

TAINY EMOD-L1-IO / EMOD-V2-IO TAINY HMOD-L1-IO / HMOD-V2-IO

Software Release Note



Dr. Neuhaus

Copyright Statement

The information released in this publication is under copyright. Translations, reprints, duplication and/or storage in data-processing systems require the express prior consent of Dr. Neuhaus Telekommunikation GmbH.

© 2013 Dr. Neuhaus Telekommunikation GmbH

All rights reserved.

Dr. Neuhaus Telekommunikation GmbH

Papenreye 65

22453 Hamburg

Germany

Internet: <http://www.neuhaus.de>

Subject to technical modification.

TAINY® is a trademark of Dr. Neuhaus Telekommunikation GmbH. All other trademarks and product names are trademarks, registered trademarks or product names of the respective owners.

Dr. Neuhaus Telekommunikation GmbH renders all deliveries and services on the basis of the currently valid version of the company's General Conditions of Contract at the time. All information is provided on the basis of the manufacturers' information. No warranty or liability will be assumed for any incorrect information and/or omissions. The description of the specifications in this manual does not constitute a contract.

Product No.: 3173, 3183 and 3192

Doc. No.: 3192PB006 Version 1.320_1

Contents

1	INTRODUCTION	6
2	VERSION 1.320	7
2.1	Compatibility	7
2.2	New Functions	7
2.2.1	Automatic termination of the installation mode	7
2.3	Improved Functions	7
2.3.1	Checking the connection	7
2.3.2	VPN	7
2.3.3	Roaming	7
2.3.4	Logging	7
2.3.5	SIM Card	7
2.3.6	Profile handling	8
2.3.7	Reset button	8
2.3.8	NTP server	8
2.3.9	Web server	8
2.3.10	System Resources	8
2.4	Known Bugs	8
2.4.1	SMS	8
3	VERSION 1.309	9
3.1	Compatibility	9
3.2	New Functions	9
3.2.1	Method of Provider Authentication	9
3.2.2	Network Selection mode „UMTS only“	9
3.2.3	Error handling concerning the entry of connection data	9
3.3	Improved Functions	10
3.3.1	VPN	10
3.3.2	SNMP	10
3.3.3	DynDNS	10
3.3.4	GSM-Layer	10
3.3.5	Firmware-Update	10
3.3.6	Roaming	10
3.3.7	NTP	10
4	VERSION 1.214	11
4.1	Compatibility	11
4.2	New Functions	11
4.2.1	System status overview	11
4.2.2	SNMP- (Simple Network Management Protocol) and SNMP trap support	11
4.2.3	Installation mode	11
4.2.4	Device identification fields	11
4.2.5	Activation of a profile using secure download via SSH	11
4.2.6	ItoI NAT	11
4.2.7	Connection statistics for VPN tunnel setup	11
4.2.8	Connection statistics for GPRS and IP use	12
4.2.9	Network selection - Roaming	12
4.2.10	Data/volume meter	12
4.2.11	PIN change	12
4.3	Improved Functions	12
4.3.1	VPN	12
4.3.2	SMS over IP	12
4.3.3	GSM layer	12
5	VERSION 1.107	13
5.1	Compatibility	13
5.2	New Functions	13

