

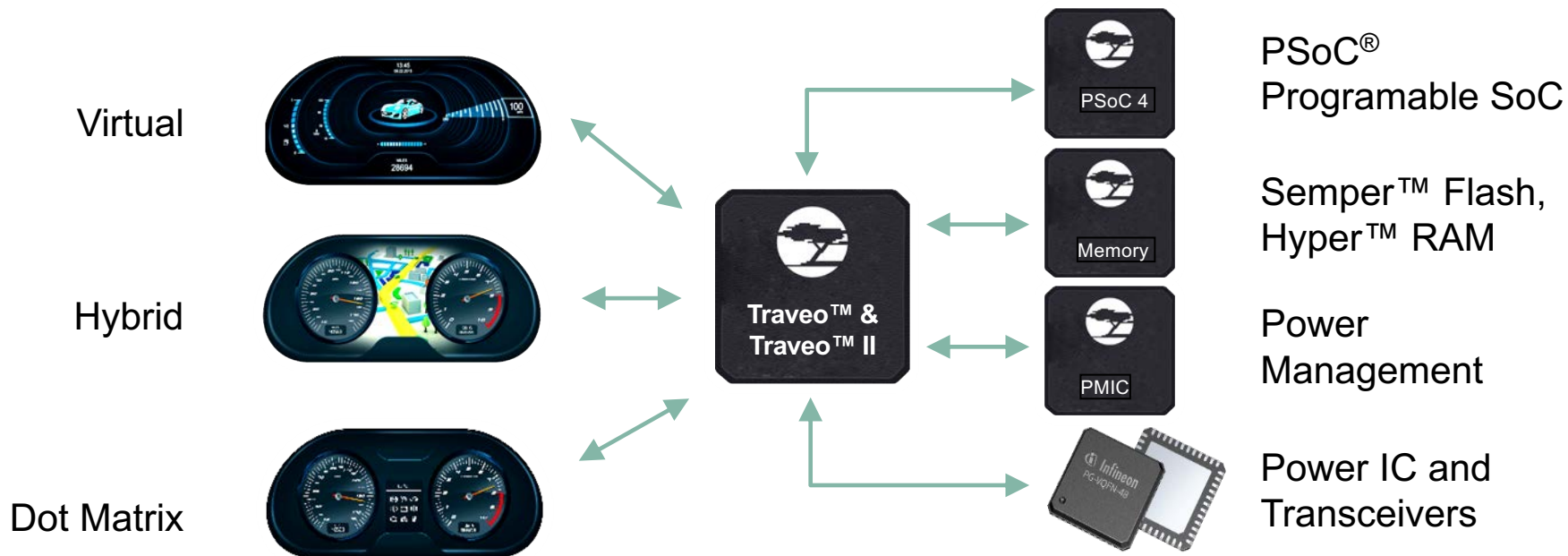


We are the link  
between the real and  
the digital world.

