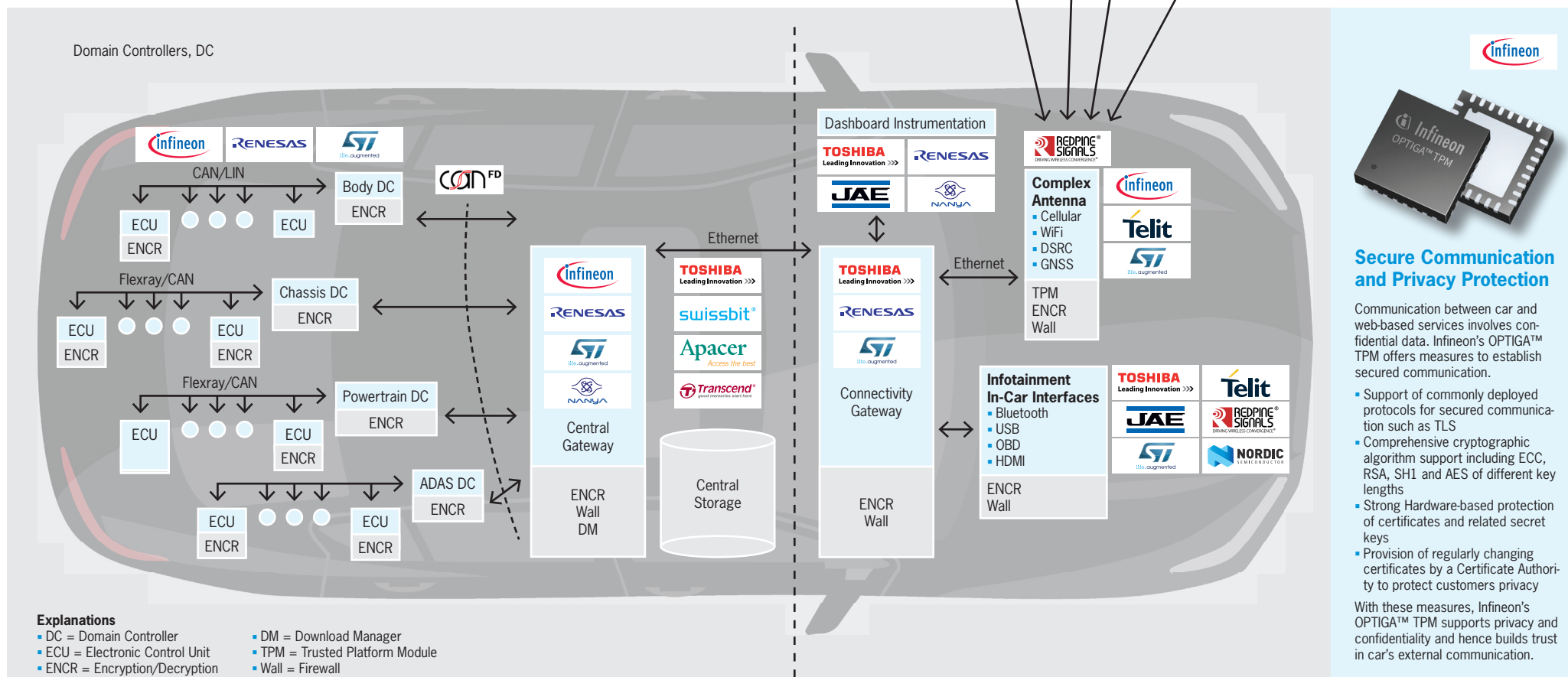
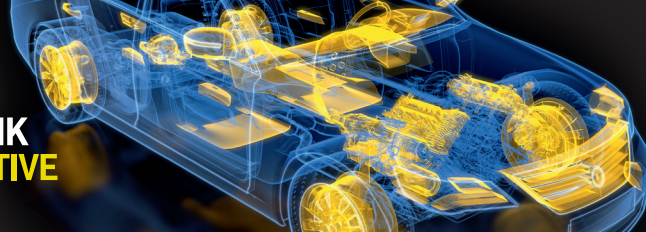


Discover Innovation in Motion

AUTOMOTIVE Products

Connected Car





Dashboard Instrumentation



Manufacturer	Series/Type	Features
Renesas	RH850/D	32-Bit Microcontrollers with display drivers and stepper motor drivers
Renesas	R-Car	Multi-Core Processors
Toshiba	TC90175	Audio Video Bridge, Ethernet AVB
Intersil	ISLxxx, TW	Video Decoders, Display Drivers, HUD-LED Projector Drivers

Connectivity Gateway



Manufacturer	Series/Type	Features
Renesas	R-Car	Multi-Core Processors
Toshiba	TC90175	Audio Video Bridge, Ethernet AVB
Toshiba	Low Power DDRx	DDRx Memory
STMicroelectronics	Accordo	Multi-Core Telematics Processor

