

dovado™

USB Mobile Broadband Router



tiny

MIGHTY small
mighty FAST

Reference Manual

dovado

The Mobile Choice for your Broadband Internet

Reference Manual

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Introduction

Thank you for choosing the Dovado USB Mobile Broadband Router.

Package contents

Before continuing to the next section, make sure all of the listed items below are included in your package. If something is missing, kindly contact your reseller.

- Router - USB Mobile Broadband router
- Power supply
- WLAN antenna
- Velcro pads, for optional surface mounting of the router
- Quick Wizard Guide and Reference Manual

Additional required items

In addition to the items above you will need a mobile broadband USB modem in order for the product to work. This modem provides the wireless link to your operator's network and is sold separately. To use the Internet you need a computer.

ATTENTION: As the DOVADO portfolio of routers are constantly being updated to support new modems, features as well as fixes, it is advised that you remain updated with the latest firmware. To download the latest firmware, please visit www.dovado.com/firmware



- | | |
|--|--------------------------|
| 1. USB-port | 5. DC Power Input |
| 2. Internet/SMS LED | 6. LAN port |
| 3. Reset button | 7. WAN port |
| 4. SMA connector for WiFi antenna | |

The Reset button

The location of the reset button is at the back of the router. If you need to erase all the inserted parameters and password, along with restoring the factory default settings, then hold down the reset button for approximately 8 seconds. For restart of the router just press the reset button quickly.

The screenshot shows a web interface for configuring a modem. On the left is a dark sidebar with navigation links: Home, Modem (selected), Internet, LAN, WLAN, SMS, Position, Automation, System, Upgrade, Restart, and Logout. The main content area has a header with 'Modem Status', 'Modem Settings' (active), and 'PPP'. Below the header is the 'Modem Configuration' section, which includes fields for IP Address, IP Netmask, IP Gateway, IP DNS Server (pre-filled with 195.54.122.211), Host Name (pre-filled with 3GN), and Domain Name. The 'Network Preference' section has radio buttons for 'Automatic (3G/4G preferred)' (selected), '4G (LTE) Only', '3G (UMTS/HSPA) Only', and '2G (GPRS/EDGE) Only'. The 'Select APN' section includes a 'Current location' dropdown (set to 'Select country'), a 'Select Access Point' dropdown (set to 'Select a country first'), and an 'Access Point Name' text field. The 'PIN code' section has an 'Enter PIN Code' text field. The 'Modem On/Off Switch' section contains a note about manually connecting/disconnecting the internet and a checkbox for 'Activate Modem On/Off Switch'. A 'Save Settings' button is at the bottom.

On the **Modem>Modem Settings** page, you will be able to insert all the valid inputs in order to access the internet via your mobile operator. There are several relevant bits of information which are necessary in order to complete this task successfully:

- **APN (Access Point Name).** If you are not sure what your mobile operator's APN is, please contact them or check with your modem manual.
- **PIN code.** This is your PIN code provided with your SIM card which resides in your USB modem.
- **Username & Password:** Some operators may require you to insert a username and password along with APN information in order to authenticate towards the mobile network. If you haven't been provided this, then using only an APN might be sufficient. If not, then please contact your operator.

The following scenarios should assist you in enabling your router for Internet access, depending on which type of USB modem you have inserted into the router.

If your scenario is not available in this guide, then please visit **www.dovado.com/support** for latest update.

Once the information has been inserted, the unit will automatically try to establish a connection to the operator's network. A solid green light on the Internet LED indicates a successful connection.

Note: Mobile operators typically have an **Access Point Name** (APN) as the key relevant point of entry towards the mobile broadband network. Make sure to have the name of your APN in advance of configuring your USB modem. If you are using any other technology besides GPRS, EDGE, UMTS or HSPA, you might not require an APN.

Scenario 1: 3G USB modem using a SIM card

- In the **Modem->Modem Settings** page, select to use **SIM**.
- Enter your operator **Access Point Name** and a **PIN code** if using one.
- Push **Save Modem Settings**.
- **Restart** the router.

Scenario 2: 3G USB modem using a SIM card along with a username and password

- In the **Modem->Modem Settings** page, select to use **SIM**.
- Enter your operator **Access Point Name** and a **PIN code** if using one.
- Push **Save Modem Settings**.
- Go to **Modem->PPP** and make sure that PPP is **enabled**.
- Enter your **Username** and **Password**
- **Save PPP Settings**.
- **Restart** the router.

Connection Status Overview Bar

Date: 2009-04-23	Time: 17:01	Traffic Down / Up (GB)
Signal: 51 % (3G)	Connection: USB	Modem: 0.00 / 0.00
SMS (0)		ETH: 0.00 / 0.00

Atop of the user interface, a bar displays an overview of your Internet connection. This information sits outside the security zone of your router, and does not need to be accessed via an authorized login, thus saving time on checking the connection status.

