

# Xilinx Zynq FPGA, TI DSP, MCU 기반의 프로그래밍 및 회로 설계 전문가 과정

## Mibspi(Loopback)

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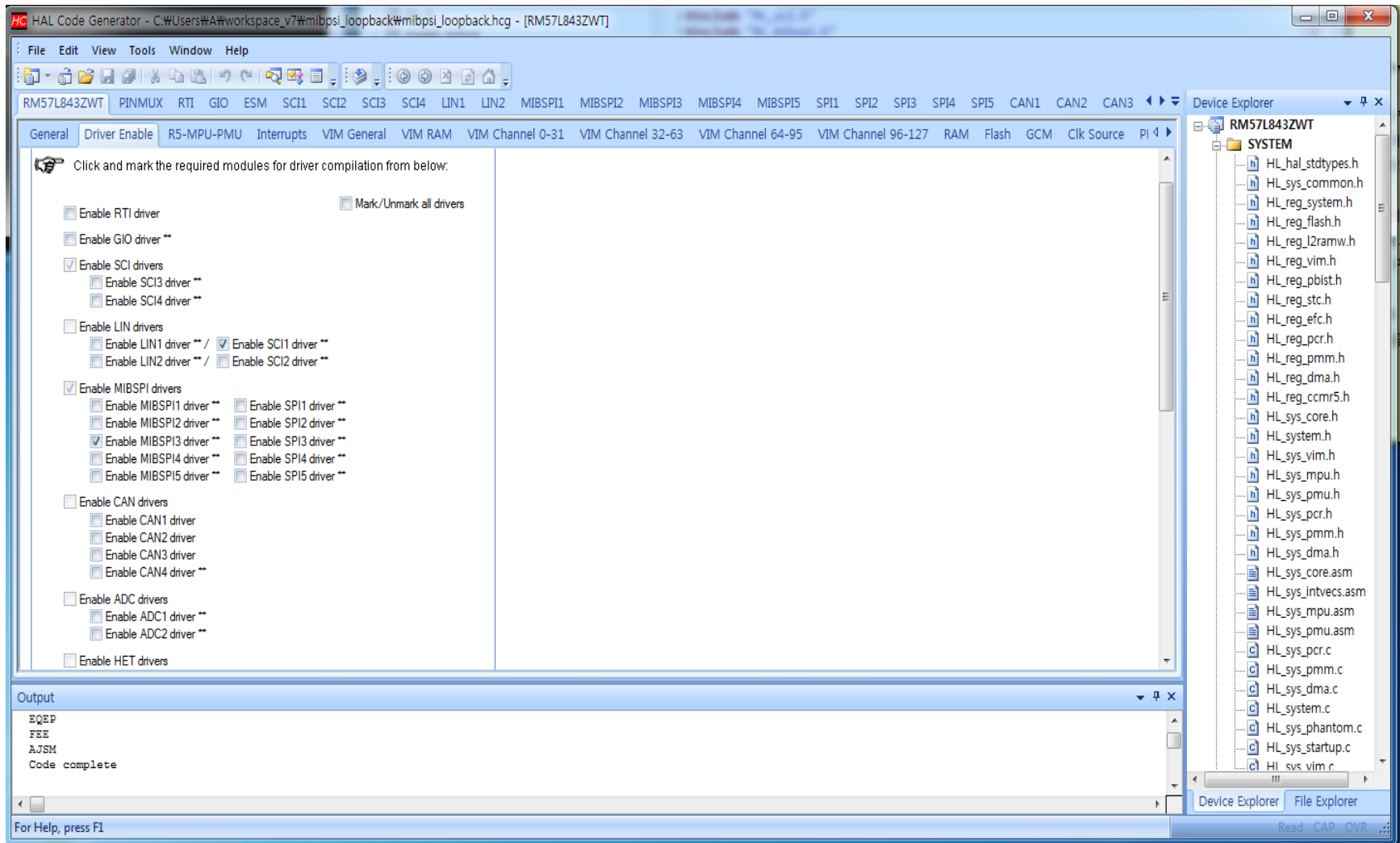
학생 – 변진혁

