数字安全互联系统 Digital Security Connectivity System
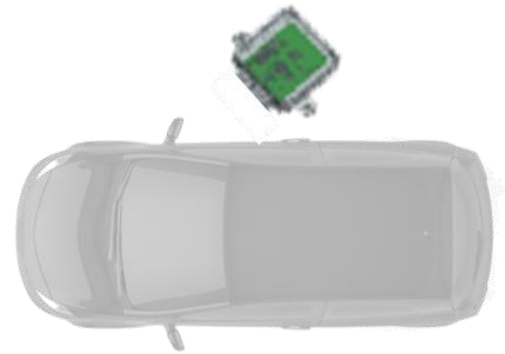
无线功能模块 Remote Functional Module

◆ 简要描述 Brief Description：

无线功能模块主要用于从钥匙和/或胎压传感器接收射频信号，然后发送处理后的数据给车身域控制器用于车身相关操作(如上锁,解锁, 尾门, 胎压信息的仪表显示)。

RFM(Remote Functional Module) is mainly to receive the RF signal from UID(User Identification Device) and/or TPS(Tired Pressure Sensor), and then send the processed data to BDC(Body Domain Controller Unit) for vehicle related operation(Such as Lock, Unlock, Trunk, Panic, Sensor information on cluster display).

◆ 主要特征 Main Feature：

✧ 采用车规级芯片方案 Automotive Qualified Chip Solution
✧ 可支持AES128加密算法 Support AES128 Algorithm
✧ CAN 或 LIN通讯 CAN or LIN Communication
✧ 可支持无线遥控/无钥匙进入启动/胎压接收功能 Support RKE/PKE/TPM receiving Function
✧ 可支持双频接收功能 Support Two Frequency Receiving Function
✧ 满足不同的国家法规 Meet Different Country Regulation
✧ 小尺寸及安装便利性 Small Size & Convenience For Installation

◆ 技术参数 Technical Parameters：

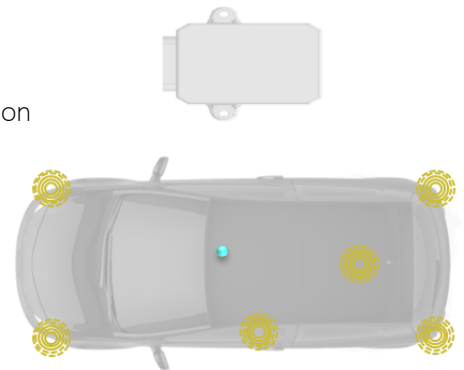| 参数	参数指标
操作温度 Operated Temp.	-40~+85℃
存储温度 Storage Temp.	-40~+85℃
操作电压 Operated Voltage	9~16V
静态电流 Quiescent Current	<=1.5mA
通讯方式 Communication Method	CAN
近场通讯频率 RF Frequency	433.92MHz
射频距离 RF Distance	>20m

数字互联模块 Digital Connectivity Module

◆ **简要描述 Brief Description：**

数字互联模块主要用于与手持端装置(如手机/智能穿戴/实体钥匙等)进行无线通讯，并将通讯数据通过总线传送给特定的电子控制单元或系统。

DCM(Digital Connectivity Module) is mainly to communicate with the handheld device(such smart phone, wearable devices, Key fob, etc.), and send the data to specified ECU or system via bus line.

◆ **主要特征 Main Feature：**

✧ 采用车规级芯片方案 Automotive Qualified Chip Solution
✧ 超宽带 和/或 蓝牙 和/或 近场通讯组合 UWB and/or BLE and/or NFC Combination
✧ 兼容CAN/CANFD通讯 Compatible With CAN/CANFD Comm.
✧ 支持钥匙定位功能 Support DSK Positioning Function
✧ 可支持SE加密功能 Support SE function
✧ 满足不同的国际标准 Meet Different International Standard
✧ 小尺寸及安装便利性 Small Size & Convenience For Installation

Note : Different System Architecture, Different Modules Position
备注: 不同系统架构, 不同模块位置
图中表示模块可能放置的位置
(如UWB模块在四个车边角落, NFC模块在车门把)

