

USER MANUAL

DWM-156

VERSION 1.0



Preface

D-Link reserves the right to revise this publication and to make changes in the content hereof without obligation to notify any person or organization of such revisions or changes.

Manual Revisions

Revision	Date	Description
1.0	March 18, 2009	DWM-156 Revision A1 with firmware version 1.00

Trademarks

D-Link and the D-Link logo are trademarks or registered trademarks of D-Link Corporation or its subsidiaries in the United States or other countries. All other company or product names mentioned herein are trademarks or registered trademarks of their respective companies.

Copyright © 2009 by D-Link Systems, Inc.

All rights reserved. This publication may not be reproduced, in whole or in part, without prior expressed written permission from D-Link Systems, Inc.

Table of Contents

Preface	2	Connection Management	16
Manual Revisions	2	Current Connection	16
Trademarks	2	Connection History	17
Introduction.....	5	Usage Management	18
Features	5	Usage	18
Product Overview	6	Usage Statistics	19
Package Contents	6	Text Messaging (SMS)	20
System Requirements	6	New/Reply/Forward Text Message	21
Hardware Overview	7	Deleting a Message	21
LED Indicator Information	8	Saving a Sender to Contacts	21
Installation	9	SMS Settings.....	22
SIM Card Installation	9	Contact Management	23
MicroSD Card Installation	10	Adding Contacts	23
Software Installation	11	Editing Contacts	23
Basic Functions	12	Deleting Contacts	23
Software Overview	12	Importing vCards to Contacts	24
New Profile	13	Exporting Contacts to vCards	24
Use Default Profile (Preset)	13	SIM Management	25
User-Defined Profile	14	SIM Information	25
Establishing a Connection	14	Enabling or Disabling a PIN Code	26
Ending a Connection	14	Changing a PIN Code.....	27
Profile Management	15	Unlocking a PIN Code	27

Profile Settings	28
Band Settings	28
Network Selection.....	29
Call Settings	30
Missed Calls	30
Startup Options	31
Version Information	31
Troubleshooting	32
Glossary	33
Technical Specifications	36

Introduction

The 3.75G HSUPA USB Adapter allows users with a computer to connect to mobile broadband networks (HSUPA/HSDPA/UMTS/GPRS/GSM). While connected, users can transfer data, stream media, and send SMS messages. The adapter uses a standard USB interface for fast and simple installation.

Features

- Compact and sleek mobile adapter easily fits in your pocket
- Provides HSUPA/HSDPA/UMTS/GPRS/GSM/EDGE network support
- GSM circuit-switched (CSD) data transfer for multimedia
- Plug-and-Play: No CD-ROM required
- Connection software launches quickly and automatically
- Convenient USB connector requires no additional cables
- MicroSD card reader slot for optional removable storage
- Send group SMS messages to up to 25 contacts simultaneously
- Store up to 1000 outgoing SMS (depending on SIM card capacity)
- Control incoming calls with forwarding, busy tone, or continuous ringing

