



# WRTU54G-TM

Wireless Router with Home Phone Adapter

## Release Notes

Software Version 1.00.25  
(Maintenance Release 9)

June 8, 2010





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## 1. Introduction

The purpose of this document is to discuss new features and enhancements, caveats, fixed issues, and open issues in the firmware Release 1.00.25 of the WRTU54G-TM Wireless Router with Home Phone Adapter product from the Cisco Service Provider Video Technologies Group (SPVTG) Telco Home Networks Business Unit (THNBU).

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### 1.1 Software Versions

Release Date	June 8, 2010
Firmware Version	1.00.25
File Name	WRTU54G-TM_v1.00.25.bin
Diagnostics Firmware Version	1.00.25.diag-01
Diagnostics Firmware File Name	WRTU54G-TM_v1.00.25.diag-01.bin

### 1.2 Version Variations

Firmware v1.00.25 is the production image for normal subscriber usage.

Firmware v1.00.25.diag-01 is the same as v1.00.25 but includes the hidden diagnostics pages and internal logs. ***This version is for T-Mobile internal testing and troubleshooting ONLY.***



## 2. New Features and Enhancements

- NTP optimization. WRTU54G-TM performance where NTP fails or is otherwise unavailable is improved with the following enhancements:
  - Last Good Time stamp – the last good time that the device obtained from the network is now stored in non-volatile memory.
  - The device now implements ISP-friendly NTP UDP port sweeping across NTP servers.
  - The device will always use the FQDN for the NTP server to avoid subnet configurations which would sometimes erroneously route the NTP request to the LAN side.
  - The RMS time stamp reply is also used as a time source.
  - There is a new web GUI entry where the user can change the port sweeping range to avoid hostile ISP blocking.
- Boot-up RMS report. On occasion, the router would not get the blue LED indicating successful registration. When this happened, the RMS boot-up report showed the IMSI number is all zeroes. The boot-up RMS report is now enhanced to add the IMSI number so that in the case where there is no registration report available, the RMS server will already have the unit's IMSI number. (TT#1094038)



### 3. Fixed Issues

- **Issue:** QC #20649
  - **Problem:** RMS report with "&" characters are ignored by the RMS Server.
  - **Resolution:** The RMS schema was updated so that this issue no longer occurs.
  
- **Issue:** QC #20650
  - **Problem:** The router sends location update every 1 hour 7 minutes instead of every hour as expected.
  - **Resolution:** The kernel library was corrected so that location updates are now sent every hour as originally intended.
  
- **Issue:** QC #23243
  - **Problem:** If the NTP port is blocked by the Internet, the router does not use a timestamp on RMS report.
  - **Resolution:** This issue is fixed by using the saved timestamp from the RMS boot-up report whenever the time cannot be obtained from NTP.
  
- **Issue:** QC #23246
  - **Problem:** Call waiting is disabled after sending or receiving a fax call.
  - **Resolution:** Call waiting is now properly re-enabled after sending or receiving a fax.
  
- **Issue:** CSCta88539
  - **Problem:** The WRTU54G-TM cannot get NTP time when the WAN interface uses a static IP address.
  - **Resolution:** This issue is caused by running NTP script prior to DNS. Therefore, the IP address of NTP server cannot be resolved. This issue is resolved by starting DNS before executing the NTP script.
  
- **Issue:** CSCta76429
  - **Problem:** WRTU54G-TM backup/restore does not work.
  - **Resolution:** The configuration file was not being backed up completely. This issue is resolved by getting the complete content from the configuration file and backing it up properly.



- **Issue:** CSCsz15422
  - **Problem:** WRTU54G-TM PortRangeForward page displays invalid format of IP address.
  - **Resolution:** The configuration file was not being backed up completely. This issue is resolved by getting the complete content from the configuration file and backing it up properly.
  
- **Issue:** CSCsz49163
  - **Problem:** WRTU54G-TM PPPoE configuration backup/restore does not work.
  - **Resolution:** The configuration file was not being backed up completely. This issue is resolved by getting the complete content from the configuration file and backing it up properly.
  
- **Issue:** CSCsz27758
  - **Problem:** UPnP on XBOX and PS3 does not work properly.
  - **Resolution:** This issue occurs because the game console fails to make a connection to the live game server. The UPnP library was updated to a new version, and XBOX and PS3 can now connect to the live gaming servers.
  
