**// SampleAPP\_SendMegEvent**

Location:

File: OSAL\_SampleApp.c

Location: const pTaskEventHandlerFn tasksArr[]

uint16 SampleAPP\_SendMegEvent( uint8 task\_id, UINT16 events )

Action: SampleApp\_SendAVRMessage(); //send AVR Message

// **Initiation** for osalInitTasks

Location:

File: OSAL\_SampleApp.c

Location: void osalInitTasks( void )

Action: SampleApp\_SendMeg\_Init (taskID++ );

//-------------------------------------------

// **Initiation** for Send Message Event Task ID

void SampleApp\_SendMeg\_Init( uint8 task\_id )

{

SampleApp\_SendMeg\_TaskID = task\_id;

}

In OSAL.h,

extern uint8 SampleApp\_SendMeg\_TaskID;

In SampleApp.c

uint8 SampleApp\_SendMeg\_TaskID;

//-----------------------------------------------

osal\_set\_event (SampleApp\_SendMeg\_TaskID, PP\_MSG);

PP\_MSG

#define PP\_MSG 0x02 // AVR communincation evernt

Change:

Locatioin:

File: MT\_UART.c

Location: void MT\_UartProcessZToolData ( uint8 port, uint8 event )

Action: Receive message form PC

Example of Payload in Computer to Zigbee Message

FE 0B 00 12 4B 00 01 0B D3 D6 02 30 30 1C

|  |  |
| --- | --- |
| FE | Start byte |
| 0B | Length, Hex, Range 1 to 100 |
| 00 12 4B 00 01 0B D3 D6 | Zigbee Signature, End Device ID, Hex |
| 02 | Type, Hex, Range 0x00 to 0x0B |
| 30 30 | Data |
| 1C | Coordinator Packet CheckSum, Hex, Adding all bytes from Zigbee Signature to the last Data, Range Range 0x00 to 0xFF |

FE0B00124B00010BD26A02112200

FE0B00124B00010BC80002112200

FE0B00124B00010BC800C1112200

FE1E00124B00010BD26A0001000000000000000000010000000000000000000100

FE1E00124B00010BC8000001000000000000000000010000000000000000000100

Location:

File: SampleApp.c

Location: uint16 SampleAPP\_SendMegEvent( uint8 task\_id, UINT16 events )

Add: Receive message form MT layer and Send Message to End device

Add Function: void SampleApp\_SendEndDeviceMessage(uint8 \*msg)

Target: Send message to End device

03 02 30 30

|  |  |
| --- | --- |
| 03 | Length, Hex, Range 1 to 100 |
| 02 | Type, Hex, Range 0x00 to 0x0B |
| 30 30 | Data |

uint8 SampleApp\_SendMeg\_TaskID;

Hal\_PP\_TaskID

Hal\_PP\_Event

void Hal\_PP\_event\_Init( uint8 task\_id )

uint16 Hal\_PP\_Event( uint8 task\_id, UINT16 events )

Brief: Event for Hal PP, receive data from other layer.

void SampleApp\_MessageMSGCB( afIncomingMSGPacket\_t \*pkt )

brief: receive Zigbee message

Coordinator – pass the message to Uart

End device – pass the message to AVR

CLUSTERID:

SAMPLEAPP\_AVRMSG\_CLUSTERID – Receive AVR message in Coordinator

SAMPLEAPP\_ENDDEVICE\_CLUSTERID – Receive Server message in End Device

void SampleApp\_SendEndDeviceMessage(uint8 \*msg)

brief: Coordinator send message to specific End Device

Format:

| MSG Len | Type | Data |

| 1 | 1 | 0-Len |

Return: ???

**Computer to Zigbee Message Format:**

| SOP | Data Length | IEEE Address | Type | Data | Check Sum |

| 1 | 1 | 8 | 1 | 0-Len | 1 |

FE 0B 00 12 4B 00 01 0B D3 D6 02 30 30 1C

|  |  |
| --- | --- |
| FE | Start byte |
| 0B | Length, Hex, Range 9 to 100  Len = sizeof (DstAddr+Type+Data) |
| 00 12 4B 00 01 0B D3 D6 | Zigbee Signature, End Device ID, Hex |
| 02 | Type, Hex, Range 0x00 to 0xFC |
| 30 30 | Data |
| 1C | Coordinator Packet CheckSum, Hex, Adding all bytes from Zigbee Signature to the last Data, Range Range 0x00 to 0xFF |

**CTRL\_TYPE\_EEPOM\_WRITE**

Brief: Type for remote change End Device AVR EEPROM Value

**Data Format (Computer to Zigbee):**

FE 11

00124B00010BC800

C1

0000 0064

0002 0037

9E

|  |  |
| --- | --- |
| FE | Start byte |
| 11 | Length, Hex, Range 9 to 100  Len = sizeof (DstAddr+Type+Data) |
| 00124B00010BC800 | Zigbee Signature, End Device ID, Hex |
| C1 | Type, Hex, Range 0x00 to 0x0B |
| 0000 | Address of AVR EEPROM that is be written |
| 0064 | Value that writing to above AVR EEPROM |
| 9E | Coordinator Packet CheckSum, Hex, Adding all bytes from Zigbee Signature to the last Data, Range Range 0x00 to 0xFF |

\*\* Can multi-write value to one message. But do not more than 2 value, it is not stable. No QTY in the message, QTY = ( Len-9 ) / 4.

**Data Format (Zigbee to Computer):**

24 53 54

00 12 4B 00 01 0B C8 00 01

09 C1

00 00 00 64

00 02 00 37

64 0D 0A

|  |  |
| --- | --- |
| 24 53 54 | Zigbee Signature, Start byte, ASCII ($ST) |
| 00 12 4B 00 01 0B C8 00 | Zigbee Signature, End Device ID, Hex |
| 01 | Zigbee Signature, Meter ID, Hex |
| 09 | Length, Hex, Range 0x01 to 0x4F |
| C1 | Type, Hex, Range 0x00 to 0x07 |
| 0000 | Address of AVR EEPROM that is be written |
| 0064 | Value that writing to above AVR EEPROM |
| 64 | Coordinator Packet CheckSum, Hex, Adding all bytes from Zigbee Signature to the last Data, Range Range 0x00 to 0xFF |
| 0D 0A | Zigbee Signature, Stop byte |