[xollgun@gmail.com](mailto:xollgun@gmail.com)

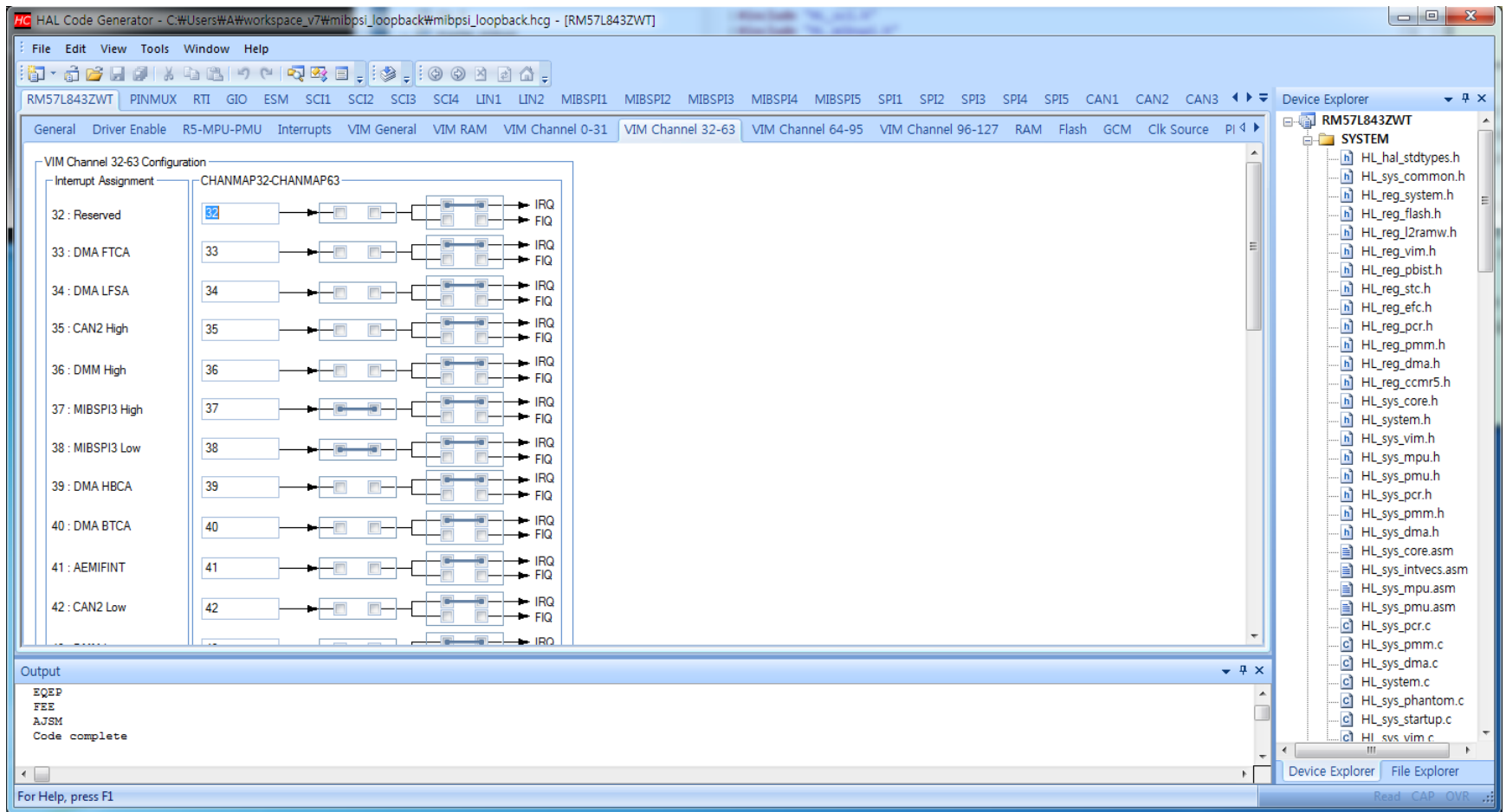
학생 – 김형준