The Connection Status Overview Bar shows the following information:

Date: Synchronized with a DOVADO NTP (Network Time Protocol) server upon each new successful Internet connection.

Time: Displayed in a 24-hour format (HH:MM). In case the displayed time is incorrect, you can set the time-zone in the **SYSTEM->NTP** page.

Signal: The latest measurement gathered by the USB modem upon connection is displayed in a percentage value, along with the technology (2G, 3G or 4G). The value is only updated after initiating a new connection.

Connection: Indicates whether your current Internet connection is via the inserted **USB** modem or via an Ethernet **WAN** port. This is useful if your router has been configured to perform automated failovers between one dropped Internet connection to a secondary (backup) connection.

Connection Indicator: Green color indicates that the DOVADO router is connected to the Internet via a USB modem. Red color indicates that it is disconnected from the Internet.

Traffic: Quickly displaying this month's Internet consumption in gigabytes (GB) on the downlink and uplink of both Internet interfaces (USB modem and Ethernet WAN).

Data Traffic Usage Report

3GN Web Configuration Pages - Windows Internet Explorer
http://192.168.0.1/cgi-bin/getcfg.cgi?trafficusage+/content/ethwa

Internet Connection WAN Port Settings Connection Tracker **Traffic**

Traffic usage

Monthly Data Consumption Report

Traffic Usage in megabytes:

	USB-3G:		ETH-WAN:	
Downloaded Apr 2009:	0	MB	0	MB
Uploaded Apr 2009:	0	MB	0	MB
Total Apr 2009:	0	MB	0	MB
Downloaded last month:	0	MB	0	MB
Uploaded last month:	0	MB	0	MB
Total last month:	0	MB	0	MB

These figures are estimations. For more accurate figures - please contact your operator.

Traffic Usage Update by SMS

Notify every

Up + Downloaded MB

Downloaded

This setting must be activated in [SMS Remote Control](#) in order to work

Kilobyte base

Use Bytes per kilobyte

It is possible to keep track of how much Internet traffic is consumed each new calendar month. A log is also held for the previous month. The chart displays how much data has been downloaded as well as uploaded per Internet interface, be it a USB modem or Ethernet WAN port. A total is also calculated for the month per interface. As these figures are automatically updated every few minutes, a forced update can be manually requested by pushing the Update button.

Notification of Data Traffic Usage

Upon enabling this feature, the router can send you an SMS and/or E-Mail notification after a certain amount of data has been consumed by your Internet connection. It will then continuously update each time it passes that interval, thus providing you with an overview of your monthly data consumption.

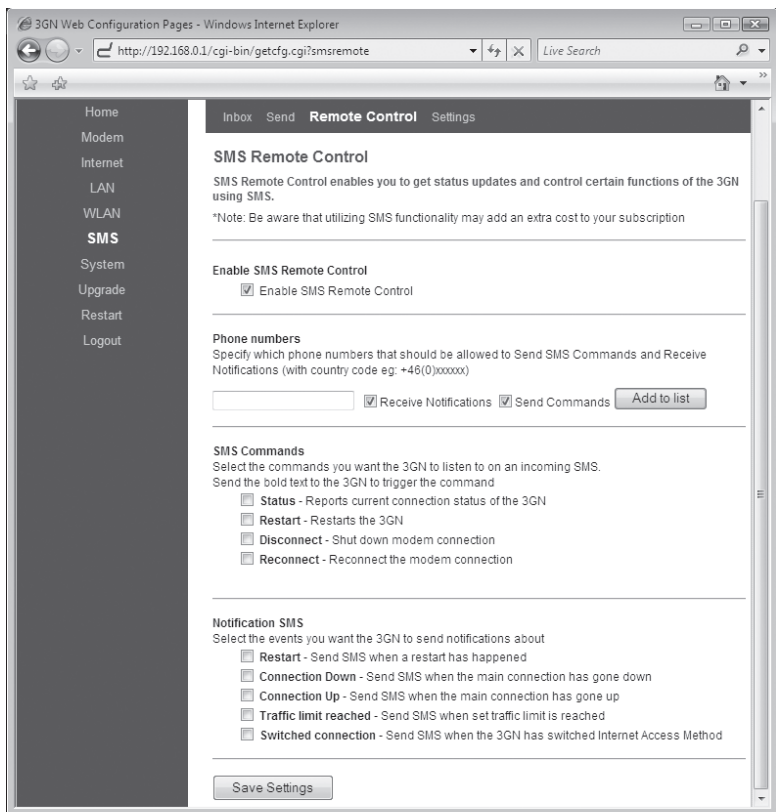
The router can alert you after every 100MB, 250MB, 500MB and 1000MB of downloaded or totally accumulated bi-directional traffic passed during the calendar month.

