1. ADC
   1. Get ADC Value

|  |  |  |
| --- | --- | --- |
| Function Name | ApiAdc\_GetPedal1Vol | |
| Return Value | Uint16 | Get ADC Value for PIN ACC\_PEDAL1\_SIG |
| Notes | 1. Provide return value range 0~4095 (voltage range 0~5V) | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiAdc\_GetPedal2Vol | |
| Return Value | Uint16 | Get ADC Value for PIN ACC\_PEDAL2\_SIG |
| Notes | 1. Provide return value range 0~4095 (voltage range 0~5V) | |

1. DIO
   1. Get Pin Value

|  |  |  |
| --- | --- | --- |
| Function Name | ApiDio\_GetHoodSW | |
| Return Value | Uint8 | Get DI state for PIN HoodSw |
| Notes | The return back value should be 0/1  0: hood closed  1: hood opened | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiDio\_GetTailgateSW | |
| Return Value | Uint8 | Get DI state for PIN TailgateSw |
| Notes | The return back value should be 0/1  0: Tailgate closed  1: Tailgate opened | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiDio\_GetDrDoorSW | |
| Return Value | Uint8 | Get DI state for PIN DrDoorSW |
| Notes | The return back value should be 0/1  0: door closed  1: door opened | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiDio\_GetPsDoorSW | |
| Return Value | Uint8 | Get DI state for PIN PsDoorSW |
| Notes | The return back value should be 0/1  0: door closed  1: door opened | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiDio\_GetRRDoorSW | |
| Return Value | Uint8 | Get DI state for PIN RRDoorSW |
| Notes | The return back value should be 0/1  0: door closed  1: door opened | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiDio\_GetRLDoorSW | |
| Return Value | Uint8 | Get DI state for PIN RLDoorSW |
| Notes | The return back value should be 0/1  0: door closed  1: door opened | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiDio\_GetCentralDoorLockSW | |
| Return Value | Uint8 | Get DI state for PIN CentralDoorLockSW |
| Notes | The return back value should be 0/1  0: button released  1: button pressed | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiDio\_GetHazardSW | |
| Return Value | Uint8 | Get DI state for PIN HazardSWSta |
| Notes | The return back value should be 0/1  0: button released  1: button pressed | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiDio\_GetBrakeSW | |
| Return Value | Uint8 | Get DI state for PIN BRAKE\_SW |
| Notes | The return back value should be 0/1  0: brake pedal released  1: brake pedal pressed | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiDio\_GetBrakeLampSW | |
| Return Value | Uint8 | Get DI state for PIN Brake Stop Lamp |
| Notes | The return back value should be 0/1  0: brake pedal released  1: brake pedal pressed | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiDio\_GetTrunkHanSW | |
| Return Value | Uint8 | Get DI state for PIN TrunkHanSW |
| Notes | The return back value should be 0/1  0: button released  1: button pressed | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiDio\_GetSeatSW | |
| Return Value | Uint8 | Get DI state for PIN SeatSW |
| Notes | The return back value should be 0/1  0 = seat empty  1 = seat occupied | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiDio\_GetCrashSignal | |
| Return Value | Uint8 | Get DI state for PIN VEHICLE\_CRASH\_SIG |
| Notes | The return back value should be 0/1  0 = GND  1 = B+ | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiDio\_SetHazardIND | |
| Return Value | Uint8 | Set Hazard indicator signal |
| Notes | The return back value should be 0/1  0 = GND  1 = B+ | |

1. PWM
   1. PWM measurement
2. System

Get System Information

|  |  |  |
| --- | --- | --- |
| Function Name | ApiSys\_GetHWID | |
| Return Value | Uint8 |  |
| Notes | The return back value should be 0~255 | |

1. NM

Set CAN NM Information

|  |  |  |
| --- | --- | --- |
| Function Name | ApiCan\_SetFrameRoutingEnable | |
| Set Value | Uint8 |  |
| Notes | All CAN Tx request from NM  active=1  deactive=0 | |

1. APS

Get PAS Value

|  |  |  |
| --- | --- | --- |
| Function Name | ApiAps\_GetDist | |
| Return Value | Void |  |
| Notes | Includes the following signals:  APS\_OUP\_SNG\_PAS\_D\_FCR  APS\_OUP\_SNG\_PAS\_D\_FMR  APS\_OUP\_SNG\_PAS\_D\_FML  APS\_OUP\_SNG\_PAS\_D\_FCL  APS\_OUP\_SNG\_PAS\_D\_RCR  APS\_OUP\_SNG\_PAS\_D\_RMR  APS\_OUP\_SNG\_PAS\_D\_RML  APS\_OUP\_SNG\_PAS\_D\_RCL  APS\_OUP\_SNG\_PAS\_D\_FLL  APS\_OUP\_SNG\_PAS\_D\_RLL  APS\_OUP\_SNG\_PAS\_D\_FLR  APS\_OUP\_SNG\_PAS\_D\_RLR | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiAps\_GetDistLevel | |
| Return Value | Void |  |
| Notes | Includes the following signals:  APS\_OUP\_U08\_PAS\_A\_FCR  APS\_OUP\_U08\_PAS\_A\_FMR  APS\_OUP\_U08\_PAS\_A\_FML  APS\_OUP\_U08\_PAS\_A\_FCL  APS\_OUP\_U08\_PAS\_A\_RCR  APS\_OUP\_U08\_PAS\_A\_RMR  APS\_OUP\_U08\_PAS\_A\_RML  APS\_OUP\_U08\_PAS\_A\_RCL | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiAps\_GetUssSta | |
| Return Value | Void |  |
| Notes | Includes the following signals:  APS\_OUP\_U08\_USS\_Sta\_FCR  APS\_OUP\_U08\_USS\_Sta\_FMR  APS\_OUP\_U08\_USS\_Sta\_FML  APS\_OUP\_U08\_USS\_Sta\_FCL  APS\_OUP\_U08\_USS\_Sta\_RCR  APS\_OUP\_U08\_USS\_Sta\_RMR  APS\_OUP\_U08\_USS\_Sta\_RML  APS\_OUP\_U08\_USS\_Sta\_RCL  APS\_OUP\_U08\_USS\_Sta\_FLL  APS\_OUP\_U08\_USS\_Sta\_RLL  APS\_OUP\_U08\_USS\_Sta\_FLR  APS\_OUP\_U08\_USS\_Sta\_RLR | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiAps\_GetPASChime | |
| Return Value | Uint8 |  |
| Notes | The return back value should be 0~255 | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiAps\_GetSensorLayout | |
| Return Value | Uint8 |  |
| Notes | The return back value should be 0~255 | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiAps\_GetPASSystemFailSta | |
| Return Value | Uint8 |  |
| Notes | The return back value should be 0~255 | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiAps\_GetPASSystemMode | |
| Return Value | Uint8 |  |
| Notes | The return back value should be 0~255 | |