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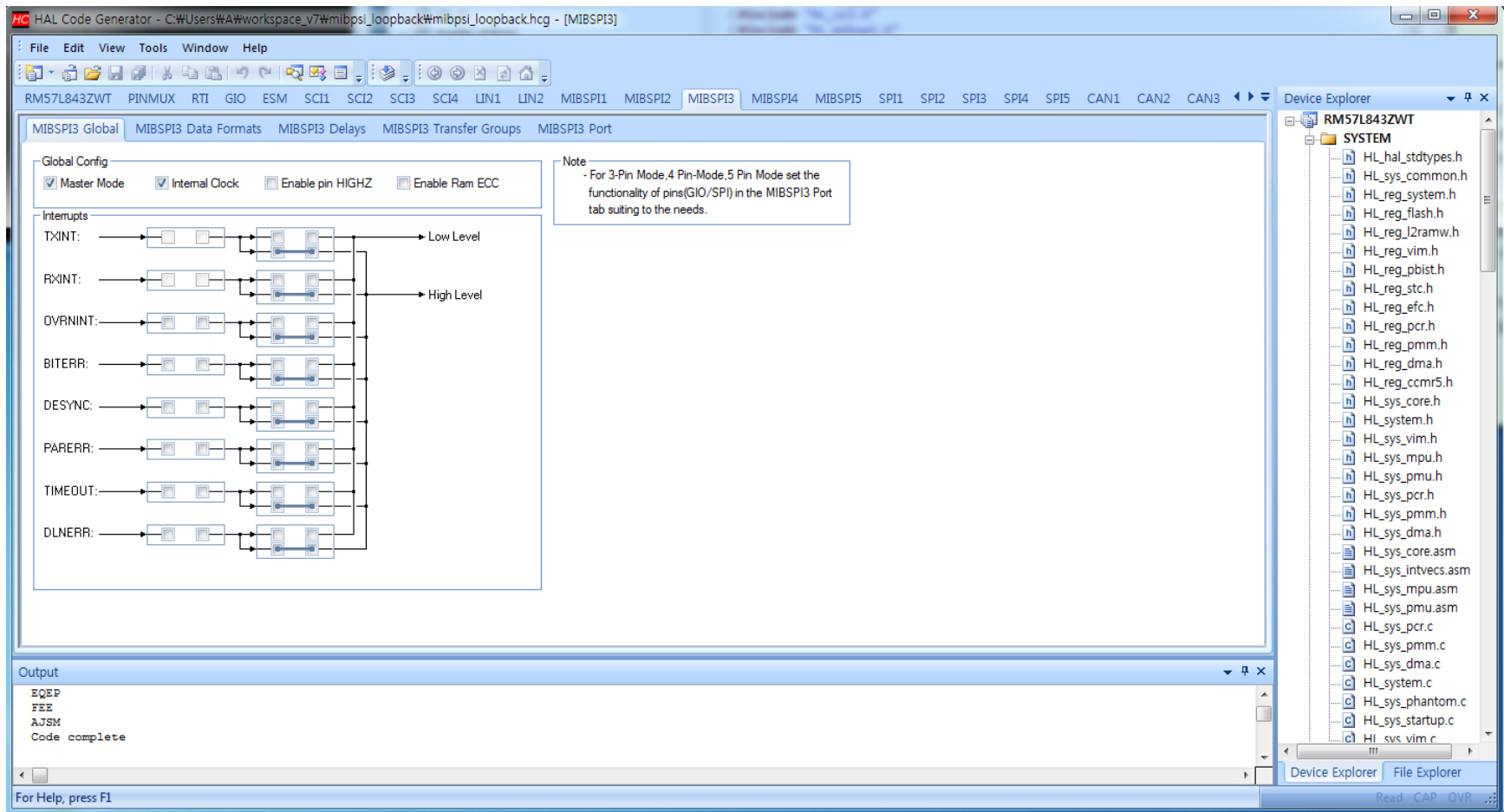
# 1.Halcogen Setting(Driver Enable)