Note: By using your USB modem directly in the computer, the router will only be able to display the amount of data the router itself has consumed when the USB modem is inserted into it. It will not display what the USB modem has consumed; therefore, to acquire the most accurate accumulated figures, please contact your Internet service operator.

To enable notification by SMS, go to **SMS->REMOTE CONTROL**, and select the **Traffic Limit Reached**, located under **Notification SMS**.

To enable notification by E-Mail, go to **SYSTEM->E-Mail**, and enter your E-Mail account configuration.

Then proceed to **INTERNET->TRAFFIC**, and select how often you would like to be notified by SMS and/or E-Mail for an updated total of your calendar month's data consumption. You can also specify which kind of data to keep track of (downloaded only, or downloaded and uploaded; depending on your mobile broadband subscription terms).



If your SIM card and 3G USB modem support SMS (see www.dovado.com) in the router, then you'll be able to employ this feature to remotely control the router from your mobile phone. A short text command can be sent from your phone to administer any of these tasks instantly. The configuration allows an unlimited range of authorized mobile phone numbers to be inserted into the list.

You can specify which number will be viable for sending commands, receiving notifications, or both. To insert the number, use international dialing format (e.g. +46 for Sweden, followed by the rest). For each number that is inserted with its rights, click on Add to list. Note: For each number that is entered, and tagged with a “Notification” tick mark, an individual SMS will be sent by the router in case of any notification. By doing so, this will generate a larger load of SMS traffic to your mobile broadband subscription.

Remote Commands

The short text commands are: **Status, Restart, Disconnect, Connect (or Reconnect).**

Status: The router will reply to you stating that it's either connected or disconnected from the Internet. It will also contain the IP address (if connected) of its WAN/3G interface along with signal information.

Restart: The router will restart itself.

Disconnect: The router will disconnect itself from the mobile broadband network. Internet connection will be dropped, though SMS will still be active.

Connect (or Reconnect) : The router will connect itself to the mobile broadband network. Internet connection will be enabled.

Notification SMS

Unexpected events which occur in regards to the Internet connection along with the overall status of the router can be reported by SMS to all numbers listed for “Notification”. Notification messages can be sent to recipients for the following events:

Restart: In case the router was forced to restart itself after 3 unsuccessful connection attempts (based on the settings located in the Connection Tracker). A restart can also be affected by an unexpected power failure.

Connection down: The Internet connection has been dropped. The router at this point has acknowledged a drop, and is working on resolving this situation by either redialing the connection, restarting itself or switching connection to the secondary Internet interface (depending on what has been defined in the **INTERNET->CONNECTION TRACKER** site)

Connection up: An Internet connection has been established. It is very likely that your router will be handed a new IP address from the operator. The SMS will display the new IP address in case you would like to remotely connect to it for administration purposes.

Traffic limit reached: More information for this is available on page 9.

Switched connection: In case your Connection Tracker has been configured to automatically perform a connection failover between two interfaces, you will be notified of this change, along with further information pertaining to that new connection.

Advanced Settings

The Dovado router has a built-in firewall. In this section you will learn more about this and other security features.

Besides password protecting the router configuration pages it is possible to restrict the Wireless LAN devices that may access your private network and the public Internet through the router. You can use encryption and/ or MAC address filtering in order to achieve this.

With encryption you can choose a key, which then all Wireless LAN clients need to know in order to access your private network through the router. These settings are found in **WLAN->Authentication**.

With **MAC address filtering** you can enter the MAC address of each client that you want to grant access to your private network. This address is physically linked to the network card in each client. These settings are found in **WLAN->MAC Address Control**.

Under **WLAN->WLAN Properties** are the settings for the wireless network.

Wireless Band drop-down menu lets you choose what wireless standard to use in your private network. Possible choices are 802.11b with a maximum transfer rate of 11Mbps, 802.11g with a maximum transfer rate of 54Mbps, 802.11n with a maximum transfer rate of 150 Mbps or 802.11b+g+n if you have clients with mixed types of network cards.

Channel drop-down menu lets you change the radio channel for the wireless communication. This is useful if you experience poor performance that could be as a result of interference from other wireless devices.

Data Rate drop-down menu is the setting for the transmission speed at the selected Wireless Band. If you experience problems at high data rates, then we recommend that you select a lower data rate..

SSID (Service Set Identifier) is the name of the router that will appear in other Wireless LAN clients when they perform a network search. Default value is DO-VADO.

SSID Broadcast enables or disables transmission of the SSID from the router. When disabled, other Wireless LAN clients will not find the router when they perform a network search.

Fragment length is a setting that affects the quality of the wireless transmissions. If you experience a high packet error rate you can decrease this value in small steps to reduce this problem. Setting the fragment length too low may result in poor performance. The default value is 2346.

RTS length is a setting that affects the quality of the wireless transmissions. If you experience inconsistent data flow you can decrease this value in small steps to reduce this problem. The default value is 2311.