Product Overview

Package Contents

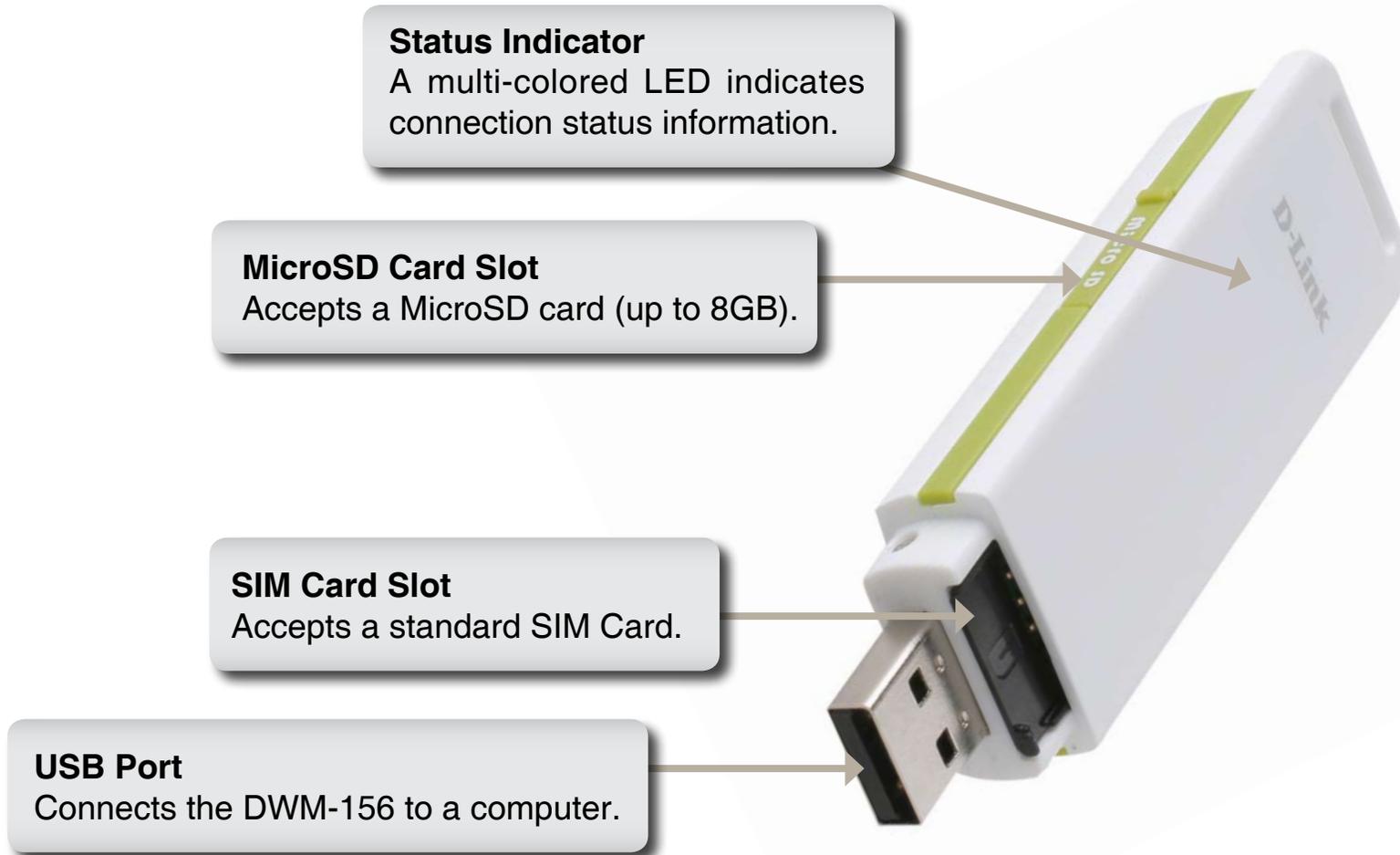


D-Link DWM-156 - 3.75G HSUPA USB Adapter

System Requirements

- Windows 2000/XP/VISTA or Mac OS X 10.4.0+
- Pentium III or greater
- 128MB RAM or greater
- 50MB available disk space
- Internet Explorer v6.0+ / Firefox v1.5+
- A computer with an available USB 2.0 port

Hardware Overview



LED Indicator Information

Color	Service	Blinking	Solid
Yellow	System	–	Device Initializing / No Signal
Red	SIM Card Service	Searching	Error (No SIM / Invalid SIM)
Green	WCDMA	Registered	Connected
Blue	HSDPA/ HSUPA	–	Connected
Purple	GPRS/ EDGE	Registered	Connected

Installation

SIM Card Installation

Follow the steps below to install a SIM card:

1. Remove the cover from the end of the adapter.
2. Pull out the SIM card tray. (Figure 1)
3. Insert the SIM card with the gold contacts facing down. (Figure 2)
4. Push the SIM card tray back into the adapter. (Figure 3)
5. Connect the adapter to a USB port on your computer. (Figure 4)

Note: To remove an installed SIM card, pull out the SIM card tray and gently lift the card.



Figure 1



Figure 2



Figure 3



Figure 4

MicroSD Card Installation

The DWM-156 has a slot which can read MicroSD cards with capacities of up to 8GB.

Follow the steps below to install a MicroSD card:

1. Unplug the DWM-156 USB adapter from the computer.
2. Gently lift the upper left corner of the MicroSD card slot cover. (Figure A)
3. Insert the MicroSD card with the gold contacts facing towards the top of the adapter. (Figure B)
4. Close the MicroSD card slot cover. (Figure C)
5. Plug the DWM-156 into a USB port on your computer.
6. The computer may take a moment to recognize the device.
7. A new removable disk will appear in your computer's list of storage drives.

Note: To remove a MicroSD card, unplug the device from the computer. Open the card slot cover and gently push the card in to eject it.



Figure A



Figure B



Figure C

Software Installation

Before you install the software, you must first install a SIM card into the USB adapter and connect the adapter to a USB port on your computer.

1. Open **My Computer**.
2. Double click on the removable drive labeled **ConnMgr**.
3. Double click the file labeled **setup.exe** to start the installation.
4. Follow the step-by-step instructions on the Installation Wizard.
5. The D-Link Mobile Connection Manager will launch automatically.



Basic Functions

Software Overview

Once the program has been installed, you may launch the DWM-156 USB Modem application by double clicking on its desktop icon, or via **Start > Programs > D-Link > D-Link USB Modem**.



Once launched, the D-Link Mobile Connection Manager icon will be displayed in the windows notification area. The D-Link Mobile Connection Manager provides all of the functions needed to manage your connection to a mobile service network.

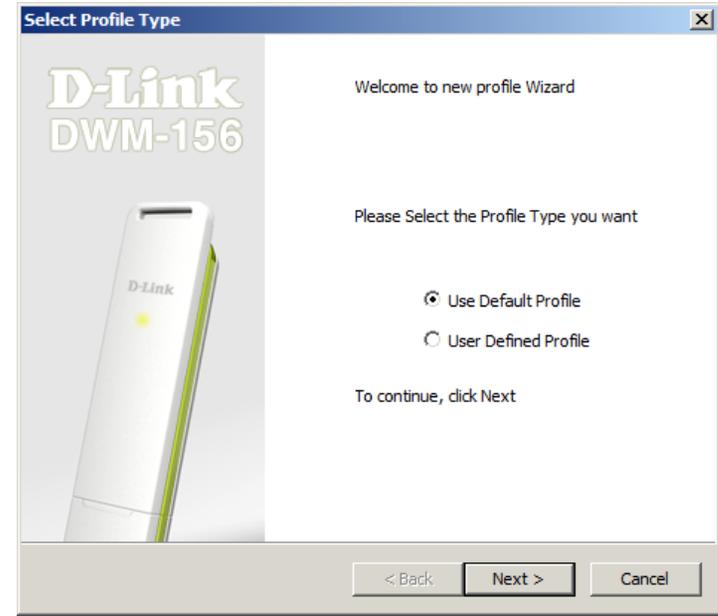


New Profile

Before starting, if the mobile service provider associated with your SIM card is listed in the preset profile list, you can directly connect to the desired network using its pre-defined profile.