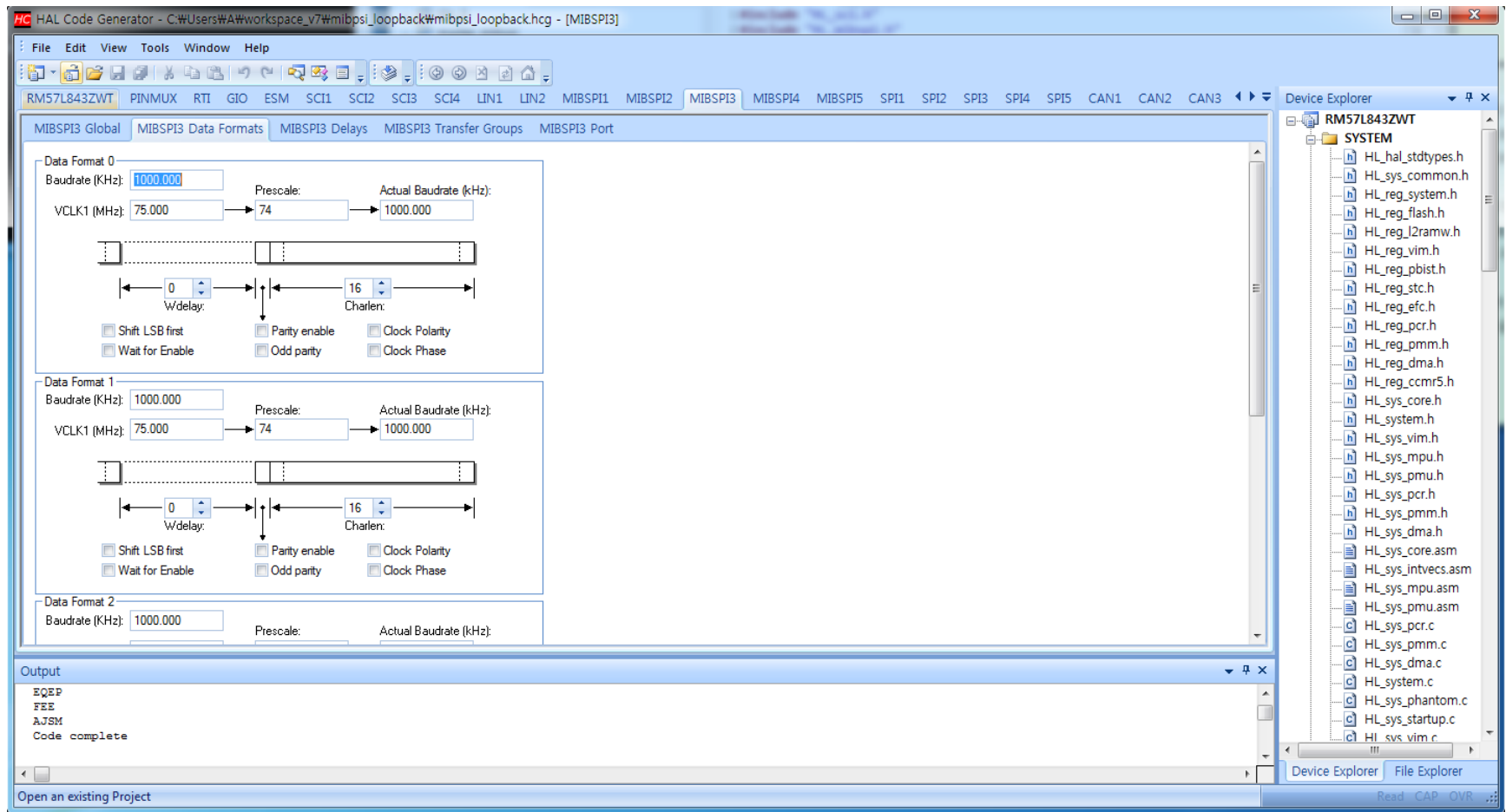
# 2.Halcogen Setting(VIM Channel)



