工程模式说明文档

Revision history

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Version Description | Author | Date |
| V1.0 | First Version | XHUANG93 | 4/21/2021 |
| V1.1 | 1. Delete IVSU Version 2.Delete SDARS ESN 3.Delete TCU ESN  4.Delete ICCID  5.Merge SDM Diagnostic into 1.9”I2C over LVDS Diagnostics” | XHUANG93 | 4/27/2021 |
| V1.2 | Update ECG/TCU Diagnostic | XHUANG93 | 5/12/2021 |
| V1.3 | Add requirements of “轨迹模式””进入开发者模式””关闭移动数据网络” | XHUANG93 | 5/14/2021 |
| V1.4 | Remove “Tones Test” from Bezel Diagnostics to Supplier Diagnostic | XHUANG93 | 5/25/2021 |
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# 1 福特工程模式（Bezel Diagnostic）

福特工程模式的具体需求及实现方式，请参考”Bezel Diagnostics APIM SPSS V1.8 Sep 3,2020”

本章节仅罗列出Bezel Diagnostic 所需项。

## 1.1 CDC Diagnostics

(1) CDC Part Numbers

|  |  |
| --- | --- |
| Name | Settings |
| CDC Part Numbers | CDC Serial Number |
| vehicle Identification Number |
| Assembly Part Number |
| H/W Part Number |
| CCPU S/W Part Number |
| VMCU Part Number |
| Acoustic Tuning |
| IIIumination Part Number |
| Sound Enhancement PN |
| PartII PN |
| Android PN |
| QNX PN |
| Calibration PN |
| ANC PN |
| Digital Chime PN |
| Primary Bootloader PN |
| Secondary Bootloader PN |

(2) Software Versions

|  |  |
| --- | --- |
| Name | Settings |
| Software Versions | QNX Version |
| Model |
| Android Version |
| Kernel Version |
| OS Version Number |
| MCU Version |
| Apk Version |
| AUH\_CAL\_FD02 |
| Boot0 Version |
| Boot1 Version |

(3) Radio Signal Strength

The AHU shall display the current station’s radio signal strength.

AM OR FM

(4) Speaker Walk-Around Test

|  |  |
| --- | --- |
| **Channel Under Test** | **Display Text** |
| LF Door | **LF DOOR** |
| LF Tweeter | **LF TWEETER** |
| RF Door | **RF DOOR** |
| RF Tweeter | **RF TWEETER** |
| RR Door | **RR DOOR** |
| LR Door | **LR DOOR** |
| Aux 1 | **AUX 1** |
| Aux 2 | **AUX 2** |

(5) Configuration Status

依据DE00-DE0D 分类显示，并添加精准搜索

Relate to Config DID

(6) Location Information

|  |  |
| --- | --- |
| Name | Settings |
| Location Information | Time |
| Date |
| Latitude |
| Longitude |
| Heading |
| Altitude(m) |
| H DOP |
| P DOP |
| V DOP |
| Position |
| 2D Accuracy |
| 3D Accuracy |
| Vehicle Speed |
| Number of Satellites |
| Fix Mode |
| Time to First Fix |

(7) CDC Wi-Fi Settings

|  |  |
| --- | --- |
| Name | Settings |
| Wi-Fi Settings | Wifi module version |
| Wifi testing module setting |
| Wifi test module |
| Wifi band settings |
| Wifi band |
| Wifi channel settings |
| Wifi channel |
| Wifi working settings |
| Wifi working mode |
| Wifi signal strength |
| Wifi mac address |

(8) Touch Panel Calibration

(9) Display Test Pattern

(10) GRB Pixel Test

(11) Turner Reception

(12) Sensor

(13) Gyroscope

(14) BT test mode

(15) Touch Screen Activation Test

(16) Diagnostic Exits(退出到上一级—福特工程模式)

## 1.2 DSP Diagnostics

(1) DSP Part Number

|  |  |
| --- | --- |
| Name | Settings |
| DSP Part Numbers | S/W Part Number |
| H/W Part Number |
| Calibration Part Number |

(2) Diagnostic Exits

## 1.3 EFP/ICP Diagnostic

(1) ICP Part Number

|  |  |
| --- | --- |
| Name | Settings |
| ICP Part Numbers | S/W Part Number |
| H/W Part Number |
| Calibration Part Number |
| ICP Part Numbers |

(2) Diagnostic exits

## 1.4 ECG Diagnostics

Implement the function which marked yellow

(1) %Memory used

(2) Connection Status

(3) Processor Usage

(4) Flash memory Usage

(5) 参考Bezel Diag

|  |  |  |  |
| --- | --- | --- | --- |
| Requested Data | DID Address | Config data | Description |
| ECG Provisioning Status |  | Factory Mode Default (0x20)  Unprovisioned Mode (0x21)  Waiting for ECG Response (0x22)  Waiting for TCU Response (0x23)  Waiting for Home URL (0x24)  Connecting to Home URL (0x25)  Provisioned Mode (0x26) | Show ECG provisioning status (authorization state) |
| ECG Hardware Part Number |  | String | Show the Hardware Part Number |
| ECG VMCU Software Number |  | String | Show the VMCU software version |
| ECG VMCU Configuration Part Number |  | String | Show the VMCU configuration part number |
| ECG VMCU Bootloader Software Number |  | String | Show the VMCU bootloader software version |
| ECG VMCU Bootloader Part Number |  | String | Show the VMCU bootloader part number |
| ECG AP Software Number |  | String | Show the AP software part number |
| ECG AP Configuration Number |  | String | Show the AP configuration number |
| ECG AP Bootloader Software Number |  | String | Show the AP bootloader software number |
| ECG AP Bootloader Part Number |  | String | Show the AP bootloader part number |
| ECG ESN |  | String | Show the Electronic Serial Number |
| ECG Application Part Numbers |  | String | Show the part numbers for the applications on the ECG |
| ECG Application Part Numbers 2 |  | String | Show the part numbers for the applications on the ECG |
| ECG Provisioning URL |  | String | Show the URL the ECG connects to for provisioning |
| ECG Home URL |  | String | Show the URL the ECG connects to after it is provisioned |