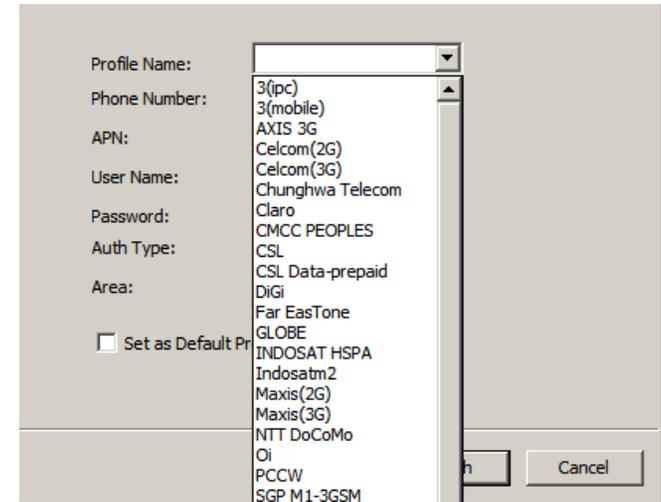
You also can create your own profile by following the steps below:

1. Click the **Profile** button.
2. Click the **New** button to activate the wizard which will help you create a new profile.
3. Select the profile type, **Use Default Profile** or **User-Defined Profile**. Click **Next** to continue.



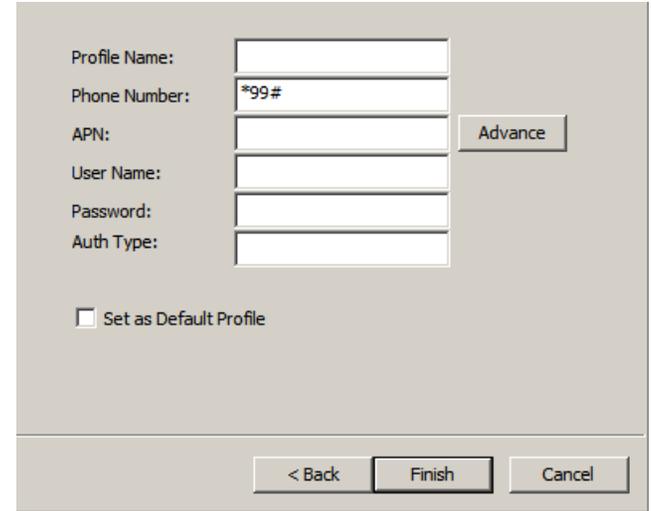
Use Default Profile (Preset)

1. Select a Profile Name from the drop-down menu. Most of the required information will be populated into the fields automatically.
2. If needed, fill in the Phone Number, APN (Access Point Network), User Name, and Password.
3. If desired, click the check box to set this as the default profile.
4. Click **Next** to continue.



User-Defined Profile

1. Fill in the Profile Name, Phone Number, APN, User Name, Password, and Authorization Type.
2. Click **Finish** to complete.
3. Click the **Advanced** button to display APN details.
4. Highlight an APN and click **OK**.
5. Click **Next** to continue.



The screenshot shows a configuration dialog box for a user-defined profile. It contains the following fields and controls:

- Profile Name: [Text input field]
- Phone Number: [Text input field containing *99#]
- APN: [Text input field]
- User Name: [Text input field]
- Password: [Text input field]
- Auth Type: [Text input field]
- Set as Default Profile:
- Buttons: < Back, Finish, Cancel, and an Advance button to the right of the APN field.

Establishing a Connection

The Connect/Disconnect button will be black when you are offline. You can click the Connect button to connect to the network via the default profile. After you are connected, the button will turn green with a checkmark. Once connected, you can use the mobile service network to browse the Internet, send e-mail, send text messages, and perform other tasks online.



Connect

Ending a Connection

If you wish to disconnect, click the button again, and the button will turn black to indicate you have successfully disconnected and are offline.



Disconnect

Profile Management

Under the Profiles icon, users can create, edit and delete profiles as well as preset profiles.

Editing

1. Click the **Profile** button.
2. Select a profile and click the **Edit** button.
3. Click the appropriate tab and enter the information in the fields.
4. Click the **Advanced** button to display a list of operators and their areas in the window below.
5. Click **OK** to close the APN window.
6. Click **OK** to close the Edit Profile window.

Note: Profiles may only be edited when you are disconnected.

Deleting a Profile

1. Click the **Profile** button.
2. Select a user-defined profile and click the **Delete** button.
3. Click **Yes** to confirm the deletion.

Deleting All Profiles

1. Click the **Profile** button.
2. Click the **Delete All** button.

Setting the Default Profile

1. Click the **Profile** button.
2. Highlight the profile to use when the DWM-156 is started.
3. Click **Set as Default** profile.

Reset to Factory Default

1. Click the **Profile** button.
2. Click **Set as Factory Default** to return the DWM-156 to the factory settings.



Profile

Connection Management

The Connection Information window allows users to manage not only the current connection (if connected), but also their connection history. Click the Connection Info button to open the Connection Information window.

Current Connection

The Current Connection tab displays the following information:

Profile Name - Displays the current profile. Select other profiles from the drop down menu.

Connection Type: Displays the mobile service technology that the service network uses.

Connection Band - Displays the band of the current connection.

Connected Time - Displays how long the current session has been active for.

Volume - Displays the total amount of data received (Rx) and transmitted (Tx).

Speed - Displays the speeds for both transmitted and received data.

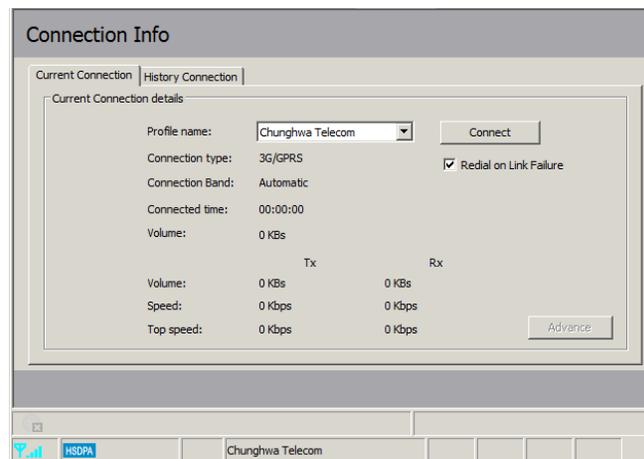
Top Speed - Displays the maximum transmitted and received speeds attained.