Wireless Radio enables or disables the WLAN. If you do not use any Wireless LAN devices it is recommended that you select disable.

Click on **Save WLAN Settings** and then **Restart** for the changes to take effect.

WLAN->Authentication: The encryption settings for your private Wireless LAN.

Encryption is disabled by default. Choose **Enable** to show the available settings. There are three types of encryption methods in the **Authentication Type** drop-down menu, **WEP Open System**, **WEP Shared Key** and **WPA-PSK**.

WEP Open System encrypts all data that is sent over the wireless network but does not use any authentication. This means it is still possible for all clients in range to log onto the router, but without the correct key they will not be able to communicate with it. To activate this setting, choose **WEP Open System** from the **Authentication Type** drop-down menu. Then choose a **Key Type**, either **HEX** (range 0-9 and A-F) or **ASCII** (any character on the keyboard). Choose **Key Size**; 64 bits (for HEX this is 10 characters and for ASCII 5 characters) or 128 bits (for HEX this is 26 characters and for ASCII 13 characters): the longer the key, the stronger the encryption. The key is case sensitive. You have the possibility to define 4 keys at once so that you can easily change key to maintain security.

WEP Shared Key is identical to WEP Open System except that this mode also uses authentication. This is less suitable from a security perspective since it is possible to retrieve the key from the authentication process.

WPA-PSK is the third and strongest security option. Choose it from the **Authentication Type** drop-down menu and then enter a pass phrase between 8 and 63 characters. All Wireless LAN clients must use the exact same pass phrase in order to access your network. Due to the complexity and larger data overhead this option may decrease the performance of the network.

Click on **Save Authentication Settings** and then Restart for the changes to take effect.

WLAN->MAC Address Control:

The settings for restricting access to your private network via white-listing of authorized clients.

MAC Address Control enables or disables the MAC address filtering on the MAC addresses under **WLAN->MAC Address Control**.

MAC Address control is a security function that limits which clients can access your private network and the public Internet through your router. Enter the MAC address of the client that you want to grant access to your network (the MAC address of a client running Microsoft Windows can be obtained by clicking on the **Start** button and then **Run**. Type **cmd** and press enter. Then type **ipconfig /all** in the command prompt and press enter. The MAC address is found on the physical address line). Click on **Add to list**. Note that the function is enabled or disabled under **WLAN->WLAN Properties**. Disabling the function does not clear the **MAC Address Control** List.

LAN->LAN Settings: The network settings for the router.

Network Settings allows you to change the default IP address for your router. However, in most cases you do not need to change this setting. Note that the IP address for the router is used on your private network only. It is not possible to change the subnet mask. Click on **Save LAN Settings** and then **Restart** for the changes to take effect.

LAN->DHCP: The settings for your private network.

DHCP Server allows you to enable or disable the built-in DHCP server. When enabled, all clients on your private network will automatically obtain an IP address from the range specified under **Client IP Address Range** (valid range is from 1 to 254). When disabled you have to manually enter an IP address from this range into each client.

Client Network Information allows you to set a domain name for the router and specify an additional DNS server.

Static Address Assignment can be used when you want a client to obtain the same IP address each time it logs on to your private network. This setting works no matter if the DHCP Server is enabled or disabled. Select how you want to identify the client, by hostname or MAC address (it is possible to define 253 static IP addresses based on MAC addresses and 256 based on hostnames). Type in the hostname or the MAC address under **Host Identifier** and finally, set the desired IP address under **Internal Address**. Please make sure not to assign the IP address of the router to any of the clients. Click on Add and then **Save DHCP Settings** when you are finished.

View DHCP Table is a function that shows the IP and MAC addresses of all clients that are connected to the router.

Click on **Save DHCP Settings** and then Restart for the changes to take effect.

LAN->Port Forwarding: The settings for manually unblocking certain communication ports in your private network.

Reserved Ports is a list of logical ports that cannot be used to access your private network from the public Internet.

Port Forwarding to LAN lets you specify which ports clients on the public Internet shall be able to communicate through, to clients on your private network. Under **Port Range**, select a range (any range that does not contain the ports listed under **Reserved Ports**) from 0-65535. Select the type of traffic that should be let through on these ports, **TCP** or **UDP**, or **Both**. Finally, type in the **Destination Address**, which is the IP address of the client on your private network that you want to be accessible from the public Internet. Click on **Add** when you are finished. Note that by default, no traffic is permitted inwards if the request is initiated by an external user. However, clients on your private network can always access the public Internet.

Click on **Restart** for the changes to take effect.

LAN->UPnP: The settings for Universal Plug and Play.

The router supports Universal Plug and Play. UPnP is a feature that enables client application on devices behind the router to automatically trigger the opening of TCP/UDP ports through the firewall in the router.

As a security precaution, this feature is disabled by default and can be enabled manually.

