



telecoms
our solutions. **your success**

SS-76 MF GPRS Buffer



User Manual

History of changes

Revision 01	Original document	01 October 2006
Revision 02	Added section on Getting IMEI numbers etc.	13 October 2006
Revision 03	Correct name (SS-76)	14 November 2006
Revision 04	S/W update with new (IMEI and SCID) commands	26 November 2006
Revision 05	Draft for market release	18 January 2007
Revision 06	Cosmetic changes	20 March 2008
Revision 07	Add Alternate ETX character	23 February 2010

CONTENTS

1.	INTRODUCTION	3
2.	FEATURES	3
3.	BASIC SETUP	4
3.1	SIM CARD	4
3.2	GPRS SETUP	4
3.3	BUFFER SETUP	4
4.	GPRS MODULE COMMANDS	5
5.	BUFFER SETUP	6
6.	BUFFER COMMANDS	6
7.	CALL LOGGING & DIAGNOSTIC COMMANDS	7
8.	CONTACT DETAILS	8

1. INTRODUCTION

The purpose of the SS-76 is to provide a buffer where the buffer collects data via its serial interface and sends the data out to a centralised site, using UDP Logger, via the GPRS network.

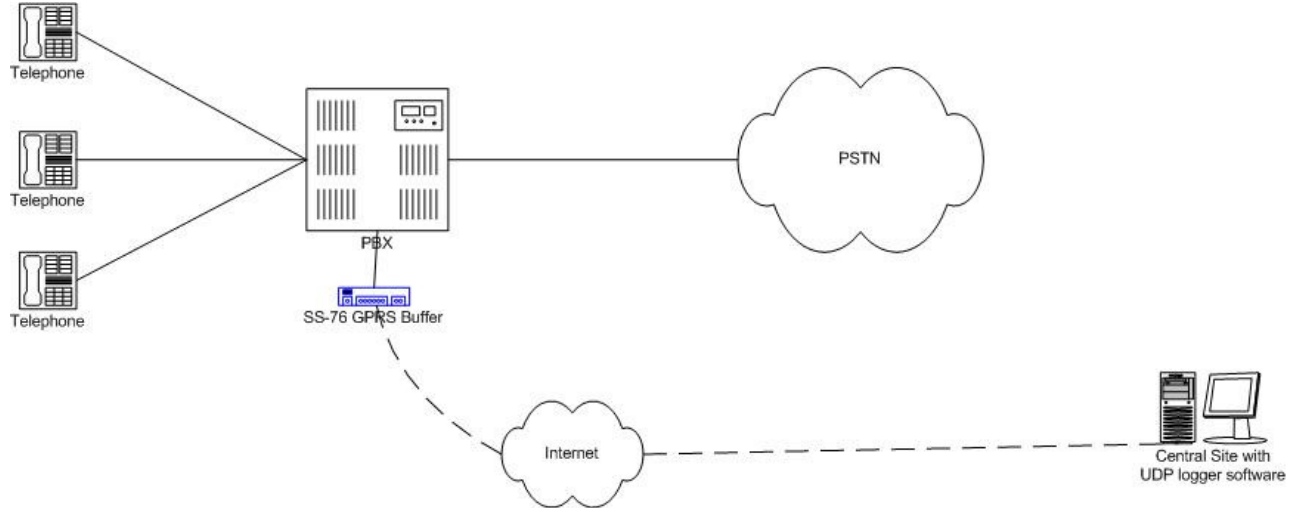
2. FEATURES

- Utilizes any currently available size Compact Flash memory
- Battery backup
- Remote setup
- Built in power supply
- LED indicators for
 - GPRS
 - NET – indicates that the unit is logged on to the GPRS network
 - SVR – indicates that contact has been established with the server
 - TX – indicates that data is being sent to the GSM module
 - RX – indicates that data is being received from the GSM module
 - BUFFER
 - Heartbeat – indicates that the unit is functional
 - 50% - indicates when 50% of the buffer's memory capacity is reached
 - 80% - indicates when 80% of the buffer's memory capacity is reached
 - PABX
 - TX – indicates that the buffer is transmitting data to the PABX
 - RX – indicates that the buffer is receiving data from the PABX
 - REMOTE DOWNLOAD
 - TX – indicates that the buffer is transmitting data to the GPRS module
 - RX – indicates that the buffer is receiving data from the GPRS module ¹
 - PWR – indicates that there is power being supplied to the unit
- Diagnostics
 - PING – to test internet availability
 - DNS lookup – to find the logging server's IP address by using its DNS-name
- SNTP (Simple Network Time Protocol) support – the unit date and time stamps the records using date and time information received from an internet time server.
- Push operation allows use of INTERNET APN

Please Note the following:

1. The REMOTE DOWN LOAD TX & RX and GPRS TX & RX will frequently flash simultaneously
2. For a list of abbreviations please consult our website at www.sstelecoms.com
3. Please download the latest version of the UDP Logger from www.sstelecoms.com

3. BASIC SETUP



3.1 SIM CARD

Some SIM cards require initialising for proper operation.