- **Issue:** CSCtc86408
  - **Problem:** When the WAN connection is configured as a static IP address, DHCP takes too long to assign a LAN IP address if there is no WAN connection.
  - **Resolution:** The LAN-side DHCP server is now enabled immediately, and the router will offer DHCP leases to LAN clients within 10 minutes regardless of whether or not there is a WAN connection.



#### 4. Known Issues

- There are no known issues.



## 5. Previous Releases

### 5.1 Maintenance Release 8 (MR8)

#### 5.1.1 Software Versions

Release Date	July 14, 2009
Firmware Version	1.00.21
File Name	WRTU54G-TM_v1.00.21.bin
Diagnostics Firmware Version	1.00.21.diag-01
Diagnostics Firmware File Name	WRTU54G-TM_v1.00.21.diag-01.bin

#### 5.1.2 Version Variations

Firmware v1.00.21 is the production image for normal subscriber usage.

Firmware v1.00.21.diag-01 is the same as v1.00.21 but includes the hidden diagnostics pages and internal logs. ***This version is for T-Mobile internal testing and troubleshooting ONLY.***

#### 5.1.3 New Features and Enhancements

- No new features

#### 5.1.4 Fixed Issues

- **Issue:** #20781
  - **Problem:** The blue LED fails to illuminate, indicating that the phone port is not properly registered.
  - **Resolution:** This issue was caused by a memory leak. The memory leak has been fixed and this issue no longer occurs.
- **Issue:** #20782
  - **Problem:** MO Calls go to dead air and MT Calls go to voice mail when the dial tone and voice blue LED light are present.
  - **Resolution:** This issue was caused by a memory leak. The memory leak has been fixed and this issue no longer occurs.





### 5.1.5 Known Issues

- **Issue:** CSCta88539
  - **Problem:** Time-of-day will not be acquired via Network Time Protocol (NTP) if the WAN interface of WRTU54G-TM was configured as static IP address.
  - **Impact:** There is no impact to the VoIP service with this issue.

## 5.2 Maintenance Release 7 (MR7)

### 5.2.1 Software Versions

Release Date	June 17, 2009
Firmware Version	1.00.20
File Name	WRTU54G-TM_v1.00.20.bin
Diagnostics Firmware Version	1.00.20.diag-01
Diagnostics Firmware File Name	WRTU54G-TM_v1.00.20.diag-01.bin

### 5.2.2 Version Variations

Firmware v1.00.20 is the production image for normal subscriber usage.

Firmware v1.00.20.diag-01 is the same as v1.00.20 but includes the hidden diagnostics pages and internal logs. ***This version is for T-Mobile internal testing and troubleshooting ONLY.***

### 5.2.3 New Features and Enhancements

- No new features

### 5.2.4 Fixed Issues

- **Issue:**
  - **Problem:** The device cannot register with the T-Mobile network due to a failure to validate the digital certificate at the security gateway.
  - **Resolution:** This issue was caused by a certificate update on the security gateway and an NTP failure. An enhanced NTP client was implemented to prevent the NTP failure. In case of NTP failure, the default system time is changed to 06/01/2009 so that the system can still validate the digital certificate.



- **Issue:** #20533
  - **Problem:** The Router cannot change from Bridge mode to Router mode thru RMS server response.
  - **Resolution:** When NAT is set to ON mode in an RMS report, the router is not able to change from Bridge mode to Router mode. The issue was resolved by setting the correct type in the RMS report.
  
- **Issue:** #20626
  - **Problem:** The element in RMS report is set to wrong type when WAN is set to a static IP address
  - **Resolution:** The element type in RMS report was changed from FIXED to STATIC.
  
- **Issue:** #20649
  - **Problem:** An RMS report containing “&” characters are ignored by the RMS server.
  - **Resolution:** This was resolved by using “&amp” to represent “&” per the XML specification.

#### 5.2.5 Known Issues

- **Issue:**
  - **Problem:** The Power LED continues to flash for 10 minutes after a firmware upgrade or factory default reset.
  - **Resolution:** After a firmware upgrade or factory default reset, the Power LED continues to flash for about 10 minutes during and after the reboot. The root cause is that the IP subnet of DNS server is abnormally set to the same IP subnet of the WRTU54G-TM LAN ports. All DNS queries are hence routed to the LAN IP subnet instead of being routed to the WAN port as would normally be done. To avoid this rare corner case, ensure that the IP subnet of the DNS server is not using the same IP subnet of the LAN ports.