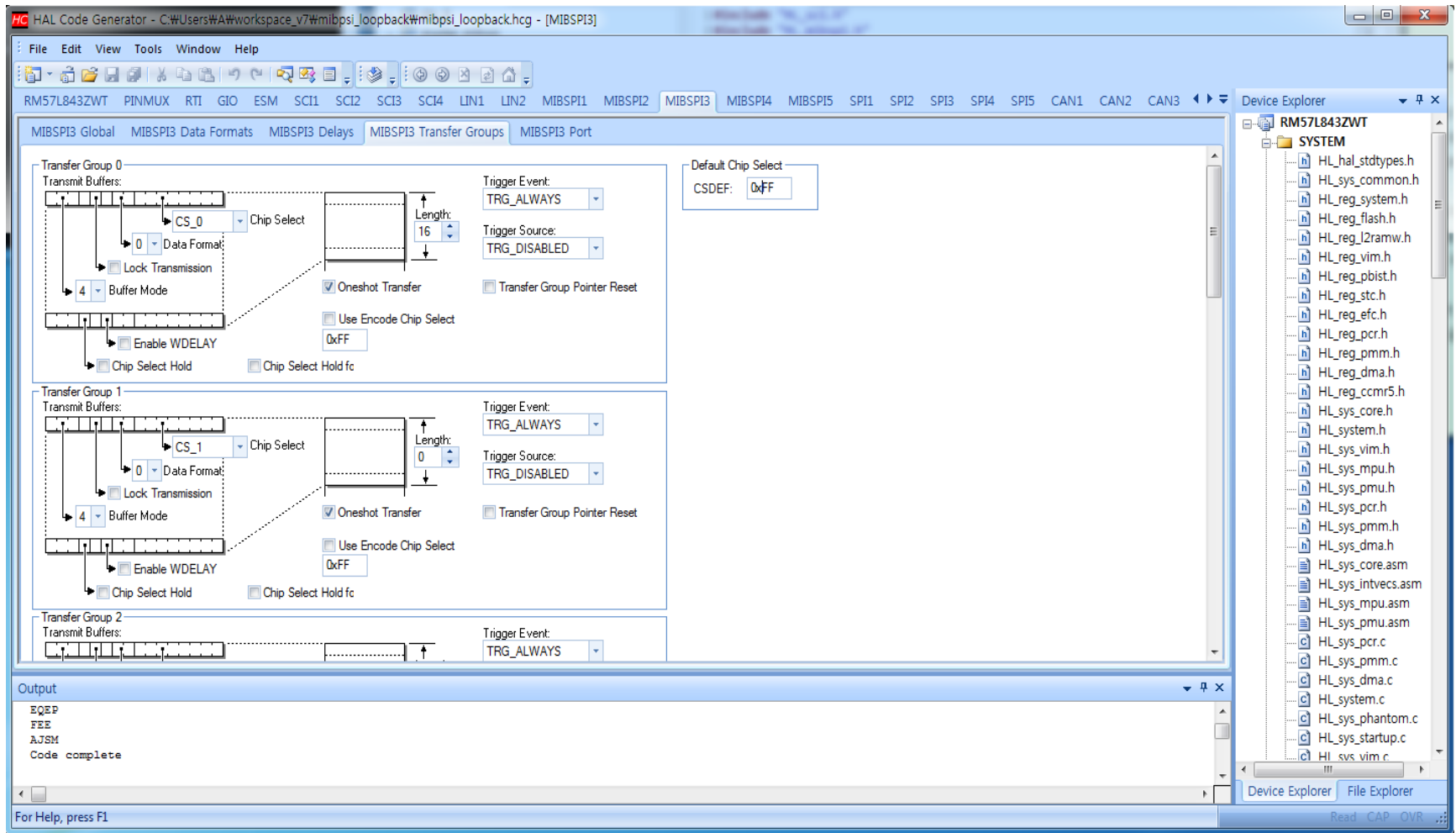
# 3.Halcogen Setting(Mibspi Global)