Complex Antenna



Manufacturer	Series/Type	Features
Telit	ATOP	3G/GPS/GLONASS combo modules for automotive telematics on-board units
Redpine Signals	RS9116	High Output (+23dbm) 802.11p Module for V2V and V2X and additional support for dual band 802.11abgn + BT4.0 dual mode + ZigBee + Thread + Apple HomeKit
STMicroelectronics	Teseo III	GPS/Galileo/GLONASS/BeiDou/QZSS standalone positioning receiver IC
Infineon	Optiga TPM (SLB...)	Trusted Platform Module for Device Authentication, Secured Key Store, Secured Channel, Secured Updates and Lifecycle Management

Infotainment In-Car Interfaces



Manufacturer	Series/Type	Features
Nordic Semiconductor	nRF51	Standalone Multiprotocol BLE/ANT/2.4GHz RF SoC with Cortex M0
Nordic Semiconductor	nRF52	Standalone Multiprotocol BLE/ANT/2.4GHz RF SoC with Cortex M4 and NFC
Redpine Signals	RS9113	M2M Combo Modules (dual band 802.11abgn + BT4.0 dual mode + ZigBee + Thread + Apple HomeKit)
STMicroelectronics	BlueNRG-1	Standalone Bluetooth Low Energy System on Chip (BLE SoC)
Telit	xE910	ISO TS16949 compliant automotive grade 2G module family

Central Storage, eMMC



Capacity	Part Number	eMMC Version	Max. Speed (MB/s)	Power Supply Voltage		Operation Temperature (°C)	Package
				Vcc (V)	Vccq (V)		
64GByte	THGBMHG9C8LBAAG	5.1	400	2.7 to 3.6	1.7 to 1.95 2.7 to 3.6	-40 to +85	FBGA153
32GByte	THGBMHG8C4LBAAR						
16GByte	THGBMHG7C2LBAAR						
8GByte	THGBMHG6C1LBAAL						

Central Storage, SD-Cards

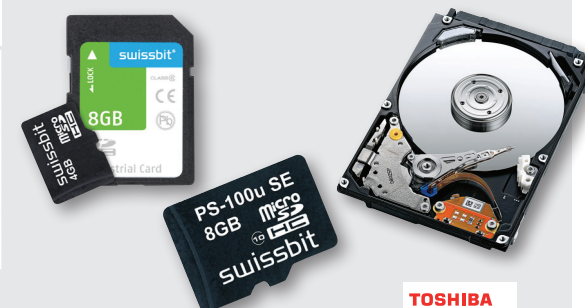


Manufacturer	Series	Type	Features
Swissbit	S-45	SFSDXXGL3BM1TO-X-GE-2B1-STD	MLC Flash / -25°C - 85°C / -40°C - 85°C / 4GB-128GB / SD
Swissbit	S-45u	SFSDXXGN3BM1TO-X-GE-2B1-STD	MLC Flash / -25°C - 85°C / -40°C - 85°C / 4GB-32GB / MicroSD
Apacer	Industrial SD H1-M	AP-SDXXXGXA-1XTM	MLC Flash / -25°C - 85°C / -40°C - 85°C / 8GB-128GB / SD
Apacer	Industrial MicroSD H1-M	AP-MSDXXGCA-1XTM	MLC Flash / -25°C - 85°C / -40°C - 85°C / 8GB-64GB / MicroSD
Transcend	SD / 10M	TSXXGSDHC10M	MLC Flash / -25°C - 85°C / 8GB-32GB / SD
Transcend	MicroSD / 10M	TSXXGUSDC10M	MLC Flash / -25°C - 85°C / 8GB-32GB / MicroSD

DDRx



	512Mbit	1Gbit	2Gbit	4Gbit	8Gbit
DDR2	now	now			
DDR3		now	now	now	
DDR4				2017	2017
LP-DDR		now			
LP-DDR2		now	now	Nov'16	
LP-DDR3				Dec'16	
LP-DDR4					2017



Central Storage, Hard Disc Drive



Model Number	MQ01AAD032C	MQ01AAD020C	MQ01AAD010C
Maximum Capacity (Formatted)	320 GB	200 GB	100 GB
Number of platters	1		
Number of heads	2		1
Average seek time	12 ms		
Interface	ATA8/Serial ATA 2.6		
Interface speed	3/1.5 Gbit/s		
Rotational speed	4,200 rpm		
External dimensions (WxDxH; mm)	69.85 x 100 x 9.5 mm		
Weight (g)	105 g		
Temperature	Operating	-30 to +85 °C	
	Non-operating	-40 to +95 °C	
Altitude	Operating	494.9-1049.8hPa(-300 to 5,650 m)	
	Non-operating	193.3-1049.8hPa(-300 to 12,000 m)	
Vibration	Operating	29.4 m/s² {3 G} (8-50 Hz)	
		24.5 m/s² {2.5 G} (50-200 Hz)	
	Non-operating	19.6 m/s² {2.0 G} (200-500 Hz)	
		49 m/s² {5 G} (10-500 Hz)	