

Skywire[®] Development Kit File Transfer Protocol (FTP)

NimbeLink Corp

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Table of Contents

Introduction	2
1.1 Orderable Part Numbers	2
1.2 Prerequisites	3
Download from an FTP Server	4
Overview	4
Activate the Data Session	4
Set the Time Out Period	4
Open an FTP Connection	4
Set the File Type	5
Change the Working Directory (If Necessary)	5
Download the File from the FTP Server	5
2.8 Close the FTP Connection	6
2.9 Deactivate the Data Session (If Necessary)	6
Upload to an FTP Server	6
3.1 Overview	6
3.2 Activate the Data Session	6
3.3 Set the Time Out Period	7
3.4 Open an FTP Connection	7
3.5 Set the File Type	7
3.6 Upload the File to the FTP Server	7
3.7 Close the FTP Connection	8
3.8 Deactivate the Data Session (If Necessary)	8

1. Introduction

1.1 Orderable Part Numbers

Orderable Device	Description	Carrier	Network Type
NL-SWDK	Skywire Development Kit	Any	Any
NL-SW-1xRTT-A	2G 1xRTT	Aeris	CDMA
NL-SW-1xRTT-S	2G 1xRTT	Sprint	CDMA
NL-SW-1xRTT-V	2G 1xRTT	Verizon	CDMA
NL-SW-GPRS	2G GPRS	Any GSM (AT&T, T-Mobile, etc.)	GSM
NL-SW-EVDO-A	3G EVDO, GPS, GLONASS	Aeris	CDMA
NL-SW-EVDO-V	3G EVDO, GPS, GLONASS	Verizon	CDMA
NL-SW-HSPA	3G HSPA+	Global	GSM
NL-SW-HSPA-B	3G HSPA+	Global	GSM

1.2 Prerequisites



This document assumes you have completed the initial setup of your modem and development kit. If you have not completed those steps, refer to the Skywire® Development Kit User Manual and complete the modem setup before proceeding.

2. Download from an FTP Server

2.1. Overview

File Transfer Protocol (FTP) is a tried-and-tested industry standard for transferring files over TCP-based networks. Skywire® modems support FTP, which is useful for transmitting data. Below is an example for downloading a small text file from a FTP server to the Skywire modem.

2.2. Activate the Data Session

In the terminal program, type the following command:

```
AT#SGACT=1,1
```

followed by the enter key, and the terminal program should display:

```
#SGACT: www.xxx.yyy.zzz
```

```
OK
```

where **www.xxx.yyy.zzz** is the IP address of your Skywire modem.

2.3. Set the Time Out Period

In the terminal program, type the following command:

```
AT#FTPTO=1000
```

followed by the enter key, and the terminal should display:

```
OK
```

2.4. Open an FTP Connection

To open an FTP connection, type the following into the terminal program:

```
AT#FTPOPEN="example.com:xx","username","password",y
```

where **example.com:xx** is the FTP server and port number you would like to connect to, **username** and **password** is the login information for the the server, and **y** is the FTP mode you would like to operate in (0 = active (default), 1 = passive), followed by the enter key. After a short delay, the terminal program should display:

```
OK
```

The FTP connection has now been established.

Note: If you do not specify a port, the default value of 21 will be used.

2.5. Set the File Type

In the terminal program, type the following command:

```
AT#FTPTYPE=x
```

where **x** is either **0** for Binary file type, or **1** for ASCII file type, followed by the enter key. The terminal program should respond with:

OK

2.6. Change the Working Directory (If Necessary)

If necessary, you may need to change the directory where the file needs to be downloaded to. Type the following command into the terminal program:

AT#FTPCWD="directory"

where **directory** is the directory you need to change to. The terminal should respond with:

OK

2.7. Download the File from the FTP Server

To download a file from the FTP server, type the following command into the terminal program:

AT#FTPGET="file.txt"

where **file.txt** is the file you would like to download, followed by the enter key.

Note: If necessary, you can list the files available for download from the FTP server using the **AT#FTPLIST** command.

The terminal should respond with:

CONNECT

and begin downloading. Once it is complete, the terminal program will say:

NO CARRIER

2.8 Close the FTP Connection

Once you have downloaded the file that you need, you can close the FTP connection with the following command:

AT#FTPCLOSE

followed by the enter key. After a short delay, the terminal should respond with:

OK

2.9 Deactivate the Data Session (If Necessary)

To close the data session, type the following into the terminal program:

AT#SGACT=1,0

followed by the enter key, and the terminal program should respond with:

OK

3. Upload to an FTP Server

3.1 Overview

In addition to downloading files from an FTP server, your Skywire modem can upload data to a server via FTP. Below is an example for uploading a file from a Skywire modem to an FTP server.

3.2 Activate the Data Session

In the terminal program, type the following command:

```
AT#SGACT=1,1
```

followed by the enter key, and the terminal program should display:

```
#SGACT: www.xxx.yyy.zzz
```

```
OK
```

where **www.xxx.yyy.zzz** is the IP address of your Skywire modem.

3.3 Set the Time Out Period

In the terminal program, type the following command:

```
AT#FTPTO=1000
```

followed by the enter key, and the terminal should display:

```
OK
```

3.4 Open an FTP Connection

To open an FTP connection, type the following into the terminal program:

```
AT#FTPOPEN="example.com:xx","username","password",y
```

where **example.com:xx** is the FTP server and port number you would like to connect to, **username** and **password** is the login information for the the server, and **y** is the FTP mode you would like to operate in (0 = active (default), 1 = passive), followed by the enter key. After a short delay, the terminal program should display:

```
OK
```

The FTP connection has now been established.

Note: If you do not specify a port, the default value of 21 will be used.

3.5 Set the File Type

In the terminal program, type the following command:

```
AT#FTPTYPE=x
```

where **x** is either **0** for Binary file type, or **1** for ASCII file type, followed by the enter key. The terminal program should respond with:

OK

3.6 Upload the File to the FTP Server

To upload a file to the FTP server, type the following command into the terminal program:

AT#FTPPUT="file.txt"

where **file.txt** is the file you would like to upload, followed by the enter key. The terminal should respond with:

CONNECT

and begin downloading. Once it is complete, the terminal program will say:

NO CARRIER

3.7 Close the FTP Connection

Once you have downloaded the file that you need, you can close the FTP connection with the following command:

AT#FTPCLOSE

followed by the enter key. After a short delay, the terminal should respond with:

OK

3.8 Deactivate the Data Session (If Necessary)

To close the data session, type the following into the terminal program:

AT#SGACT=1,0

followed by the enter key, and the terminal program should respond with:

OK