Redial on Link Failure - Redial if the connection is somehow disconnected.



Connection Information

Note: Windows Vista requires your confirmation to redial on link failure.



Connection History

The History Connection tab displays the following information:

Type - The type of connections made.

Profile - The names of the profiles used.

Date & Time - The date and time of the connection.

Duration - The duration of the connection in hours, minutes, and seconds.

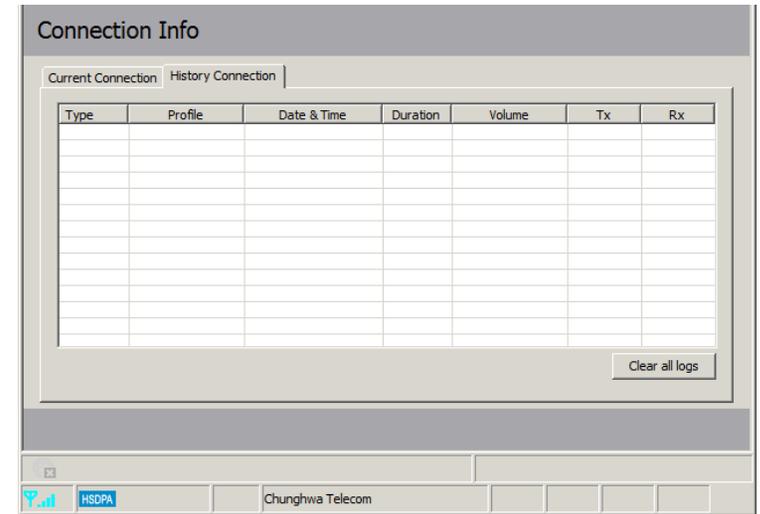
Volume - The total amount of data transmitted and received.

Tx - The total number of bytes transmitted.

Rx - The total number of bytes received.

Follow the steps below to clear the Connection History:

1. Click **Clear All Logs** to clear the logs.
2. Click **Yes** to confirm.

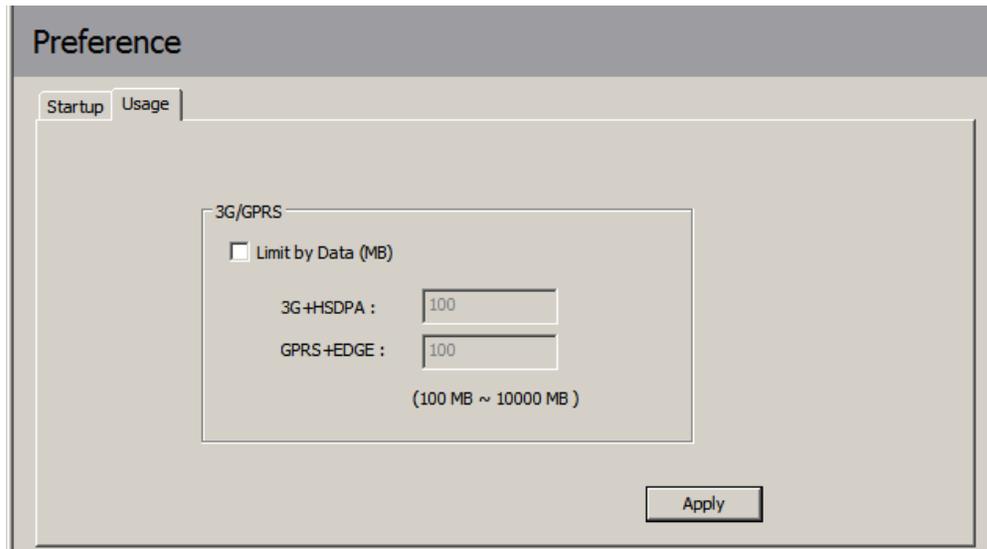


Usage Management

Limits can be set on how long a connection will last. These limits can either be set by usage (3G/GPRS connections) or by time (Dialup connections).

Usage

1. Select **Tools > Preference**.
2. Select the **Usage** tab.
3. Check the **Limit by Data** checkbox.
4. Enter the desired value between 100MB and 10,000MB.
5. Click **Apply** to save the settings.



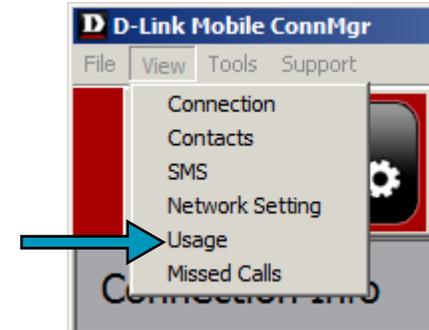
Usage Statistics

Statistics for both usage and time can be viewed from the usage menu.