### 5.3 Maintenance Release 6 (MR6)

#### 5.3.1 Software Versions

Release Date	May 26, 2009
Firmware Version	1.00.19
File Name	WRTU54G-TM_v1.00.19.bin
Diagnostics Firmware Version	1.00.19.diag-01
Diagnostics Firmware File Name	WRTU54G-TM_v1.00.19.diag-01.bin

#### 5.3.2 Version Variations

Firmware v1.00.19 is the production image for normal subscriber usage.

Firmware v1.00.19.diag-01 is the same as v1.00.19 but includes the hidden diagnostics pages and internal logs. ***This version is for T-Mobile internal testing and troubleshooting ONLY.***

#### 5.3.3 New Features and Enhancements

- No new features

#### 5.3.4 Fixed Issues

- **Issue:**
  - **Problem:** The device was unable to download firmware thru RMS server response.
  - **Resolution:** The RMS server was set to use the new element keyword based on the v2.5 schema to notify a firmware pointer.
- **Issue:**
  - **Problem:** The new v2.5 schema settings for PPTP and L2TP cause an invalid RMS report.
  - **Resolution:** The firmware did not handle these two element keyword settings correctly. If the RMS server changed these settings, other settings in the same VPN security group might have been lost. This issue was resolved by correctly maintaining the VPN security settings.



- **Issue:**
  - **Problem:** An IMSI ERROR causes invalid RMS report.
  - **Resolution:** The RMS server did not handle the IMSI ERROR string as generated by the WRTU54G-TM. This was fixed by using the correct format to generate the RMS report.

## 5.4 Maintenance Release 5 (MR5)

### 5.4.1 Software Versions

Release Date	May 11, 2009
Firmware Version	1.00.17
File Name	WRTU54G-TM_v1.00.17.bin
Diagnostics Firmware Version	1.00.17.diag-01
Diagnostics Firmware File Name	WRTU54G-TM_v1.00.17.diag-01.bin

### 5.4.2 Version Variations

Firmware v1.00.17 is the production image for normal subscriber usage.

Firmware v1.00.17.diag-01 is the same as v1.00.17 but includes the hidden diagnostics pages and internal logs. ***This version is for T-Mobile internal testing and troubleshooting ONLY.***

### 5.4.3 New Features and Enhancements

- RMS schema v2.5 is supported in this release
- **Issue:** #18049
  - **Feature:** Router sensitivity to PPPoE heartbeat.
  - **Enhancement:** The PPPoE LCP configuration for the echo request parameters are now set as follows
    - ◆ Maximum retry: 5 times
    - ◆ Retry timeout: 20 seconds
    - ◆ Echo request interval: 20 seconds.
- **Issue:** #18058
  - **Feature:** TCP retry algorithm.
  - **Enhancement:** The TCP retry algorithm was improved by changing the unacknowledged time sensitivity to 300 seconds and the retransmission limit to 7 times.



- **Issue:** #18064
  - **Feature:** Combine multiple internal log files into one log file.
  - **Enhancement:** Add a new button on GUI to retrieve all log files in the diagnostic firmware.
- **Issue:** #18830
  - **Feature:** MWI (Voicemail Indicator) notification.
  - **Enhancement:** When the SIM card SMS capacity is exceeded, the network is either sending voice mail indications very late or not at all. To avoid the SMS capacity full condition, the SMS notifications are periodically deleted. This solution is provided to work around an issue which is mainly caused by the network. It is recommended to have the network equipment vendor resolve this issue on their equipment.

#### 5.4.4 Fixed Issues

- **Issue:** #18082
  - **Problem:** Incorrect format for Access Control on the RMS.
  - **Resolution:** The value of Access Control setting in RMS report is not correct. The Access Control time “minute” field does not match the value displayed on the GUI. It is fixed by correcting the display format issue in RMS report.
- **Issue:** #18200
  - **Problem:** When the blue LED is no longer illuminated the GUI becomes inaccessible.
  - **Resolution:** This issue occurs in the diagnostic firmware only. It is caused by an overly large log size. This is resolved by limiting the maximum log size to 8 MB.
- **Issue:** #18219
  - **Problem:** MO Calls get a busy tone and MT Calls go to voice mail even when dial tone and blue voice LED are present.
  - **Resolution:** A potential SIM card access contention occurs during system boot up causing a CREG=5 “ROAMING” error later. This is resolved by adding SIM card status verification to avoid the contention.