex Core

ASIL C/D – DCDC, OBC, Inverter



ASIL C/D – BMS, Electrification, Safety co-proc



ASIL A/B – High perf, Zone, Info/Audio



ASIL A/B – “K1 extension”, Security 2022+, OTA



ASIL A/B – CAN FD and Ethernet nodes

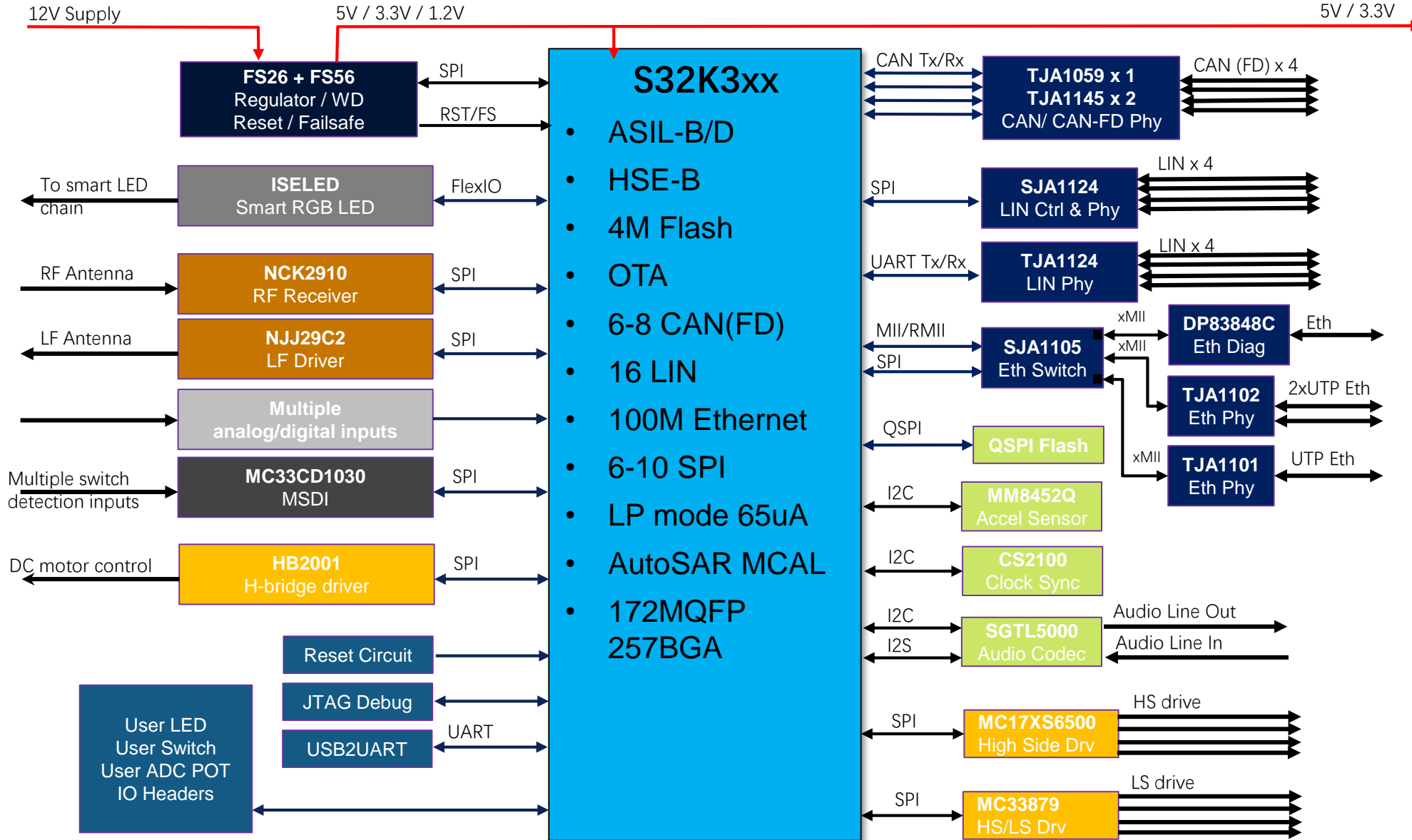


ASIL A/B – Small CAN FD and LIN nodes



* LS = lock step
 ** K310 product idea under evaluation

BODY DOMAIN CONTROL OR IBCM BASED ON S32K3



- BCM
- Gateway
- Lighting Control
- PEPS (RF/LF)
- HVAC
- Steering Lock

S32K344 WHITE BOARD HARDWARE

- RKE NCK2910
- Accelerometer MMA8452
- QSPI Flash
- Safety SBC FS26
- S32K344
- SBC FS56
- Touch Sense Pad
- NXP Products