1. Select **View > Usage**.
2. Select either the **Current Month** or **Previous Month** tab.

Follow the steps below to clear the Previous month's logs:

1. Select **View > Usage**.
2. Select **Previous Month** tab.
3. Click **Clear all logs**.
4. Click **Yes** to confirm.



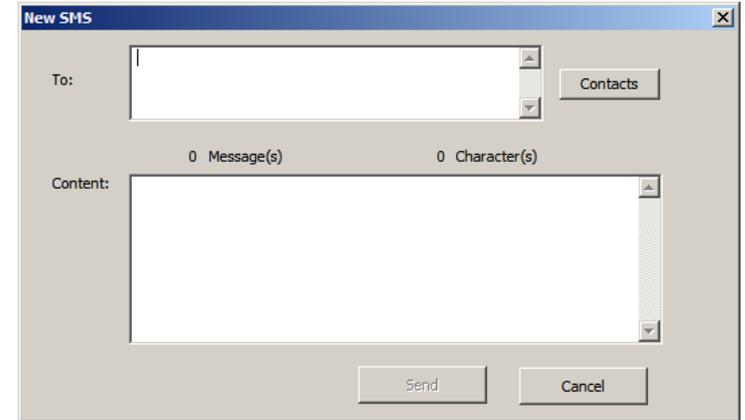
Text Messaging (SMS)

The DWM-156 can be used to perform all the text messaging functions that can be done on a mobile phone such as sending, receiving, replying, forwarding and deleting.



New/Reply/Forward Text Message

1. Click the **SMS** button.
2. Click **New**, **Reply**, or **Forward**.
3. Enter the recipient's phone number or click **Contacts** to see the contacts stored to the SIM card. In the contacts window, click the box next to the recipients name and click **Add** to return to the New SMS window.
4. Enter a message to send.
5. Click **Send** to send the message.



Deleting a Message

1. Click the **SMS** button.
2. Select the messages you want to delete. If you would like to delete all messages, click **Select All**.
3. Click **Delete** to delete the selected messages.
4. Click **Yes** to confirm.

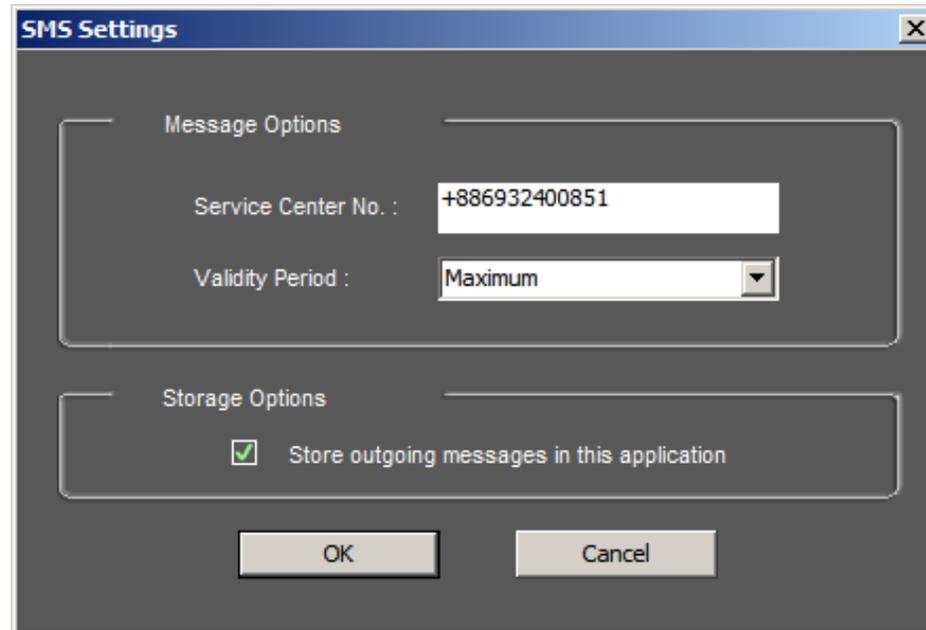
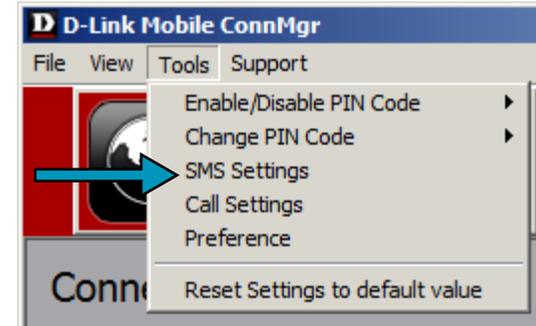
Saving a Sender to Contacts

1. Click the **SMS** button.
2. Select a message.
3. Right click on the selected message and click **Save to Contacts**.
4. In the **Add Contact** window enter the contact name.
5. Click **OK** to save the contact.
6. Once the contact has been saved, a confirmation window will be displayed. Click **OK** to close it.

SMS Settings

This menu allows you to change the service center number, its validity period, and whether to store outgoing messages within the DWM-156 Mobile Connection Manager.

1. Click **Tools > SMS Settings**.
2. If needed, enter the new Service Center number. Choose the Validity Period from the drop-down list.
3. Check the box to store outgoing messages in the application.
4. Click **OK** to save the details.



Contact Management

The DWM-156 contacts manager displays all the contacts on the SIM Card. Contacts can be added, edited, deleted and imported.

Adding Contacts

1. Click the **Contacts** button.
2. Click the **Add** button.
3. In the Add Contact window, enter the contact name and telephone number.
4. Click **OK** to add the contact.



Contacts

Editing Contacts

1. Click the **Contacts** button.
2. Select the contact to edit.
3. Click the **Edit** button.
4. Modify the contacts details.
5. Click **OK** to save the changes.

Deleting Contacts

1. Click the **Contacts** button.
2. Select the contact to delete. If you would like to delete all contacts, click **Select All**.
3. Click the **Delete** button.
4. Click **Yes** to confirm the deletion.

Importing vCards to Contacts

1. Click the **Contacts** button.
2. Click the **Import** button.
3. Select the source of the vCard(s).
4. Click **Open** to import the card(s).
5. After the import, a message will display the import information. Click **OK** to close.

Exporting Contacts to vCards

1. Click the **Contacts** button.
2. Click the **Export** button.
3. Select the destination to save the vCard(s).
4. Click **OK** to export the card(s).
5. After the export, a message will be displayed. Click **OK** to close.