To initialise the SIM card follow these steps:

- Place SIM card in cellular phone
- Enter PIN (if required)
- Request and accept MMS and Data settings
- Reply to SMS messages from Network if Network requests a reply.
- Accept more settings if required
- Make a 'missed' call to a regular cellular phone.
- Remove PIN request if no security on SIM is required.(If the pin code is required use SIMPIN command to configure the GPRS MODULE.
- Put SIM card in the slot provided on the SS-76
- Open the UDP Logger

3.2 GPRS SETUP

- Set the buffer name – Make sure it is unique and 8 characters long. Duplicated or incorrect length buffer IDs will cause operational and logging problems
- Set the Host – either to an IP address or an internet name.
- Ensure the Port and CmdPort are both 1122
- If a private APN is used then set the Username and password
- Check that the Time Server is set
- **Set the interval to 90**
- Set the baud rate (using the 'LBAUD' command) to 57600 baud
- SAVE the settings
- RESET the GPRS module (using 'RESET' command)

3.3 BUFFER SETUP

- Type in SS75SETUP
- Use the normal SS-75 commands for setting the SS-75 parameters such as baud rate, etc.
- Type QUIT to exit or wait for timeout

4.

GPRS MODULE COMMANDS

(Used when connected directly to the Serial Port at 19200 baud)

RESET	Closes the GPRS session and restarts the GPRS module
VER	Displays the Version Number
SCID	Outputs the SIM card ID
IMEI	Outputs the IMEI number of the module
DIAG <n>	Turns on (1) or off (0) diagnostic output.
BUFID <BuffName>	An 8 character field (it will be padded with “_” after the entered characters if less than 8 characters are entered)
HOST <address>	This is the IP address or the FQDN (fully qualified domain name) of the logging server. If it is an FQDN a DNS lookup will determine the IP address
PORT <pppp>	This is the IP port number that the GPRS module will address (use) at the host. The default port number is 1122
APN <apn>	This is the Access Point Name used by the particular network or it can be a private APN. Normally Vodacom & MTN use ‘internet’ and Virgin uses ‘vdata’.
USER <username>	If a private APN is used then a username may be required (A maximum of 32 characters can be used)
PASW <password>	If a private APN is used then a password may be required (A maximum of 32 characters can be used)
TIMESVR <address>	Enter the IP address or FQDN of a suitable time server. The default is ‘time-a.nist.gov’
CMDPORT <pppp>	The port from which remote commands are accepted. Set to 1122
INTERVAL <nnn>	The time in seconds between polling the server when no data transfer is taking place. Recommended setting is between 60 & 120, to allow ‘NATTED’ addresses to remain in place
LBAUD <baudrate>	This is the buffer baud rate. For this unit it should be set to 57600 baud
SS75 <n>	Enables (1) or Disables (0) buffer mode operation. In order to log data this should not be disabled
SS75TIME<n>	Enables (1) or Disables (0) the setting of the buffer time once a successful Time Server query has been made.
DISP	Displays the current settings on the unit
SAVE	Saves the settings to non-volatile memory
LOAD	Restores the last complete and saved set of settings from non-volatile memory
TARGET SETUP	Is used to effect local, direct connection setup of the buffer component of this unit. This mode will timeout after 120 seconds of inactivity.
QUIT	Exits from buffer setup mode immediately.
SIMPIN <nnnnnn>	Pin code. Enter the PIN if the SIM card is set to request the PIN No.

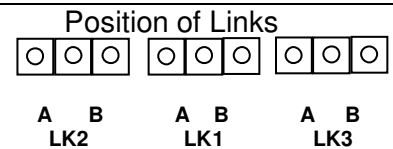
5. BUFFER SETUP

5.1 Setting the links

The links need to be changed from the default positions if:

- The LAN Buffer is used with the Philips IS 1000 or Siemens Opera PABX systems
- Wanting to bypass the opto-couplers and connecting directly to the PABX input
- A Positive feed is required to the PABX

Unscrew the top four screws and remove the lid to change the Links inside the unit.



