

iSSC Vendor Command Programming Guide

ISSC Technologies Corp.

Revision History

Date	Revision Content	Version
2011/10/06	Draft Version	0.9

Content

1.	Introduction	3
2.	System Configuration	3
3.	UART Interface	3
4.	Vendor Command:	5
5.	Event	7
6.	List of Error Codes.....	7

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1. Introduction

This document describes the protocol that how to program e2prom content of BM57SPP module.

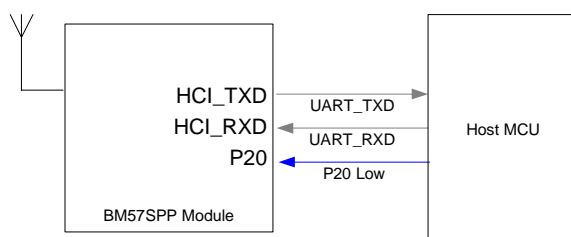
2. System Configuration

GPIO

- P2_0 pull low

UART

- Baud rate: 115200 bps.



3. UART Interface

UART Packet Format:

- All values are in Binary and Hexadecimal Little Endian formats unless otherwise noted.
- In addition, all parameters which can have negative values must use 2's complement when specifying values
- Unless noted otherwise, all parameter values are sent and received in Little Endian format (i.e. for multi-octet parameters the rightmost (Least Signification Octet) is transmitted first)

Command Format:

0	7	8	15	16	23	24	31
Packet Type		OCF		OGF		Parameter Length	
Parameter 0		Parameter 1		Parameter..			
.							
.							
Parameter N-1		Parameter N					

Packet Type

Size: 1 Octet

Value	Parameter Description
0x01	Command Packet.

OCF

Size: 1 Octet

Value	Parameter Description
0xXX	OpCode Command Field.

OGF

Size: 1 Octet

Value	Parameter Description
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0xFC	OpCode Group Field.
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Parameter Length

Size: 1 Octet

Value	Parameter Description
0xXX	Lengths of all of the parameters contained in this packet measured in octet

Event Format

0	7	8	15	16	23	24	31
Packet Type	Event Code	Parameter Length	Parameter 0				
Parameter 1	Parameter 2	Parameter..					
		.					
		.					
		.					
Parameter N-1	Parameter N						

Packet Type

Size: 1 Octet

Value	Parameter Description
0x04	Event Packet.

Event Code

Size: 1 Octet

Value	Parameter Description
0xXX	Event Code.

Parameter Length

Size: 1 Octet

Value	Parameter Description
0xXX	Lengths of all of the parameters contained in this packet measured in octet

4. Vendor Command:

E2PROM_Write

Command Format:

Command	OCF	Command Parameters	Return Parameters
E2PROM_Write	0x27	Start_Address, Length, Data	Status

Description

The E2PROM_Write command is used to write data into E2PROM.

Command Parameters

START_ADDRESS:

SIZE: 2 BYTES

Value	Parameter Description
0xXXXX	Start writing address

LENGTH:

SIZE: 1 BYTES

Value	Parameter Description
N	Length of data desired to be written (in bytes) to E2PROM N range: 1~240

DATA:

SIZE: N BYTES

Value	Parameter Description
	N bytes of data to be written into E2PROM

Return Parameters

STATUS:

SIZE: 1 BYTES

Value	Parameter Description
0x00	E2PROM_Write command succeeded.
0x01 – 0xFF	E2PROM_Write command failed. See listing of Error Codes.

Example

To write 4 bytes of E2PROM data as 0x00, 0x11, 0x22 and 0x33 starting from address 0x0010:

Command (UART raw data)

- 01 27 fc 07 00 10 04 00 11 22 33

Return Event (UART raw data)

- 04 0e 04 01 27 fc 00 (Success)
- 04 0e 04 01 27 fc 01 (Fail)

E2PROM_Read

Command Format:

Command	OCF	Command Parameters	Return Parameters
E2PROM_Read	0x29	Start_Address, Length	Status, Start_Address, Length, Data

Description

The E2PROM_Read command is used to read data from the E2PROM.

Command Parameters

START_ADDRESS:

SIZE: 2 BYTES

Value	Parameter Description
0xXXXX	Start reading address

LENGTH:

SIZE: 1 BYTES

Value	Parameter Description
N	Length of data desired to be read (in bytes) from E2PROM N range: 1~240

Return Parameters

STATUS:

SIZE: 1 BYTES

Value	Parameter Description
0x00	E2PROM_Read command succeeded.
0x01 – 0xFF	E2PROM_Read command failed. See listing of Error Codes.

START_ADDRESS:

SIZE: 2 BYTES

Value	Parameter Description
0xXXXX	Start reading address

LENGTH:

SIZE: 1 BYTES

Value	Parameter Description
N:0x00-0xFF	Length of data read (in bytes) from E2PROM

DATA:

SIZE: N BYTES

Value	Parameter Description
	N bytes of data as read from E2PROM

Example

Read 4 bytes of E2PROM data from address 0x0000:

Command (UART raw data):

- 01 29 fc 03 00 00 04

Return Event (UART raw data):

- 04 0e 0b 01 29 fc 00 00 00 04 00 11 22 33 (Success)
- 04 0e 0b 01 29 fc **01** 00 00 04 xx xx xx xx (Fail)

5. Event

Command Complete Event:

Event	Event Code	Event Parameters
Command_Complete	0x0E	Num_Cmd_Packets, Command_Opcode, Return_Parameters

Description

The Command Complete event is used by the Controller for most commands to transmit return status of a command and the other event parameters that are specified for the issued command.

Event Parameters

Num_Cmd_Packets

Size: 1 Octet

Value	Parameter Description
0x01	The Number of command packets which are allowed to be sent to the Controller from the Host. It will be 0x01 always.

Command_Opcode

Size: 2 Octet

Value	Parameter Description
0xFFFF	Opcode of the command which caused this event

Return_Parameter(s)

Size: Depends on Command

Value	Parameter Description
0xFF	This is the return parameter(s) for the command specified in the Command_Opcode event parameter. See each command's definition for the list of return parameters associated with that command.

6. List of Error Codes

Error Code	Name
0x00	Success
0x01	Command Fail

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