SIM Management

SIM Management includes functions such as enabling/disabling a PIN, changing the PIN1/PIN2 codes, checking SIM information, adjusting the phone number, viewing contacts usage, and viewing SMS usage.

SIM Information

SIM details regarding the IMEI, Phone Number, Contact Usage, and SMS Usage can be found by clicking **Support > About D-Link Mobile Connection Manager**.



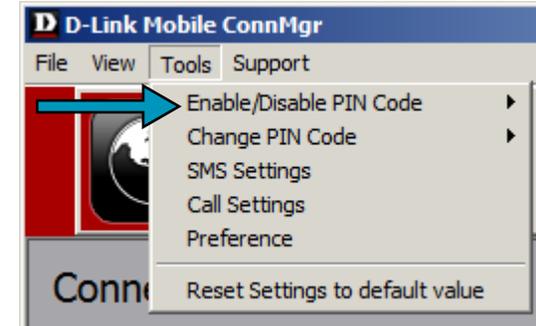
Enabling or Disabling a PIN Code

Enable PIN Code

To prevent unauthorized use of the SIM card a PIN code can be enabled.

1. Select **Tools > Enable/Disable PIN code > Enabled.**
2. Enter the correct PIN code to enable.
3. Click **OK** to enable PIN code protection.

If a PIN number has been enabled, you will always be asked to enter it before accessing the D-Link Mobile Connection Manager software.



Disable

If a PIN code is no longer required, you may disable it via the following steps.

1. Click **Tools > Enable/Disable PIN code > Disabled.**
2. Enter the correct PIN code.
3. Click **OK** to disable the PIN.

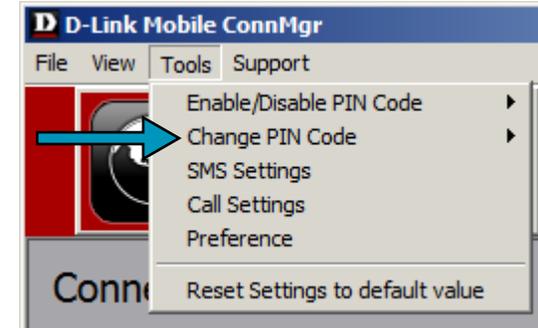
Note: The PIN is provided by your network service provider.

Warning: The PIN code must be entered correctly within three tries. Failure to do so will cause the SIM card to become locked.

Changing a PIN Code

SIM cards often contain two PIN codes that can be changed.

1. Click **Tools > Change PIN Code > PIN1** or **PIN2**.
2. Enter the details in the following fields: Current PIN Code, Enter New PIN Code and Confirm New PIN Code.
3. Click **OK** to change.
4. Once complete, a confirmation window will be displayed. Click **OK** to close the window.



Warning: The PIN code must be entered correctly within three tries. Failure to do so will cause the SIM card to become locked.

Note: The PIN codes cannot be changed while the DWM-156 is connected to a mobile network.

Unlocking a PIN Code

If the PIN code has been entered incorrectly three times and the SIM card has been locked, follow the steps below to unlock it:

1. If a PIN is blocked, the unblock window will be displayed.
2. Enter the PUK code. Enter the new PIN Code, and confirm the new code.
3. Click **OK** to confirm the new PIN code.

Note: The PUK number is provided by your mobile service provider.

Profile Settings

The Profile Settings page allows you to manually change your Band and Network setting in case your DWM-156 can not automatically connect to your network provider.

Band Settings

The DWM-156 supports two band selection options:

Automatic - The DWM-156 automatically selects the band based on the networks available in current area and those supported by the DWM-156.

3G Only - Restricts the DWM-156 to using 3G service on WCDMA 850/1900/2100 bands.

2G Only - Restricts the DWM-156 to using 2G service on GPRS 850/900/1800/1900 bands.

Note: If you accidentally configure the wrong settings, go to **Tools > Reset Settings to Default Value**.

To adjust the band settings follow the instructions below:

1. Click the **Profile** button.
2. Select **Band** tab.
3. Select Automatic, 3G only, or 2G only.
4. Click **Apply** and **OK**.



Network Selection

The current location of the DWM-156 may be covered by more than one network. The DWM-156 supports two network selection options:

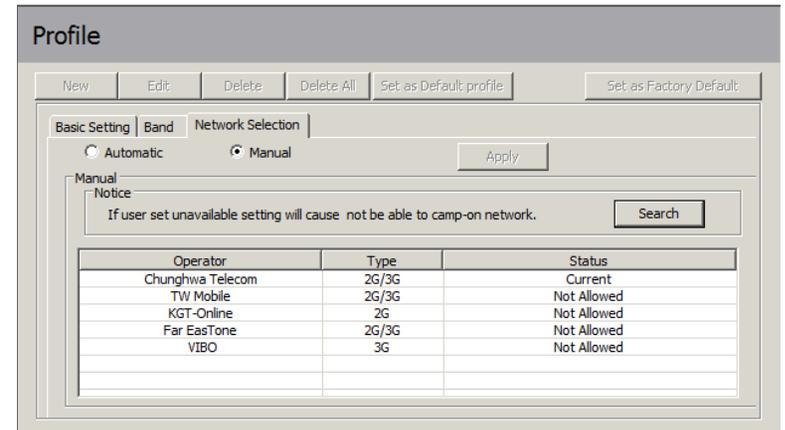
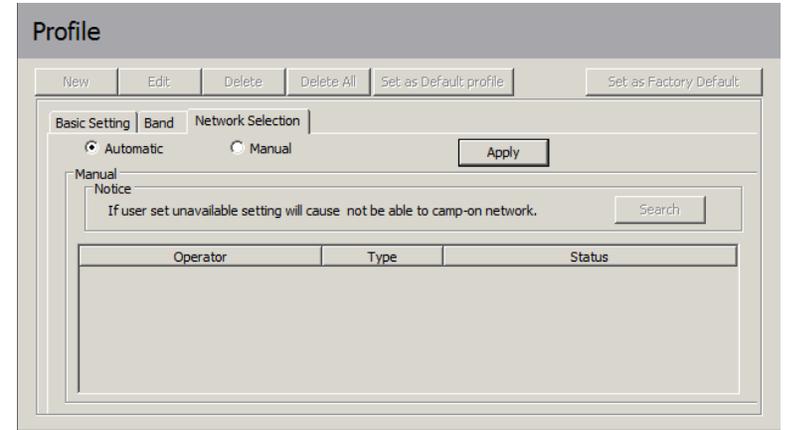
Automatic - By default the DWM-156 will automatically select the network based on the user's account and network availability.