System Settings

System->Security: Option for changing the default password of the router.

Please enter the same password twice and press **Save Password**. The new password will take effect upon restart.

Note: If you have misplaced or forgotten your password, you can reset it to "password" by pushing the Reset button for appr. 8 seconds.

Warning: By pushing the Reset button, you will also be clearing out all the parameters and restoring everything back to the original factory default settings. Please note that all your stored text messages (SMS) will be deleted as well.

System->Remote Management: The settings for enabling remote management of the router from another location.

Web Access Port: Select which port you would like to access the router interface page from the Internet. The **Standard port** is port 80, which is the regular port for HTTP.

Example: Should you wish to access the settings on your router from elsewhere on the internet, simply open a browser, type in

http://<ip address of router>:<port>.

For instance, http://183.168.0.35:4430.

Hostname lookup interval: Select how often a hostname entered in the Client Access List should be updated. Frequent updates are needed if the IP-address behind the hostname changes often.

Allowed Clients: The router will only allow access for clients visible in the Client Access List. To put a client in the list, enter the corresponding IP-address or Hostname (For instance 217.65.34.12 or myhost.dyndns.org) in the Host/IP-field and click Add to list. Repeat the procedure in order to grant more clients access. Access can be granted from anywhere on the Internet by marking "Any Host" and pressing "Add to List".

Show Mapping: Displays the router's view of IP-addresses associated with hostnames in the "Client Access List".

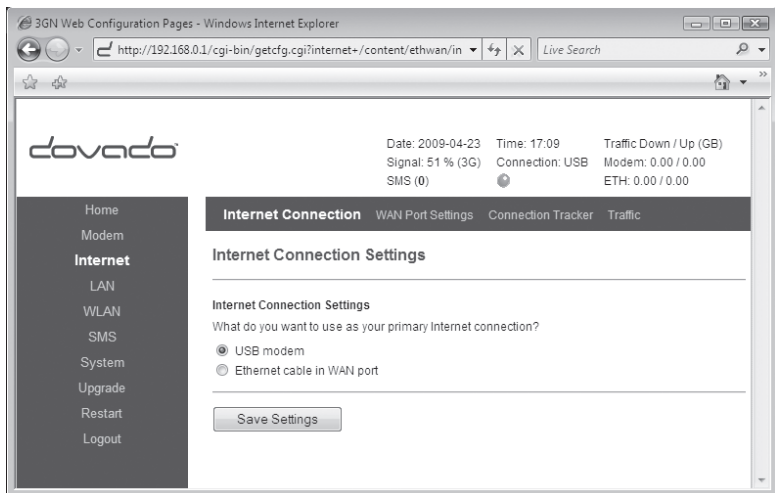
All changes will take effect upon restart of the router.

System->DNS: In most cases, the operator which provides the internet service towards your router is handing out a constantly-shifting (dynamic) IP address. The Dynamic DNS feature allows you to contact your router via an easily accessible hostname, such as "trn.mydyndns.com".

Internet

For Internet Connections, WAN Port Settings and Connection Tracker push **Internet** and make your settings.

Internet Connections



The router can also be used with a regular fixed broadband connection from an ADSL- or Cable-modem. To select your primary broadband connection, push **Internet** and then select **Internet Connection**. Make your selection and then push **Save Settings**.

WAN Port Settings

The screenshot shows a web browser window titled "3GN Web Configuration Pages - Windows Internet Explorer". The address bar contains the URL "http://192.168.0.1/cgi-bin/getcfg.cgi?ethwan+/content/ethwan/etl". The page header includes the "dovado" logo and system status information: Date: 2009-04-23, Time: 17:07, Traffic Down / Up (GB), Signal: 51 % (3G), Connection: USB, Modem: 0.00 / 0.00, SMS (0), and ETH: 0.00 / 0.00. A navigation menu on the left lists "Home", "Modem", "Internet", "LAN", "WLAN", "SMS", "System", "Upgrade", "Restart", and "Logout". The main content area is titled "WAN Port settings" and includes a sub-section "Ethernet WAN Port Configuration" with a note: "NOTE: The WAN port is currently disabled since you are using the modem for Internet connection". Below this is the "WAN IP Configuration" section, asking "How should the WAN port get its IP settings?" with two radio button options: "AutomaticDynamic (DHCP)" (selected) and "Manual (Static)". The "Current setup" section lists: IP Address: -, Subnet Mask: -, Default Gateway: -, DNS 1: 0.0.0.0, DNS 2: 0.0.0.0, Host Name: UMR, and Domain Name: localhost. A note states: "NOTE: the 'Save Settings' button below can be used to renew the IP lease from the DHCP Server (if you are using the Ethernet WAN port)". The "Custom WAN MAC Address" section explains: "Here you can modify your external WAN port Ethernet MAC Address. Enter the MAC Address in hexadecimal, using the formats: '01:23:45:6a:b7:8c' or '01-23-45-6a-b7-8c'". A text input field for "Custom MAC Address:" is present. A "Save Settings" button is located at the bottom of the configuration area.