Audio Codec SGT5000

USB2UART CP2104

Eth Switch and Phy

GD3000 EVB

User LEDs

PEPS NJJ29C2

H-bridge MC33HB2001

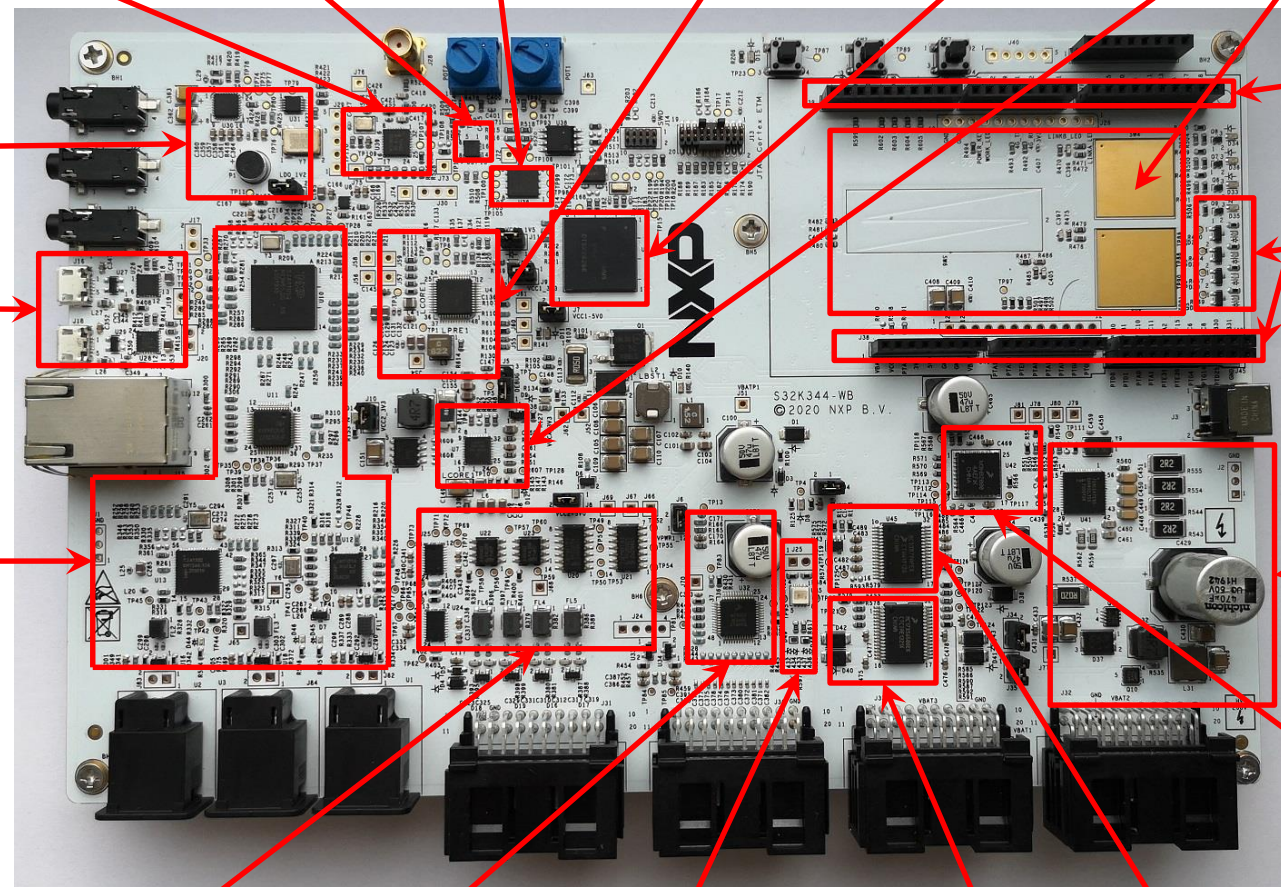
CAN Phy LIN Phy

MSDI CD1030

ISELED

HS Driver MC17XS6500

LS Driver MC33879



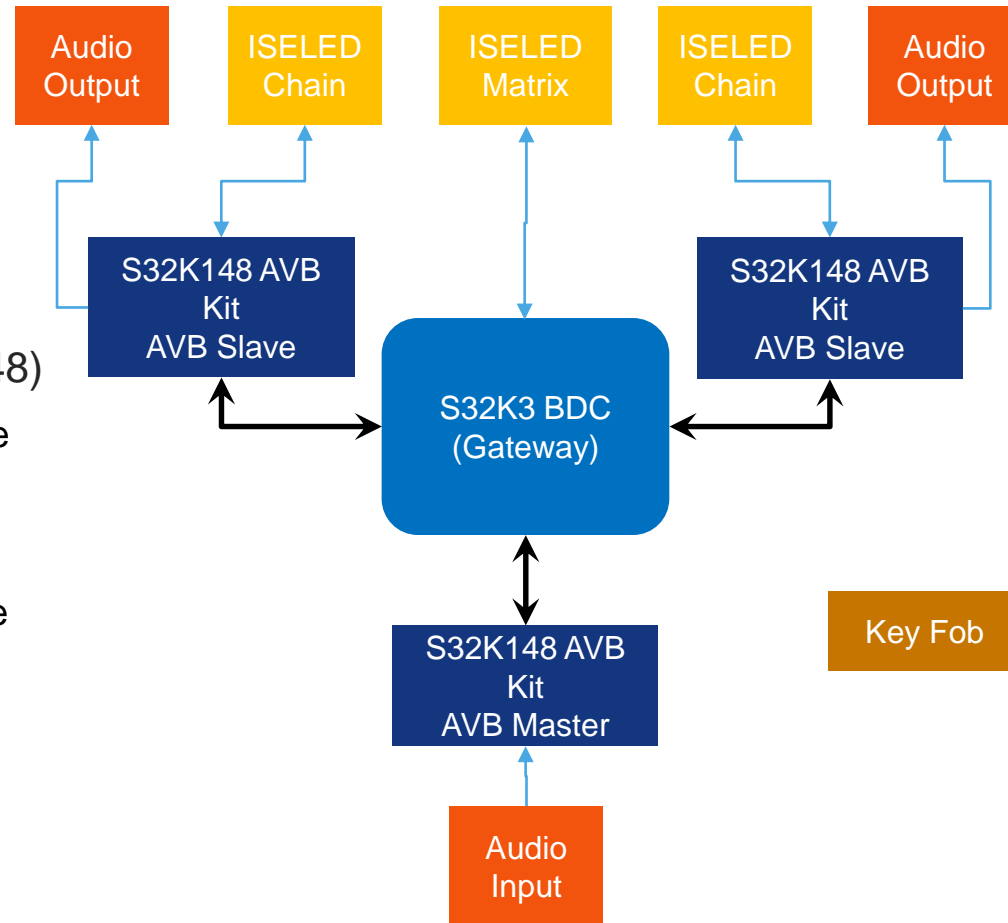
228mm x 148mm
54% of A4 (297X210)



S32K3 BDU DEMO SYSTEM

Key Features:

- Ethernet Gateway and AVB
 - Integrate EMAC driver, phy driver and LWIP stack.
- ISELED demo
 - LED chain and LED matrix control
- FOTA master (s32k3) and slave (s32k148)
 - S32k3 can update s32k148 AVB kit firmware in runtime without system suspension.
- PEPS demo
 - Passive key entry - detection of key distance
 - Remote key entry
- LCD display
 - Touch sense LCD to control the demo and display demo running status.





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