Manual - Users can also use DWM-156 to get the network list, and select an available network to use.

To manually set the network, follow the steps below:

1. Click the **Profile** button.
2. Select the **Network Selection** tab.
3. Select **Manual**.
4. Click **Search** to see all available networks.
5. Select a network operator and click **Apply**.
6. Click **OK** to finish.

Note: When the band is set to **3G Only**, manual selection will only list 3G networks.



Call Settings

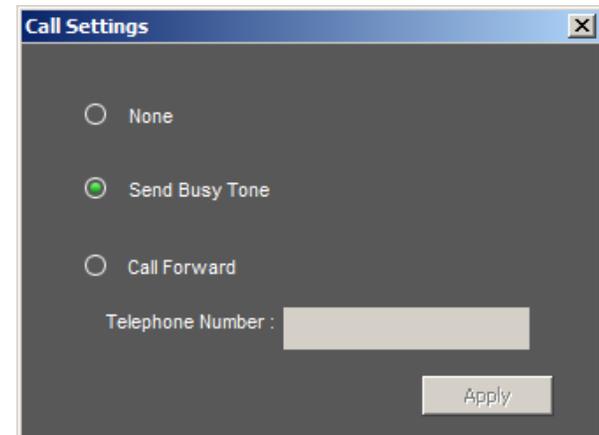
1. Select **Tools > Call Setting**.
2. You may select from one of the following options:

None - No answer.

Send Busy Tone - The caller will hear a busy tone, or will be transferred to voice mail.

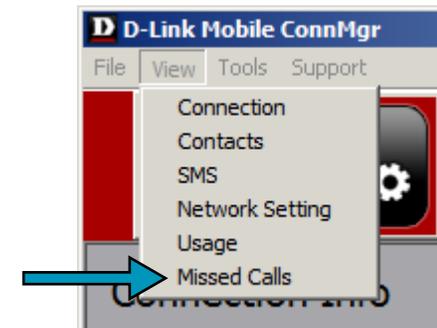
Call Forward - The incoming call will be forwarded to the phone number you enter into the **Telephone Number** text box.

Note: The call settings query may fail if the network is busy; in this case please try again later.



Missed Calls

1. Select **View > Missed Calls**.
2. If the call setting is None or Send Busy Tone, D-Link Mobile Connection Manager AP will register the incoming call in the missed calls list.

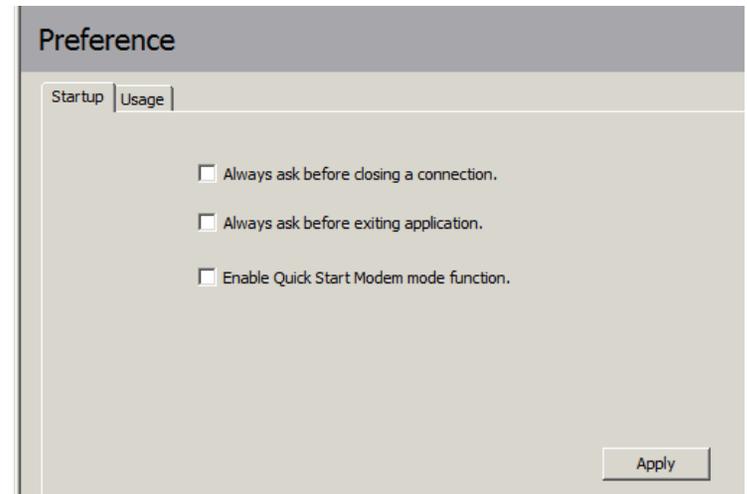


Startup Options

Users can specify how the application should start up.

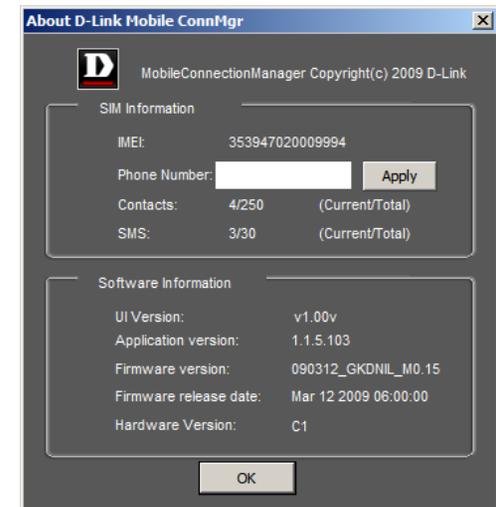
1. Click **Tools > Preferences > Startup**.
2. Check the box next to the desired options.
 - Always ask before closing a connection.
 - Always ask before exiting application.
 - Enable Quick Start. (This mode runs a program in the background to help the D-Link Mobile Connection Manager launch quickly.)
3. Click **Apply** to save the settings and finish.

Note: Please reset these settings when you want to install on another PC or remove the driver.



Version Information

The application version, firmware version and firmware release date can be found by selecting **Support > About D-Link Mobile Connection Manager**.