Set PAS Information

|  |  |  |
| --- | --- | --- |
| Function Name | ApiAps\_SetVehSpeed | |
| Return Value | Single |  |
| Notes | Vehicle Speed  Range:0~255.875 | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiAps\_SetShiftGearPosn | |
| Return Value | Uint8 |  |
| Notes | Shift Gear Position  Park:0  Neutral:4  Drive:5  Failure:6  Reverse:7 | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiAps\_SetFrontSensorON | |
| Return Value | Uint8 |  |
| Notes | F\_USS Switch Status  OFF:0  ON:1  Invalid:2 | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiAps\_SetVehSpeedTO | |
| Return Value | Uint8 |  |
| Notes | CAN message valid  Valid=1  Invalid=0 | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiAps\_SetFrontSensorSwTO | |
| Return Value | Uint8 |  |
| Notes | CAN message valid  Valid=1  Invalid=0 | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiAps\_SendChrgPlugSta | |
| Return Value | Uint8 |  |
| Notes | No plug =0  AC plug in =1  DC plug in =2 | |

1. SLEEP
   1. Sleep command to BSP

When this Api is called, BSP will start to sleep.

|  |  |  |
| --- | --- | --- |
| Function Name | ApiSys\_MCoreSleepRequest | |
| Set Value | Uint32 | state |
| Notes | (Currently no use) | |
| Set Value | Uint32 | wakeup\_timer\_s |
| Notes | Sleep duration for BSP. After this time, FUSION should wake up. | |
| Return Value | Uint8 |  |
| Notes | (Currently no use) | |

* 1. NMM state transfer to BSP

|  |  |  |
| --- | --- | --- |
| Function Name | ApiSys\_SetCanNmState | |
| Set Value | Uint8 | state |
| Notes | NMM state enum definition:  0: SLEEP  1: REPEAT  2: NORMAL  3: READYSLEEP | |

7.3 SysPower state transfer to BSP

|  |  |  |
| --- | --- | --- |
| Function Name | ApiSys\_SetSysPwrStat | |
| Set Value | Uint8 | state |
| Notes | SysPower state enum definition:  0: OFF  1: OFF-C\_HVChrg  2: OFF-A  3: STANDBY  4: ON\_NoChrg  5: READY  6: Power\_up  7: Power\_down  8: HVChrgPre-action  9: OFF-C\_LVChrg  10: ON\_HVChrg | |

7.4 Get A-core ready to sleep signal

|  |  |  |
| --- | --- | --- |
| Function Name | ApiSys\_GetACoreReadyToSleep | |
| Set Value | int8 | state |
| Notes | Signal value definition:  0: NOT READY  1: READY TO SLEEP | |

7.5 Read and write flash function

|  |  |  |
| --- | --- | --- |
| Function Name | ApiSys\_ReadAppData | |
| Set Value | int8 | state |
| Notes | Signal value definition:  0: Read correct  1: Read fail | |

|  |  |  |
| --- | --- | --- |
| Function Name | ApiSys\_WriteAppData | |
| Set Value | int8 | state |
| Notes | Signal value definition:  0: Read correct  1: Read fail | |

1. OTA

8.1 Get VINP\_PwrReq\_OTA\_enum value

|  |  |  |
| --- | --- | --- |
| Function Name | Apisys\_GetVinpPwrReqOta | |
| Set Value | uint8 | state |
| Notes | Signal value definition:  0: No request  1: Request power ON  2: Request power OFF  3: Request power STANDBY  4: Invalid | |

8.2 Get VINP\_AllowMoveThd\_OTA\_enum value

|  |  |  |
| --- | --- | --- |
| Function Name | Apisys\_GetVinpAllowMoveThdOta | |
| Set Value | uint8 | state |
| Notes | Signal value definition:  0: Allow to READY  1: Not allow to READY  2: invalid | |

1. DID

9.1 Get DID\_0201 for XWD mode Drivetrain

|  |  |  |
| --- | --- | --- |
| Function Name | Apisys\_GetDIDdata | |
| Set Value | uint8 | state |
| Notes | Signal value definition:  0: Read correct  1: Read fail | |

1. EVCC

10.1 Get VINP\_EvccAplusPwrUpReq\_flg value

|  |  |  |
| --- | --- | --- |
| Function Name | Apisys\_GetEvccAplusPwrUpReq | |
| Set Value | uint8 | state |
| Notes | Signal value definition:  0: No request  1: Request power up | |