(6) View DTCS (参考Bezel Diag)

(7) Diagnostic exits

## 1.5 TCU Diagnostics

Implement the function which marked yellow

(1) Modem SW Number

(2) IMEI SV

(3) Serving Cell Info

1）NAS/Service Status

2) RAT

3) Cell ID

4) PDP State

1. C&C APN
2. APN

(4) Additional Information

(5) Configuration Status

(6) View DTCS

(7) 参考Bezel Diag

|  |  |  |  |
| --- | --- | --- | --- |
| Requested Data | DID Address | Config data | Description |
| TCU Provisioning Status |  | Factory Mode (0x30)  Unprovisioned Mode (0x31)  Provisioned Mode (0x32) | Show TCU provisioning status (authorization state) |
| TCU VMCU Software Version Number |  | String | Show the CAN VMCU SW version |
| TCU Hardware part number |  | String | Show the modem SW version |
| TCU ESN |  | String | Show the modem hardware part number |
| TCU ICCID |  | String | Show the Electronic Serial Number for the TCU |
| TCU AP SW Number |  | String | Show the unique serial number that represents the SIM |
| TCU AP Part Number |  | String | Show the AP software part number |
| TCU AP Bootloader SW Number |  | String | Show the AP bootloader software number |
| TCU AP Bootloader Part Number |  | String | Show the AP bootloader part number |
| TCU VMCU Part Number |  | String | Show the VMCU part number |
| TCU VMCU Bootloader SW Version Number |  | String | Show the VMCU bootloader software version number |
| TCU VMCU Bootloader Part Number |  | String | Show the VMCU bootloader part number |
| TCU Modem Part Number |  | String | Show the TCU modem part number |

(12) Diagnostic exits

## 1.6 Security: Root Detect

Detect root 账号，detect 有没有root

## 1.7 LIN Diagnostics

(1) LIN Status (ICP LIN Status)

(2) LIN Serial Number

(3) LIN Extended Part Number

## 1.8 I2C over LVDS Diagnostics

(1) ECU Core Assembly Number

1）SDM Diagnostic

|  |  |
| --- | --- |
| Name | Settings |
| SDM Part Numbers | SDM Core Assembly Part Number |

(2) ECU Delivery Assembly Number

(3) ECU Serial Number

(4) ECU Main Calibration Data Number

## 1.9 Exit Diagnostics

退出到上一级

# 2. Supplier Diagnostic

Supplier 自定义，仅在开发阶段提供，是否保留需security 评估, 以下内容仅供参考

Implement the function marked yellow

(1) 版本信息

(2) Tuner

(3) WiFi管理

(4) 蓝牙测试

(5) 屏幕测试

(6) 屏幕触摸测试

(7) GPS信息

(8) Sources 测试

(9) RVC 测试

(10) FOTA Test

(11) 数字功放设置

(12) USB测试

(13) 电池信息

(14) 备用

(15) MIC 测试

(16) 恢复出厂设置

(17) 按键测试

(18) 声音测试

(19) Wi-Fi Hotspot

(20) 煲机模式

(21) 以太网测试

(22) 温度信息

(23) 配置字设置

(24) 升级

(25) 眼图测试

(26) APP 版本号

(27) GPS Demo

(28) Desay APP入口

(29) 指南针

(30) 调试选项

(31) WIFI TWO

(32) 蓝牙TWO测试

(33) 时钟

(34) GPS陀螺仪

(35) 轨迹模式

百度提供轨迹模拟APK集成，工程模式中增加入口，进入Android原生设置的开发者模式页面（里面由模拟导航的入口）

(36) 进入开发者模式

工程模式中增加入口，进入Android原生设置的开发者模式页面

(37) 关闭移动数据网络

工程模式中增加入口，进入Android原生设置的关闭移动网络页面

(38) Tones Test

|  |  |
| --- | --- |
| Tones Test | 当前音量 |
| 低音 |
| 高音 |
| Tbox |
| BT Phone |
| DTCS |
| fader |
| balance |
| SDVC |
| 播放导航音 |

# 3. Other Diagnostic

## 3.1 问题上报

(1) 日志工具

|  |  |
| --- | --- |
| Name | Settings |
| 日志工具 | 惯性导航日志 |
| 开启日志 |
| 清空日志 |
| 拷贝日志 |
| 蓝 牙 HCI日志 |

(2) Exit (退出到上一级)

## 3.2 软件更新

(1) 软件更新

|  |  |
| --- | --- |
| Name | Settings |
| 软件更新 | MCU更新 |
| OS更新 |
| 屏幕固件更新 |
|  |
| SPL更新 |
| Host模式 |
| Adb模式 |

(2) Exit (退出到上一级)

# 4 语言设置

1. 中文

选中中文模式，语言切换为中文

1. 英文

选中英文模式，语言切换为英文