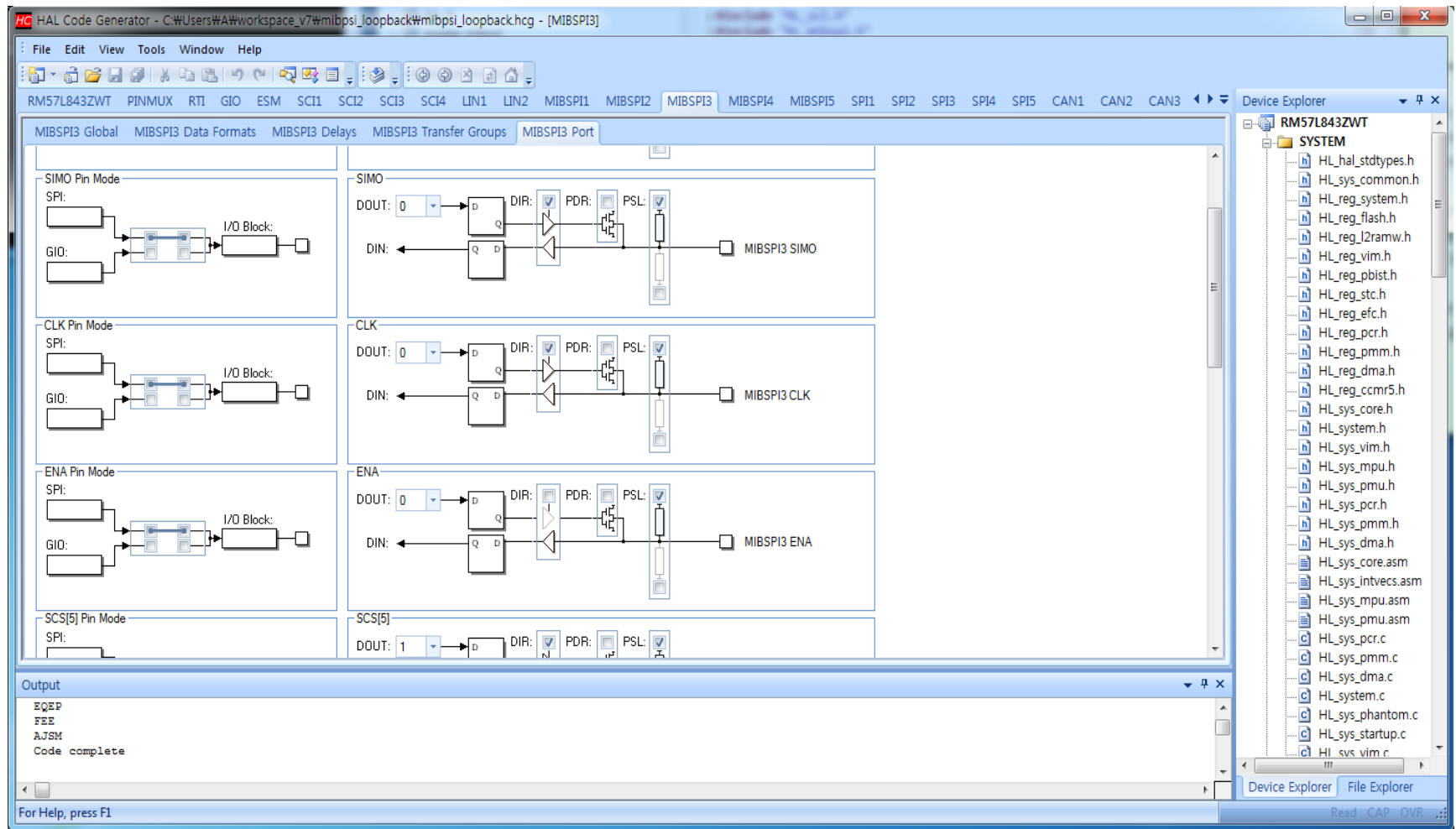
# 4. Halcogen Setting(Mibspi Data Formats)