The default setting is that your operator automatically will give you an IP address, should your operator have given you a static (specific) IP address than select **Manual settings** and fill in the given information in the relevant fields.

The screenshot shows a web browser window titled "3GN Web Configuration Pages - Windows Internet Explorer". The address bar contains the URL "http://192.168.0.1/cgi-bin/getcfg.cgi?contract+/content/ethwan/c". The page header includes the "covado" logo and system status information: Date: 2009-04-23, Time: 17:13, Traffic Down / Up (GB), Signal: 51 % (3G), Connection: USB, Modem: 0.00 / 0.00, SMS (0), and ETH: 0.00 / 0.00. A navigation menu on the left lists "Home", "Modem", "Internet", "LAN", "WLAN", "SMS", "System", "Upgrade", "Restart", and "Logout". The "Internet" section is active, with sub-menus for "Internet Connection", "WAN Port Settings", "Connection Tracker", and "Traffic". The "Connection Tracker" page contains the following sections:

- Connection Tracker**: The Connection Tracker assures maximum possible uptime of your Internet connection.
- Activate Connection Tracker**: Connection tracker active
- Ping Tracking**: A minimum of 2 valid public IP addresses need to be inserted in the following fields for the Connection Tracker to monitor. WARNING: Each pinged IP address will consume approximately 500 bytes per interval. Fields for IP Address 1, IP Address 2, and IP Address 3, a "Test now" button, and an "Interval" field set to 1 minutes.
- Failure handling**: What should happen when the connection goes down?
 - Redial only (in WAN Ethernet mode: Reinitialize interface)
 - Redial and Restart (3GN restarts itself after 3 failed redial attempts)
 - Auto fail-over to secondary interface. (WAN-to-USB or USB-to-WAN)

A "Save Settings" button is located at the bottom of the configuration area.

In order to ensure maximum internet availability you can use the Connection Tracker feature. When inserting a minimum of 2 IP addresses, these addresses will be "pinged" with an interval that you specify in minutes in the **Interval** field.

After entering the selected IP addresses, you can test the ping function to these addresses by pushing the **Test now** button directly below the IP address fields. The result will be shown to the right of each IP address field.

WARNING: Please note that if you are paying for bandwidth usage, activating this function will add data consumption to your monthly bill. An approximate figure for the additional monthly data consumption will be indicated directly to the right of the Interval field. Raising the interval value will lower the monthly consumption.

Should your internet connection drop, you have 3 options on how the router should react:

- **Redial only (in WAN Ethernet mode: Reinitialize interface).** Default value that attempts to reestablish the broadband connection.
- **Redial and Restart (the router restarts itself after 3 failed redial attempts).** Using this option, your local area/wireless network will be unreachable for a short while during the restart of the router.
- **Auto fail-over to secondary interface. (WAN-to-USB or USB-to-WAN).** The router is connected to both a USB modem and a fixed broadband connection. Both of these interfaces must be properly configured in the event of a fail-over between each other. You can check which interface is your primary connection on the Internet->Internet Connection page.

Upgrading the firmware

The latest firmware is available on www.dovado.com/firmware

Warning! Do not remove the power or the USB modem during upgrading as this will break your router!

Express Upgrader:

The simplest recommended method of firmware upgrade is to visit www.dovado.com/firmware and download the latest version of Express Upgrader. The Express Upgrader allows you to quickly establish contact with the router, type in the router's password, and perform the upgrade with the click of a button. Please note that this method only works with Windows operating systems.

There are also two other ways to upgrade the firmware: you can either upgrade the router via HTTP or via FTP. HTTP is used for conducting the upgrade process locally from a computer attached to the router, whereas the FTP method is used when the source of the upgrade file is on a server located in a remote location.

HTTP Method:

Point a web browser to www.dovado.com and download the upgrade file to your computer. Remember where you store the file. Log in to the configuration pages from your computer as described in section **Configuring the router**. Go to **Upgrade->Upgrade HTTP**. Click on the **Browse** button and select the upgrade file you just downloaded, and then click on **Open**. Click on **Start HTTP Upload** to start the upgrade process.

When the upgrade is done, the router will automatically restart and a login button will appear in the web browser. The router is ready to use once it has been restarted.

FTP Method:

If you have an FTP server you have the choice to upgrade the router via FTP. Once the upgrade file is on the FTP server in the root directory, log in to the configuration pages as described in section **Configuring the router**. Go to **Upgrade->Upgrade FTP**. Then, type in the IP address of the FTP server under FTP Server IP and the filename under Filename, then click on **Start FTP Download** to start the upgrade process. The text "Restarting..." will appear in your web browser when the upgrade has finished.