## Infineon Solutions for Instrument Cluster



# Infineon's system solution for Instrument Cluster



# Dot Matrix & Hybrid Instrument Cluster – block diagram and further product details

## Automotive microcontrollers

Traveo™, Traveo™ II

PSoC® 4

## Automotive power ICs

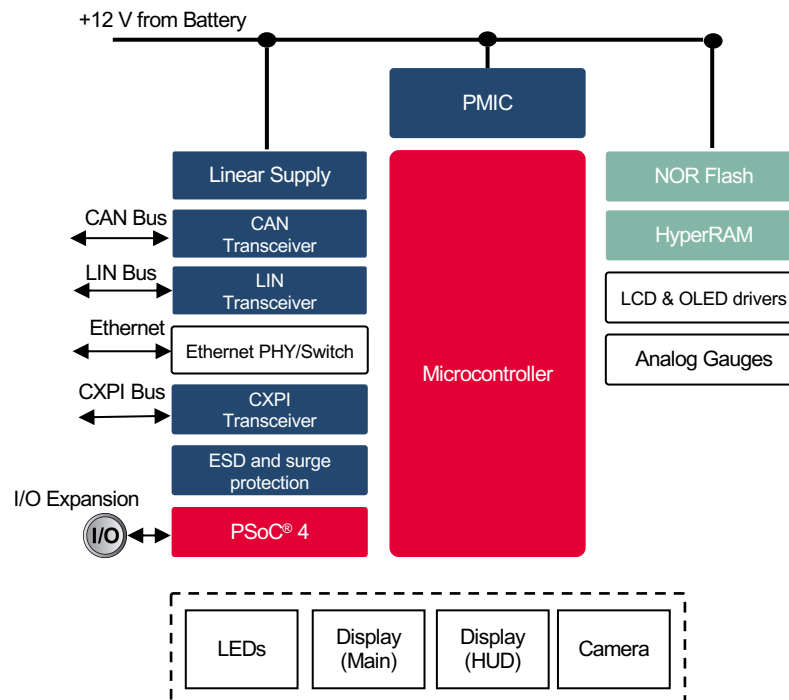
PMICs: OPTIREG™ & S6BPxxx

Linear supplies: OPTIREG™

## Connectivity ICs

Automotive Transceiver

ESD and surge protection\*



## Automotive memory

Semper™ NOR Flash

HyperRAM™ 2.0

# Entry Virtual Instrument Cluster – block diagram and further product details

## Automotive microcontrollers

Traveo™ II

PSoC® 4

## Automotive power ICs

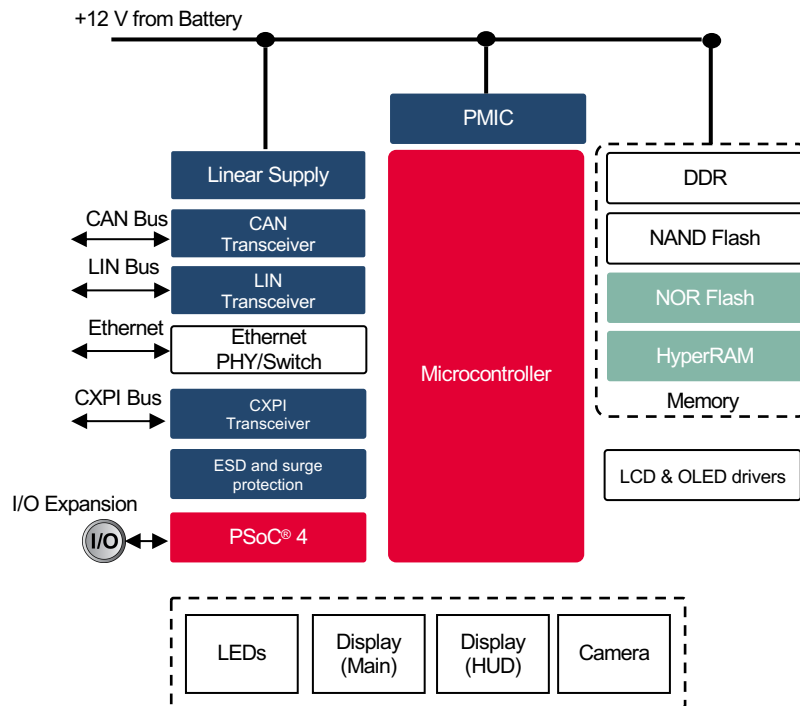
PMICs: OPTIREG™ & S6BPxxx

Linear supplies: OPTIREG™

## Connectivity ICs

Automotive Transceiver

ESD and surge protection\*



## Automotive memory

Semper™ NOR Flash

HyperRAM™ 2.0

# High-end Virtual Instrument Cluster – block diagram and further product details

## Automotive microcontrollers

Traveo™ II

## Automotive power ICs

PMICs: OPTIREG™ & S6BPxxx

Linear supplies: OPTIREG™

System Basis Chip (SBC)