# 5.Halcogen Setting(Mibspi Transfer Groups)



# 6.Halcogen Setting(Mibspi port)



# 7.Code(Mibspi Loopback)

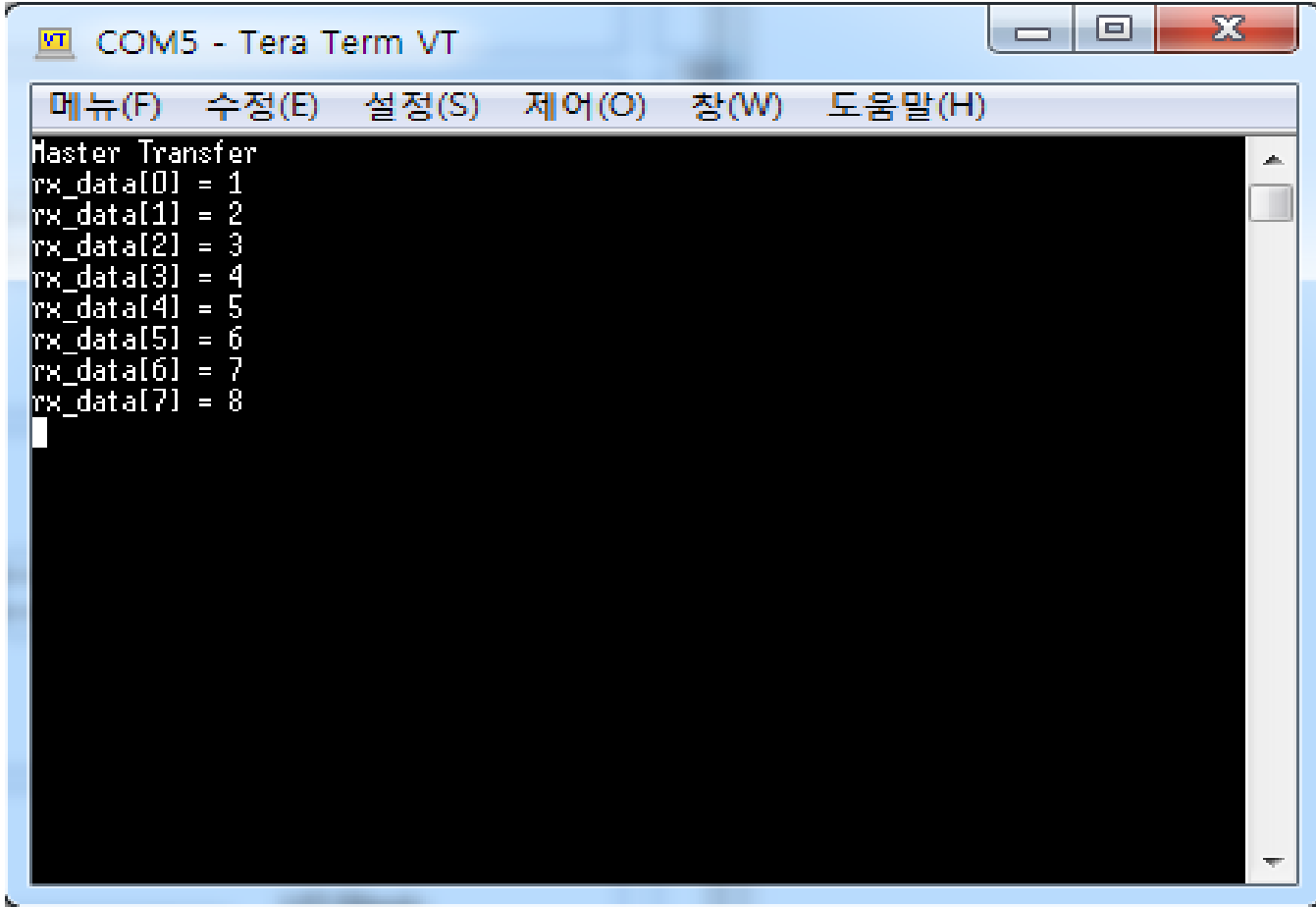
```
1 #include "HL_sci.h"
2 #include "HL_mibspi.h"
3 #include "HL_sys_common.h"
4 #include "HL_system.h"
5 #include <stdio.h>
6 #include <string.h>
7
8 #define UART    sciREG1
9
10 uint16 tx_data[8] = {1,2,3,4,5,6,7,8};
11 uint16 rx_data[8] = {0};
12
13 void sciDisplayText(sciBASE_t *sci, uint8 *text, uint32 len);
14
15 void main(void)
16 {
17     volatile i;
18     char txt_buf[256];
19     unsigned int buf_len;
20
21     _enable_IRQ_interrupt();
22
23     sciInit();
24     mibspiInit();
25
26     mibspiEnableLoopback(mibspiREG3, Digital_Lbk);
27     //mibspiEnableGroupNotification(mibspiREG3, 0, 1);
28     mibspiSetData(mibspiREG3, 0, &tx_data[0]);
29     mibspiTransfer(mibspiREG3, 0);
30 }
```



