SKYETEK PROTOCOL V3

READER COMMANDS

VERSION 101212

TABLE OF CONTENTS

1   About this Document

This application note shows how to setup and use SkyeTek Protocol v3 to issue commands related to reader module operation.

1.1   Required Reading

This document assumes you have read and are familiar with the SkyeTek Protocol V3 (STPV3) Guide located at http://www.skyetek.com/docs/commonblade/stpv3guide.pdf

1.2   Revision History

Revision Number	Submitted By	Date
101212	Ryan Smith	Initial Release

2   Understanding Reader System Parameter Commands

System parameters store information and settings on your SkyeModule for identification, radio settings, host interface settings, GPIO and more. These are unique to each module and detailed information on each can be found in your module's datasheet.

System parameters are loaded to the SkyeModule from default values stored in the non-volatile memory (EEPROM) upon power up or reset. System parameter commands can be used to modify current system parameters running on the module or the default values stored in non-volatile memory. Care must be taken when altering default system parameter values, as these parameter values will be stored on the reader even after a power cycle. For example, if the host interface default system parameter is changed to SPI and you do not have the ability to communicate via SPI, the reader will be inoperable even after a power cycle or reset.

CAUTION – Changing system parameter values—especially the default values—can render your SkyeModule nonoperational in your environment. Research, record, and test all planned changes to make sure they are compatible with your system.

You can read or write system parameters via the following commands:

- Load Defaults – loads the default values stored in non-volatile memory to the module.

- Read System Parameter—reads the current value of the system parameter at the memory address specified.

- Write System Parameter—writes a new value to the system parameter at the memory address specified.

- Store Default System Parameter—writes a new system parameter value to the module's non-volatile memory.

- Retrieve Default System Parameter—reads the system parameter value at the address specified out of the module's non-volatile memory.

2.1   Understanding System Parameter Formats

This section provides format details for the commands used to change system parameters. The system parameters can be modified in two different ways. The read and write system parameter functions are used to modify system parameters during run time. The read and write default system parameters are used to write new default system parameters to the module's non-volatile memory. These new default values will be loaded when the module is powered up or reset. For my information about the structure of commands, see the SkyeTek Protocol V3 documentation.

3   Example Reader Commands

3.1   Read System Parameter

This command instructs the reader to return the value of a specified system parameter.

In this example we request the reader to return the user GPIO port value.

3.1.1   Request

Start	Length	Flags	Command	Addr	Num Blocks	CRC
02	000A	0020	1201	0009	0001	4B86

3.1.2   Response

Start	Length	Command Response	Data Len	Data	CRC
02	0007	1201	0001	7F	300A

3.2   Write System Parameter

This command instructs the reader to update the value of a specified system parameter.

In this example we request the reader to change the user GPIO port value.

3.2.1   Request

Start	Len	Flags	Command	Addr	Num Blocks	Data Len	Data	CRC
02	000D	0820	1202	0009	0001	0001	00	D5C1

3.2.2   Response

Start	Command Response	CRC
02	1202	D5C1

3.3 Read Default System Parameter

This command instructs the reader to return the default value of a specified system parameter.

In this example we request the reader to return the default host interface type.

3.3.1 Request

Start	Length	Flags	Command	Addr	Num Blocks	CRC
02	000A	0020	1302	0006	0001	18A6

3.3.2 Response

Start	Length	Command Response	Data Len	Data	CRC
02	0007	1302	0001	06	F0C5

3.4 Write Default System Parameter

This command instructs the reader to update the default value of a specified system parameter.

In this example we request the reader to change the default host interface to serial.

3.4.1 Request

Start	Len	Flags	Command	Addr	Num Blocks	Data Len	Data	CRC
02	000D	0820	1302	0006	0001	0001	01	3EEC

3.4.2 Response

Start	Length	Command Response	CRC
02	0004	1301	CD11

skyetek

Main 720.328.3425 Fax:720.228.2400

Skyetek Inc
1525 Market St. Ste 200
Denver, CO 80202
www.skyetek.com

3.5   Load Defaults

This command instructs the read to load the default system parameters into memory.

3.5.1   Request

Start	Command Len	Flags	Command	CRC
02	0006	0020	1101	A563

3.5.2   Response

Start	Response Length	Response Data	CRC
02	0004	1101	FEA1

The reader echoes back the load default command if the operation is successful.

3.6   Reset Module

This command instructs the reader to reset its microcontroller. After a reset the device will load its default system parameter values to memory.

3.6.1   Request

Start	Data Length	Flags	Command	CRC
02	0006	0020	1102	97F8

3.6.2   Response

Start	Length	Command	CRC
02	0004	1102	CC3A