Troubleshooting

1. Why am I unable to connect to a mobile service network?

The DWM-156 requires a SIM card registered with a compatible service network. For information about the services that your SIM card provides access to, please contact your mobile service provider. The adapter will not connect to a service network unless all relevant settings have been specified correctly. Please make sure that all connection profile settings are accurate.

2. Why is the software asking for a PIN number?

For security, some SIM cards have a PIN number enabled. If the SIM was used in a previous device, the PIN will be the same as it was before. If you did not set a PIN, please contact your mobile service provider.

3. Why are the connection speed and data transfer rates slow?

Please check the network signal strength. A low signal will result in poor performance.

4. Why am I unable to receive SMS messages?

This may happen with the SIM card memory is full. You may need to delete some messages to free up space.

5. Why is only part of the name saved when adding a new contact?

The SIM card can hold a maximum of 12 letters/characters for a contact name.

6. Why does the Windows connection icon display a speed of 115.2 Kbps?

115.2 Kbps is the data rate of the USB device, not the connection speed. Please refer to the connection statistics shown within the Mobile Connection Manager for the actual connection speed.

Glossary

2G - Second-generation mobile networking technology. Represents a switchover from analog to digital; most 2G networks use GSM.

3G - Third-generation mobile networking technology that enables simultaneous transfer of voice and non-voice data; most 3G networks use WCDMA.

3.5G - A more recent standard of mobile networking technology; generally uses HSDPA.

3.75G - A more recent standard of mobile networking technology; generally uses HSUPA.

APN (Access Point Name/Network) - Provides GPRS routing information. Consists of: Network ID: Identifies the external service requested by a GPRS user. Mobile network operator ID: Specifies routing information.

ARFCN (Absolute Radio Frequency Channel Number) - The specific ID numbers for all radio channels used in cellular mobile communications.

Bps (bits per second) - How data flow is measured.

DNS (Domain Name System) - Helps route network traffic by making the addressing process more user-friendly.

DHCP (Dynamic Host Configuration Protocol) - How devices obtain IP addresses from a server.

DUN (Dial-Up Network) - Windows component that enables online access via a modem.

EDGE (Enhanced Data GSM Environment/Enhanced Data for Global Evolution) - Advanced GPRS that delivers multimedia and other data needing greater bandwidth at up to 237 kbps.

GPRS (General Packet Radio Service) - Delivers data in packets at up to 86 kbps.

GSM (Global System for Mobile Communications) - The most popular cellular network, mostly operates in 850-900 or 1800-1900 MHz; the primary 2G system.

IMEI (International Mobile Equipment Identity) - A number unique to each GSM/UMTS device that can be used block network access by a stolen mobile device.

IP (Internet Protocol) - Routes packets over a network.

HSDPA (High Speed Downlink Packet Access) - Advanced WCDMA that delivers bandwidth intensive data at up to 7.2Mbps; typically associated with 3.5G.

HSUPA (High Speed Uplink Packet Access) - Advanced WCDMA that delivers bandwidth intensive data at up to 5.76Mbps; typically associated with 3.75G.

Kbps (Kilobits per second) - A data flow measure; 1024 bits/second.

LAN (Local Area Network) - A data network with limited range but good bandwidth.

Mbps (Megabits per second) - A data flow measure; 1,048,576 bits/second.

PPP (Point-to-Point Protocol) - An internet connection method.

PIN (Personal Identity Number) - A four to eight digit security code on the SIM which permits access to a user's mobile carrier network.

PUK (Personal Unblocking Key) - A code used to unlock a blocked PIN number. Usually, if the wrong PUK is entered ten times in a row, the SIM will become permanently blocked and unrecoverable, requiring a new SIM card.

Rx - Shorthand for Reception.

SIM (Subscriber Identity Module) - A small card that contains key mobile device identification, subscription and contact information.

SMS (Short Messaging Service) - Allows text messages of up to 160 characters.

Tx - Shorthand for Transmission.

WCDMA (Wideband Code Division Multiple Access) - Wideband Code Division Multiple-Access (WCDMA) is one of the main technologies in the implementation of third-generation (3G) cellular systems. This product supports WCDMA up to 384kbps.

Technical Specifications

Minimum System Requirements

- Windows 2000/XP/Vista or Mac OS X 10.4.0 or higher
- Pentium 500MHz or greater
- 128MB RAM or greater
- 50MB available disk space
- Internet Explorer v6.0 or higher / Firefox v1.5 or higher

GSM Band (GSM/GPRS/EDGE)

- 850, 900, 1800, 1900 MHz
- Power Class 4 (900 / 1850 MHz)
- Power Class 1 (1800 / 1900 MHz)

UMTS/HSDPA Band *

- 850/1900/2100 MHz
- Power Class 3 (+24 dBm)

Data Rates **

- DL: 7.2 Mbps (HSDPA)
- UL: 5.76 Mbps (HSUPA)

Antenna

- Internal monopole antenna

Interface Support

- USB 2.0

SMS

- Circuit-switched (GSM)
- Packet-switched (GPRS)

SMS Manager

- Create, edit, forward, and send messages
- Inbox, outbox, draft, and sent folders

Phonebook

- Import, export, add, modify, and delete records

USIM Slot

- Standard 6-Pin SIM card interface

Plug and Play

- Automatic software/driver installation

Connection Status

- Network name, signal strength, send/receive rate

LED Indicator

- Five-color LED provides status information

MicroSD Card Reader

- Supports MicroSD Cards up to 8GB

Certification

- CE
- NCC

Dimensions (L x W x H)

- 86.75 x 28 x 11.4 mm

Operating Temperature

- -10° to 55°C (14° to 131°F)

* Supported frequency band is dependant upon regional hardware version.

** Data rates are theoretical. Data transfer rate depends on network capacity and signal strength.