Note: In order to use the FTP upgrade option, the FTP server which contains the firmware image must be accessible via an anonymous FTP account.

Close the web browser and wait until the router has restarted. The router is now ready to use.

Configurations

This function allows you to create, as well as restore, the working configuration of your DOVADO router. Each backup you save to your computer will contain all the configuration parameters you have entered in your DOVADO router.

Should you have performed a factory reset to clear out all your settings, you can then restore your settings by uploading your saved configuration file via this interface.

To save the current configuration of your DOVADO router to your computer, go to **Upgrade->Configurations**, then simply push the **Download** button. To restore your configuration, click on **Browse** (to locate the file on your computer), and then push **Upload**.

Tip: The configuration file you extract from your DOVADO router can also be used on other DOVADO routers. This can come in handy if performing a mass-deployment of clone configurations. This will save you a lot of time in configuring each such device.

Troubleshooting

Internet

Q1: My router is not connecting to the Internet!

A: Do all of the following:

- First check if the Internet LED on the router is OFF. If so, continue with the following steps. If not, then see the answers to Question 2.
- Please verify that you are able to connect to your mobile operator using the USB modem in your computer!
- Always insert the USB modem into the router before powering it on!
- Log into the router on <http://192.168.0.1/>
- Check that your router has identified the USB modem (Check the **Reported Backhaul Technology** under **Home** upon logging into the router). If not, check if your USB modem is supported:
www.dovado.com/modems
- Check the signal strength in the Modem->Modem Status page.
- Verify that a correct **Access Point Name (APN)** and/or Username and Password has been inserted in the PDP or PPP sections of the **Modem Settings**. Check that the APN information provided by your mobile operator is identical with the APN information used in the router settings.
- If using a PIN code on your SIM card, insert it in **Modem->Modem Settings** page.

**Q2: The Internet LED on the front of the router is lit, yet I can't surf!
How come?**

A: Test to see if you can do the following (in listed order):

1. Ping the internal IP address of the router.

- In Windows, click on **Start** followed by **Run** and type in **cmd**.
- Once the black command prompt is open, type in **ping 192.168.0.1** followed by **Enter** and see if 4 pings are replied positively.
- If positive, then try the next step.
- If negative, please try with another computer if possible. Also check your IP settings and switch to DHCP (dynamic IP) settings on your computer's network interface.

2. Ping an external IP address.

- Try to ping www.yahoo.com and note if 4 pings are replied positively.
- If so, then please check your web browser's settings for any conflicting proxy settings.

Support

Should you require any technical support, please visit www.dovado.com/support

For Frequently Asked Questions (FAQ), please visit www.dovado.com/faq

If you are unable to find what you are looking for, then kindly get in touch with our support via www.dovado.com/contactsupport

Technical specifications

Connectors

- 1 x USB 2.0
- 1 x RJ45 Connector for LAN
- 1 x RJ45 Connector for WAN
- Power supply jack (DC 5V)
- SMA Connector for WLAN antenna

Power supply

- DC 5V, 2.0A AC adapter (100-240V AC, 50/60Hz)

WLAN

- Antenna 2dBi Dipole Detachable Antenna x 1
- Output Power 11n: 14±1dBm, 11g: 14±1dBm, 11b: 17±1dBm
- Complies with 2.4GHz IEEE 802.11g/b/n standards

Routing speed

- Appr. 50 Mbit/s

Power consumption

- 1 W min. load
- 6 W max. load

Dimensions

- 20(H) x 62(W) x 87(D) mm w/o antenna

Guidelines for safe and efficient use

Product care and maintenance

Your router is a highly sophisticated electronic device. To get the most out of your router, be sure to read the following text about product care, safety and efficient use.

Use only the power supply adapter that comes with the unit. Replacement power supply adapters can be obtained from Dovado upon request.

Do not expose the product to liquid or moisture.

Do not expose the product to extreme temperatures, either hot or cold.

Do not expose the product to lit candles, cigarettes, cigars, open flames, etc.

Do not drop, throw, or try to bend the product. Rough treatment may damage the product.

Do not attempt to disassemble your product; the warranty is no longer valid if the warranty seal has been broken. The product does not contain consumer serviceable components. Service should only be performed by Certified Service Centers.

Do not allow children to play with the router as it contains small parts that could be detached and create a choking hazard.

Use only original Dovado components and replacement parts. Failure to do so may result in performance loss, damage to the product, fire, electric shock or injury, and will invalidate the warranty.

Avoid using this equipment during an electrical storm. There may be a remote risk of electric shock from lightning.

Treat the product with care, keep it in a clean and dust free place. Use only a soft, damp cloth to clean the product.

Limited Warranty

Save your original receipt. You will need it for warranty/repair claims. Should your Dovado Product need warranty service, return it to the place of purchase or contact your local Dovado Call-Centre for further information.

