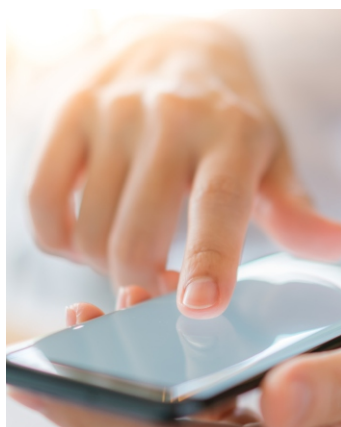# UWB

Ultra-Wide Band

Digital Key

- Compliant with CCC (Car Connectivity Consortium) digital Key features (NFC, BLE, UWB)
- UWB for Key ranging and positioning (up to +/- 10cm accuracy).
- BLE for accuracy improvement, hardware encryption and decryption.
- NFC for backup access for low-battery situation (to open door or engine start)

Application

Owner Paring

Car Sharing

Vehicle Access and Engine Start

Termination and Suspension

UWB Radar application (Child Presence Detection)

- Prevent tragic incidents of children being left in hot cars significantly reducing the risk of heatstroke and death.

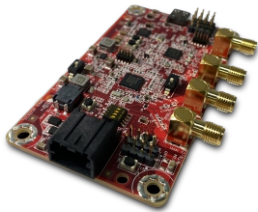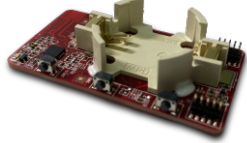| Radar quantity in car	1	2	3
Installation position	Headliner	A, B pillar	Seat-backs or A, B pillar
Functions	CPD	CPD Seat Locations Comfort Sensing Respiration Sensing	CPD Seat Locations Comfort Sensing Respiration Sensing Heartbeat Sensing
Note: The installation configuration and radar quantity may vary depending on the 3rd party algorithm used in different cars.			

Ultra-Wide Band
Product Specifications

Main Board

Main ICs	NXP S32K146	
	NXP KW45	
	NXP NCJ29D6	
Function & Interface	CAN BUS	
	USB Type C	
	NFC	
	Bluetooth Low Energy 5.3	
	UWB (Ultra-Wideband) Radar	
	Child Presence Detection	
	CCC Digital Key	
	GPIOs	
Operating Voltage	6~16V	
Nominal Voltage	12V	
Dimension	PCBA: 100mm X 100mm	

Anchors

Main ICs	NXP KW45	
	NXP NCJ29D6	
Function & Interface	Bluetooth Low Energy 5.3	
	UWB (Ultra-Wideband) ranging	
Operating Voltage	12V	
Dimension	PCBA: 953mm X 526mm	

Key Fob

Main ICs	NXP KW45	
	NXP NCJ29D6	
Function & Interface	CCC Digital Key	
	NFC	
	Bluetooth Low Energy 5.3	
	UWB (Ultra-Wideband) ranging	
	Motion Sensor for power saving	
Operating Voltage	2.5~3.6V (3V, CR2477)	
Dimension	PCBA: 551mm X 290mm	