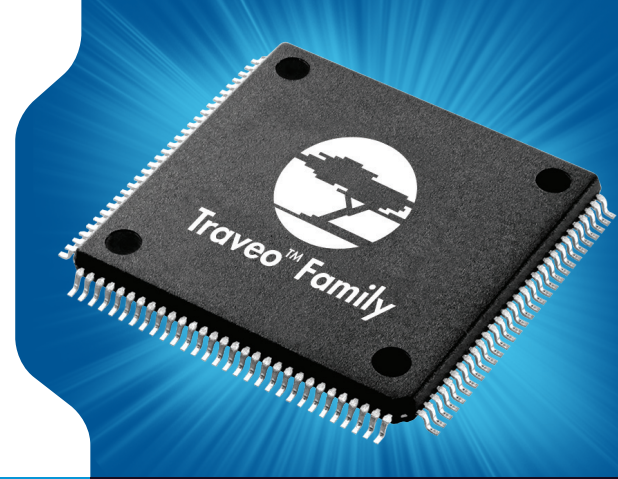


CYPRESS

# Traveo™ MCU Family S6J3110 Series for Body Control



## PRODUCT OVERVIEW

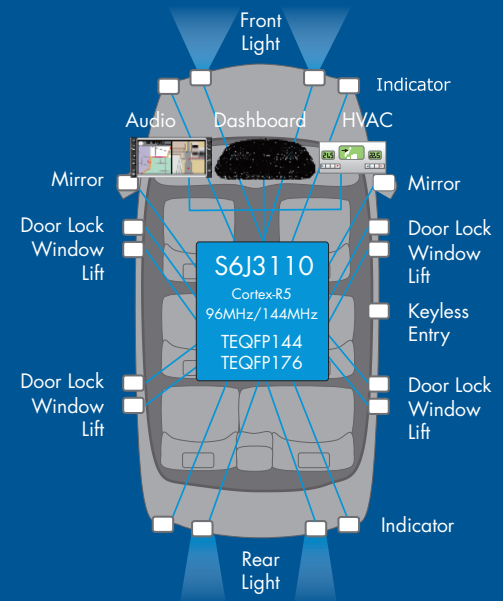
### Cypress Traveo Family

The Traveo family expands the company's automotive applications, scalability and high performance into one line-up and at the same time adds new features to fulfill the latest requirements of the automotive industry. Based on the powerful ARM® Cortex®-R5 and R5F core in single and dual core operations, it offers state-of-the-art real-time performance, safety and security features. The family supports the latest in-car networks and offers high-performance graphics engines optimized for a minimum memory footprint and embeds dedicated features to increase data security in the car.

### Cypress Traveo – S6J3110 Series

The Traveo S6J3110 family features a single ARM Cortex-R5 and operates at 144MHz. The S6J3110 family incorporates the high performance CAN FD interface for enhanced in-vehicle networking and is focused on various automotive applications including body control module (BCM), heating, ventilation and air conditioning (HVAC). In addition to the CAN FD interface operating at 5Mbps, the S6J3110 family comes with a maximum 4MB of flash memory to enable high-level program control and uses 55nm technology. It also features Secure Hardware Extension (SHE) for network security and improved performance for connected cars, as well as advanced partial wakeup for lowering power consumption.

**Security function:** In addition to conventional flash security, which protects data stored in the microcontroller, the S6J3110 series is equipped with SHE (specification ver 1.1). Key SHE management housed within the microcontroller is separated using hardware and an authentication function preventing data modification, theft and invalid access to the vehicle network.