Our warranty. Dovado guarantees this Product to be free from defects in material and workmanship at the time of its original purchase by a consumer, and for a subsequent period of one (1) year.

What we will do. If, during the warranty period, this product fails to operate under normal use and service, due to improper materials or workmanship, Dovado subsidiaries, authorized distributors, or Certified Service Centers will, at their decision, either repair or replace the Product in accordance with the terms and conditions stipulated herein.

Conditions

- 1 The warranty is only valid if accompanied by the original receipt, as issued to the original purchaser by the retailer and specifying the date of purchase and product serial number, when the product is submitted for repair or service. Dovado reserves the right to refuse warranty service if this information has been removed or altered subsequent to the original purchase of the Product from the retailer.
- 2 Once Dovado repairs or replaces the product, the repaired or replaced Product shall be covered by warranty for the remaining time of the original warranty period or for ninety (90) days from the date of repair, whichever is longer. Repair or replacement may include the use of functionally equivalent reconditioned units. Replaced faulty parts or components will become the property of Dovado.
- 3 This warranty does not cover any failure of the product due to normal wear and tear or misuse, (including but not limited to use in a manner other than the normal and customary manner, in accordance with Dovado instructions for use and maintenance of the product), accident, modification or adjustment, acts of God, improper ventilation, and damages resulting from contact with liquids.
- 4 This warranty does not cover product failures due to repair installations, modifications, or improper service performed by a non-Dovado Certified Service Centre or opening of the product by non-Dovado certified persons.
- 5 The warranty does not cover product failures caused by the use of non-Dovado original accessories.

- 6** Tampering with any of the seals on this product will void the warranty.
- 7** No other express warranties, whether written or oral, other than this printed limited warranty shall apply. All implied warranties, including, and without limitation, the implied warranties of merchantability or fitness for a particular purpose, are limited to the duration of this limited warranty. Dovado shall under no circumstances be liable for incidental or consequential damages of any nature whatsoever. Such damages include, but are not limited to, lost profits or commercial loss, to the full extent that said damages can be disclaimed by law.

Power Supply. Only connect the AC (Power Supply) to designated power sources such as those marked on the product. When removing the cord from the outlet, do so by holding onto the AC adapter rather than the cord in order to reduce the risk of damage to the electric cord. Make sure the cord is positioned so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress. To reduce risk of electric shock, unplug the unit from any power source before attempting to clean it. The power supply must not be used outdoors or in damp areas.

CE mark for European Harmonized Standards

Česky	Dovado tímto prohlašuje, že tento TINY je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
Dansk	Undertegnede Dovado erklærer herved, at følgende udstyr TINY overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch	Hiermit erklärt Dovado, dass sich das Gerät TINY in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
Eesti	Käesolevaga kinnitab Dovado seadme TINY vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
English	Hereby, Dovado, declares that this TINY is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español	Por medio de la presente Dovado declara que el TINY cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Ελληνική	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Dovado ΔΗΛΩΝΕΙ ΟΤΙ ΤΙΝΥ ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Français	Par la présente Dovado déclare que l'appareil TINY est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Italiano	Con la presente Dovado dichiara che questo TINY è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski	Ar šo Dovado deklarē, ka TINY atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių	Šiuo Dovado deklaruoja, kad šis TINY atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Nederlands	Hierbij verklaart Dovado dat het toestel TINY in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
Malti	Hawnhekk, Dovado, jiddikjara li dan TINY jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn rilevanti li hemm fid-Dirrettiva 1999/5/EC.
Magyar	Alulírott, Dovado nyilatkozom, hogy a TINY megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.

Polski	Niniejszym Dowado oświadcza, że TINY jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português	Dovado declara que este TINY está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Slovensko	Dovado v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky	Dovado týmto vyhlasuje, že TINY spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Suomi	Dovado vakuuttaa täten että TINY tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska	Härmed intygar Dovado att denna TINY står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.
Íslenska	Hér með lýsir Dovado yfir því að TINY er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC.
Norsk	Dovado erklærer herved at utstyret TINY er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

Open source software notice

This product includes certain open source or other software originated from third parties that are subject to the GNU General Public License (GPL), GNU Library/Lesser General Public License (LGPL) and different and/or additional copyright licenses, disclaimers and notices.

You may obtain a complete corresponding machine-readable copy of the source code of such software under the GPL or LGPL at <http://www.dovado.com/> Alternatively; Dovado offers to provide such source code to you on CD-ROM for a charge covering the cost of performing such distribution, such as the cost of media, shipping and handling, upon written request to:

Dovado FZ-LLC
Dubai Internet City
Al-Thuraya Tower 1, office 504
P.O. Box 500422 Dubai,
United Arab Emirates

This offer is valid for a period of three (3) years from the date of the distribution of this product by Dovado.

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The Mobile Choice for your Broadband Internet