◆ **技术参数 Technical Parameters：**

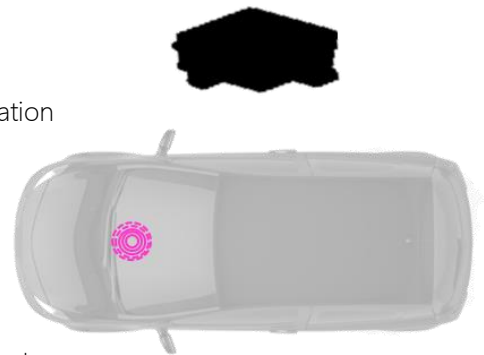| 参数	参数指标
操作温度 Operated Temp.	-40~+85℃
存储温度 Storage Temp.	-40~+85℃
操作电压 Operated Voltage	9~16V
静态电流 Quiescent Current	<=500uA
通讯方式 Communication Method	CAN
近场通讯频率 NFC Frequency	13.56MHz
近场通讯辨识距离 NFC Identification Distance	>3cm
超宽带频率 UWB Frequency	6~8GHz
有效全向辐射功率 EIRP	<-41.3dBm/MHz
蓝牙频率 BLE Frequency	2.4GHz

数字安全集成模块 Digital Security Integration Module

◆ **简要描述 Brief Description：**

数字安全集成模块主要用于接收相关的数据以进行定位，并将计算的数据结果通过总线传送给车身域控制系统进行车辆相关的操作。

DSM(Digital Security Integration Module) is mainly to receive the related data for positioning, and send the calculated result to BDC(Body Domain Controller Unit) via bus line for vehicle related operation.

◆ **主要特征 Main Feature：**

✧ 采用车规级芯片方案 Automotive Qualified Chip Solution
✧ 超宽带 和/或 蓝牙 和/或 近场通讯组合 UWB and/or BLE and/or NFC Combination
✧ 兼容CAN/CANFD通讯 Compatible With CAN/CANFD Comm.
✧ 支持数字安全访问进入功能 Support Handfree Digital Security Access
✧ 支持诊断/刷新等 Support UDS, Boot, etc.
✧ 含高精度定位算法 With High Accuracy Positioning Algorithm
✧ 支持SE加密功能 Support SE Function
✧ 满足CCC, ICCE及ICCOA相关标准 Meet CCC, ICCE and ICCOA related Standard
✧ 小尺寸及安装便利性 Small Size & Convenience For Installation

◆ **技术参数 Technical Parameters：**

参数	参数指标
操作温度 Operated Temp.	-40~+85℃
存储温度 Storage Temp.	-40~+85℃
操作电压 Operated Voltage	9~16V
静态电流 Quiescent Current	<=1mA
通讯方式 Communication Method	CAN
近场通讯频率 NFC Frequency	13.56MHz
超宽带频率 UWB Frequency	6~8GHz
有效全向辐射功率 EIRP	<-41.3dBm/MHz
蓝牙频率 BLE Frequency	2.4GHz

KESENS

数字安全钥匙 Digital Security Key

◆ **简要描述 Brief Description：**

数字安全钥匙主要用于与车身端相关模块(如数字安全集成模块，数字互联模块等)通过蓝牙和/或超宽带方式进行无线的数据通讯。

DSK(Digital Security Key) is mainly to communicate with the vehicle side modules(such as DSM, DCM, etc.) via BLE and/or UWB.

◆ **主要特征 Main Feature：**

✧ 采用车规级芯片方案 Automotive Qualified Chip Solution
✧ 超宽带 和/或 蓝牙 组合 UWB and/or BLE Combination
✧ 可支持SE加密功能 Support SE function
✧ 可支持钥匙刷新功能 Support DSK Boot Function
✧ 满足不同的国际标准 Meet Different International Standard
✧ 满足CCC及ICCE相关标准 Meet CCC and ICCE related Standard
✧

◆ **技术参数 Technical Parameters：**

参数	参数指标
操作温度 Operated Temp.	-40~+85℃
存储温度 Storage Temp.	-40~+85℃
操作电压 Operated Voltage	3V
静态电流 Quiescent Current	<10uA
超宽带频率 UWB	6.5~8GHz
有效全向辐射功率 EIRP	<-41.3dBm/MHz
蓝牙频率 BLE Frequency	2.4GHz
BLE灵敏度 BLE Sensitivity	-95dBm