Link	Description	
1	Common Ground: Pin 5 of PABX connector, connected to buffer ground	B
	Ground isolated: Pin 5 of PABX connector is isolated (factory)	A
2	Voltage Feed: Feed positive voltage on Pin 2 of PABX connector	B
	Normal operation (factory)	A
3	Direct input from PABX	B (Requires LK 1 in pos B)
	Opto-Isolated input from PABX (factory)	A (Recommend LK 1 in pos A)

6. BUFFER COMMANDS

Note: The default settings are suitable for most applications

Setup commands - <cr>after the instruction	
Command	Description
SETBAUD <nn>	Sets the baud rate to the rate represented by the first 2 characters 'nn'. e.g. use 12 for 1200bd. Note: the full baud rate can be used, (SETBAUD 9600<cr>)
SETHELLO <bufnam>	Sets the buffer name to <bufnam> - MUST be a 6 char name
YP <n>	Sets the date insertion position 1=start of record, 0=end of record.
SD <n>	Enables date insertion. 1=enabled, 0=disabled.
YY <n>	Enables year insertion. 1=enabled, 0=disabled.
YC <n>	Enables century insertion. 1=enabled, 0=disabled.
BEEP <n>	Enables BEEPING. 1=enabled, 0=disabled
SAD <n>	Enables autodump mode. 1=enabled, 0=disabled
SAT <n>	Sets the delay before dumping to nn * 50 millisec.
ST <nn>	Sets delay between sets of data being sent Sets OnEmpty delay to nn* 50 millisec or the NonAckedResendDelay.
RT <nn>	Sets the number of retries for a UnAcked packet.
SPR <nn>	If there is no communication between the buffer and GPRS module the buffer forces a reset of the GPRS module as a health check. Sets the reset time for the GPRS module in minutes. n =00 to disable

UC <n>	Converts lowercase to uppercase. 1=enabled, 0=disabled
LF <n>	Stores multiple line feeds. 1=enabled, 0=disabled
TIME YYMMDDhhmmss	Sets the time.
S7 <n>	7 Bit operation if n = 1. <i>Note: use for 7 bit only operation, do not use for 7 bit with parity.</i>
ETX <hh>	Alternate end of line character.

7. CALL LOGGING & DIAGNOSTIC COMMANDS

Command	Description
S or SEND	Sends one record per command.
HELLO	Response is: <02h><SixCharId><SixCharId><cr><lf>
VER	Will output the revision number of the buffer firmware unit.
SYS	Diagnostic command. Do NOT use in logging program to get buffer status
DUMP	Empties buffer quickly. Do not use for collecting records.
CLEAR	Clears the buffer without sending it to the logging software
TIME	Response is: TIME YYMMDDHHhhmmss<cr><lf>
DISP	Displays some buffer setup info.
/B	Displays approximate buffer capacity in records e.g. 4K<cr><lf> for a 128k buffer.
/C	Outputs the number of calls in the buffer
DPRC	Displays the number of resets and clears the reset counter for the Network Interface.
SEND <nn>	Sends nn records using following format: DataBlock<cr><lf> < r <record 1><cr><lf> " " <record nn><cr><lf> TotalRecords nn<Kr><lf> (nn may be less than the number requested, depending on how many records were available for sending.)
MM	To display buffer capacity and used memory. Response is: MstatccSSSSSSccUUUUUU<cr><lf> Where: cc is used internally and has no useful meaning. SSSSSS is the hex value of the memory installed. UUUUUU is the amount of memory used. e.g. Mstat00020000000000101 means that buffer has 128k ram fitted and there are 257 bytes of data in the buffer



telecoms
our solutions. **your success**

8. CONTACT DETAILS

Office:

23 Botha Avenue
Lyttelton Manor
Pretoria, Gauteng
South Africa

Tel: +27 12 664 4644

Fax: +27 86 614 5625

E-mail: info@sstelecoms.com

Postal address:

Postnet Suite 48
Private Bag x 1015
Lyttelton, 0140
Pretoria, Gauteng
South Africa

Sales Support:

South Africa

E-mail: sales@sstelecoms.com

United Kingdom

E-mail: uksales@sstelecoms.com

Technical Support:

E-mail: support@sstelecoms.com