## Automotive memory

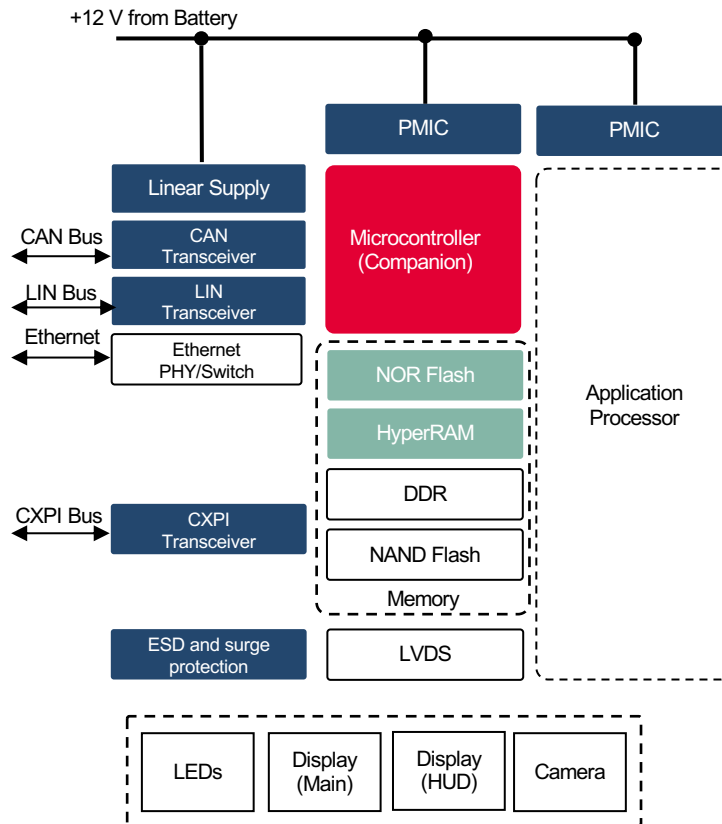
Semper™ NOR Flash

HyperRAM™ 2.0

## Connectivity ICs

Automotive Transceiver

ESD and surge protection\*



# TVII family scales across E/E architecture

## most scalable in performance, memory & peripherals



### Key features TVII family

### Key value



#### Scalability

Flexible solution with respect to performance, package, memory, peripherals, security & safety implementation



Scalability **optimizes variant costs**



#### High performance

Single M4 up to dual M7 cores, with dedicated M0+ for security (HSM). Optimized 2.5D graphics engine



**Superior graphic performance with low system cost**



#### Low power consumption

Ultra low power consumption in active mode, deep sleep mode, hibernate mode



**Save power consumption for system**



#### Functional safety

Functional safety concept enabling ISO26262 ASIL-B full functional safety in both hardware and software



**Reliable** for both hardware and software



#### Secured updatability

HSM-Level Security and Read-while-write memory, allowing execution of software (read) while programming (write) for True Firmware-Over-The-Air (FOTA) update



Increased **vehicle updatability** in secure environment

# Focus product / Semper™ Flash – safe, reliable, and high-performance flash memory solution



## Key features Semper™ Flash family



### Functional safety

World's first ISO 26262 ASIL-B functional safety  
Compliant Flash memory



### Reliability

EnduraFlex™ architecture offering 1+ million  
program/erase endurance cycles and 25 years data  
retention



### High Performance

JEDEC standard xSPI interfaces up to 400 MB/s read  
bandwidth and Quad SPI interface up to 102 MB/s



### Easy of design

Broad support from chipsets and ecosystem partners.  
Semper SDK provides production-grade drivers



### Scalability

Density range from 256 Mb to 4 Gb, supporting 1.8 V  
and 3 V interfaces, with common feature set

## Key value

➤ **Safe storage** for boot code  
and ADAS algorithms

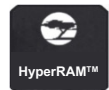
➤ **Reliable data-integrity** for  
grades up to +125°C

➤ **Instant-on boot** performance  
for instrument clusters and  
other systems

➤ Reduce design effort and  
**Fast time-to-market**

➤ Scalability **enables code and  
data size changes** without  
board re-design

# Focus product / HyperRAM™ 2.0 – low-pin-count, high-performance expansion memory solution



## Key features HyperRAM™ 2.0 family



### Flexibility

Offers both HyperBus and OctalSPI interfaces



### Low-pin-count

12-pins interface vs. 40+ pins for parallel interface solutions



### Compatibility

Compatible with NOR flash HyperBus interface



### Small footprint

Offers a small FBGA package vs. larger packages for parallel interface solutions



### Performance

Industry leading HyperBus/OctalSPI performance

## Key value

➤ Flexibility enables multiple chipset options

➤ Reduces chipset pin-count required to interface with memory

➤ Enables a shared bus to further reduce pin-count

➤ Reduces PCB area

➤ Best throughput for expansion memory



# Support material



Learn more on our [webpage](#)



Please contact your local Infineon sales office for more details



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