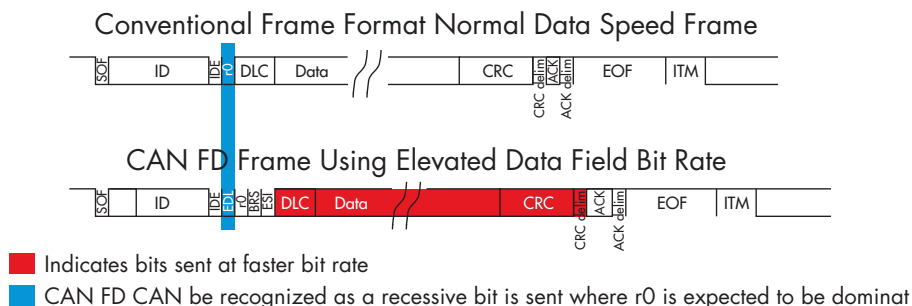


### Cypress Traveo – S6J3110 Series Lineup

Products	Freq. MHz	Pow. V	Memory Type	FLASH (KB)	RAM (KB)	Backup RAM (KB)	PKG	Note	
S6J3119H	96	4.5 to 5.25	Main Flash + Work Flash	832 + 48	64	8	TEQFP144	12bit ADC 56ch (25ch+31ch) CAN FD 1ch, Multi-Function Serial 4ch, Base Timer 30ch, 32bit Free Run Timer 6ch, 32bit Input Capture 12ch, 32bit Output Compare 12ch, DMA 16ch, SHE	
S6J311AH				1088 + 48	80				
S6J311DH	144			3136 + 112	256	64			TEQFP176
S6J311EH				4160 + 112	320				
S6J311DJ				3136 + 112	256				
S6J311EJ				4160 + 112	320				

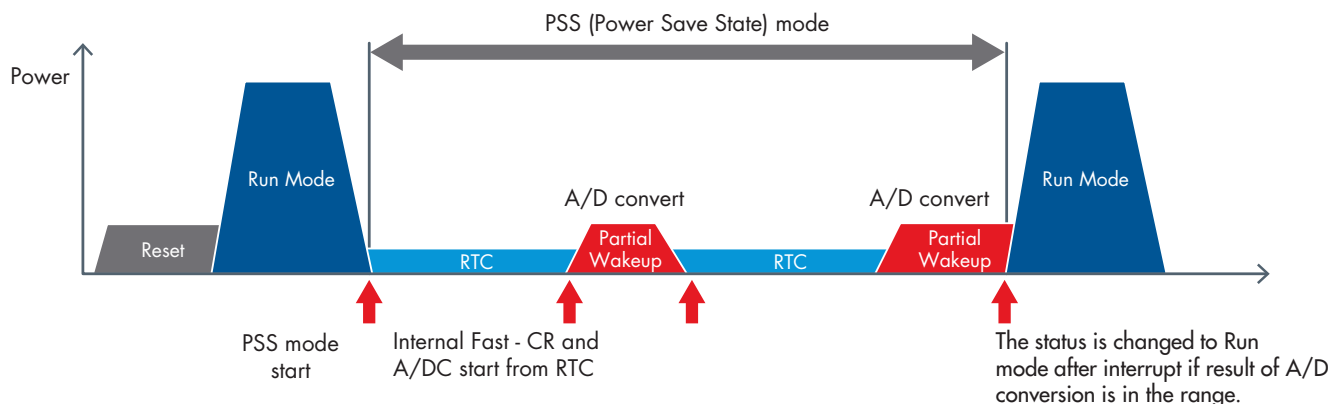
### CAN FD (CAN WITH FLEXIBLE DATA RATE)

CAN FD is a cost effective alternative to FlexRay and designed to close the gap between CAN and FlexRay. CAN FD supports data-fields up to 64bytes and a data rate up to 5Mbps allowing for a much faster software download rate.



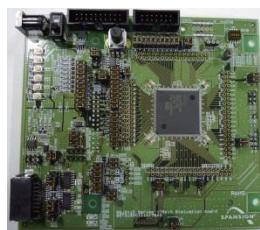
### PARTIAL WAKEUP FUNCTION

Normally, when A/D conversion is performed from the low power-consumption mode, the CPU is interrupted and the system returns to normal operation. Afterwards, it is necessary to start the A/D converter from the CPU. However, when using partial wakeup, power except Real Time Clock (RTC) is cut. Once the RTC performs a specified count, the A/D converter is started and conversion begins without passing through the CPU. If conversion results are not within the scope of set values, it is possible to start the CPU through interruption. Partial wakeup makes it possible for lower power consumption even further when periodically checking for sensor malfunctions.



### DEVELOPMENT TOOLS

Products	Evaluation Board	IDE	ICE
TEQFP144	S6T3J300111B176A2 (with S6J311EH)	Green Hills Software (Multi®) or IAR Systems (EWARM)	Green Hills Software (Green Hills Probe™) or IAR Systems (I-jet™/I-Trace™)
TEQFP176	S6T3J300111B176A2 (with S6J311EJ)		



Evaluation Board (S6T3J300111B176A2)

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