## 8.Code(Mibspi Loopback)

```
30
31 sprintf(txt_buf, "Master Transfer\n\r\0");
32 buf_len = strlen(txt_buf);
33 sciDisplayText(sciREG1, (uint8 *)txt_buf, buf_len);
34
35 while(!(mibspiIsTransferComplete(mibspiREG3, 0)))
36 {
37     ;
38 }
39 mibspiGetData(mibspiREG3, 0, &rx_data[0]);
40
41 for(i=0;i<8;i++)
42 {
43     sprintf(txt_buf, "rx_data[%d] = %d\n\r\0", i, (char)rx_data[i]);
44     buf_len = strlen(txt_buf);
45     sciDisplayText(sciREG1, (uint8 *)txt_buf, buf_len);
46 }
47
48 while(1);
49
50
51
52 }
53
```



## 9.Tera Term(Mibspi Loopback)



The screenshot shows a Tera Term window titled "COM5 - Tera Term VT". The menu bar includes "메뉴(F)", "수정(E)", "설정(S)", "제어(O)", "창(W)", and "도움말(H)". The main text area displays the following text:

```
Master Transfer  
rx_data[0] = 1  
rx_data[1] = 2  
rx_data[2] = 3  
rx_data[3] = 4  
rx_data[4] = 5  
rx_data[5] = 6  
rx_data[6] = 7  
rx_data[7] = 8  
█
```

# 10.CCS(Expressions)

Expression	Type	Value	Address
(x)= RX_data	unknown	identifier not found: RX_...	
(x)= rx_data1	unknown	identifier not found: rx_...	
 rx_data	unsigned short[8]	[1,2,3,4,5...]	0x08001550
(x)= [0]	unsigned short	1	0x08001550
(x)= [1]	unsigned short	2	0x08001552
(x)= [2]	unsigned short	3	0x08001554
(x)= [3]	unsigned short	4	0x08001556
(x)= [4]	unsigned short	5	0x08001558
(x)= [5]	unsigned short	6	0x0800155A
(x)= [6]	unsigned short	7	0x0800155C
(x)= [7]	unsigned short	8	0x0800155E
 Add new expression			