5.2.1	<i>Automatic provider selection</i>	13
5.2.2	<i>Secure DynDNS</i>	13
5.2.3	<i>SMS over IP</i>	13
5.3	Improved Functions	13
5.3.1	<i>Web interface</i>	13
5.3.2	<i>VPN</i>	14
5.3.3	<i>General</i>	14
6	VERSION 1.038	15
6.1	Compatibility	15
6.2	New Functions	15
6.2.1	<i>VPN monitoring</i>	15
6.2.2	<i>VPN - Extended</i>	15
6.3	Improved Functions	15
6.3.1	<i>Logbook</i>	15
6.3.2	<i>NTP</i>	15
6.3.3	<i>Troubleshooting</i>	15
7	VERSION 1.036	16
7.1	Compatibility	16
7.2	New Functions	16
7.2.1	<i>Remote logging</i>	16
7.2.2	<i>Firewall logbook</i>	16
7.2.3	<i>Operating logbook</i>	16
7.3	Improved Functions	16
7.3.1	<i>Security – Packet filters / port forwarding</i>	16
7.3.2	<i>Default setting</i>	16
7.3.3	<i>Troubleshooting</i>	16
7.3.4	<i>GSM mode</i>	16
7.3.5	<i>Transmission speed</i>	17
7.3.6	<i>Operating logbook</i>	17
8	VERSION 1.035	18
8.1	Compatibility	18
8.2	New Functions	18
8.2.1	<i>Web interface</i>	18
8.2.2	<i>External network</i>	18
8.3	Improved Functions	18
8.3.1	<i>SIM-card compatibility</i>	18
8.3.2	<i>Operating logbook</i>	18
8.3.3	<i>Security – Packet filters</i>	18
9	VERSION 1.031	19
9.1	Compatibility	19
9.2	Improved Functions	19
9.2.1	<i>Web interface</i>	19
9.2.2	<i>Support Snapshot</i>	19
9.2.3	<i>NTP</i>	19
9.2.4	<i>VPN – Dead Peer Detection (DPD)</i>	19
9.2.5	<i>VPN - Import of machine certificates</i>	19
10	VERSION 1.025	20
10.1	Compatibility	20
10.2	New Functions	20
10.2.1	<i>Automatic recognition of the language preferred in the browser</i>	20
10.2.2	<i>Support for receiver certificates in the .cer and .pem formats</i>	20
10.2.3	<i>DynDNS tracking (VPN)</i>	20
10.3	Improved Functions	20
10.3.1	<i>Reset to the default functions using the hardware button</i>	20
10.3.2	<i>Display of the data volume transmitted</i>	20
10.3.3	<i>Additional internal routes</i>	20

10.3.4 *Activation of configuration profiles* 21
10.3.5 *Web interface* 21
10.3.6 *IPSec* 21

1 Introduction

This release note describes the major differences in the Version 1.320 software of the TAINY EMOD-L1-IO / EMOD-V2-IO and the TAINY HMOD-L1-IO / HMOD-V2-IO compared to Version 1.309 right back to the earliest Version 1.025. It provides information on new and improved functions.

If not otherwise indicated, the descriptions apply to all the devices.

TAINY EMOD-L1-IO / EMOD-V2-IO **Version 1.025** first official release note.

TAINY HMOD-L1-IO / HMOD-V2-IO **Version 1.036** first official release note.

Configuration profiles that were generated with a later version cannot be uploaded into devices running on earlier versions.

The software update must be made incrementally. This means that it is necessary to use a special update file for each version upgrade. Under certain conditions, it will be necessary to perform the update on the current version in two or more steps.

2 Version 1.320

This release note describes the major differences of the Version 1.320 software compared to Version 1.309. It provides information on new and improved functions as well as known bugs.

2.1 Compatibility

The previously made settings remain valid after a software update.

2.2 New Functions

2.2.1 Automatic termination of the installation mode

- From firmware version 1.320 on the TAINY quits the installation mode after a predefined period of time automatically and resumes with normal operation mode. A permanent use of the installation mode is not supported any more.
- The time-out for the automatic return from installation mode to normal operation mode can be set to 15, 30, 60, or 120 min.
- A reboot of the TAINY terminates the installation mode. After a restart the device always uses the normal operation mode.

2.3 Improved Functions

2.3.1 Checking the connection

- Problems concerning the reconnection to the WAN after an ICMP connection check failed (Activity: *Renew Connection*) fixed.

2.3.2 VPN

Only TAINY EMOD-V2-IO and
TAINY HMOD-V2-IO

- Enhanced internal administration of the parameters *ID of the partner* and *Local ID*, in order to provide a stable operation of Pre shared key connections.

2.3.3 Roaming

- Roaming behaviour of the TAINY improved and stabilized.

2.3.4 Logging

- The TAINY's product name is added to each log entry.

2.3.5 SIM Card

- Enhanced SIM card functions:
 - The waiting interval between the transmission of the PIN and the reaction of the device (*SIM PIN ready*) has been increased to 3 min, in order to allow the TAINY to connect to the WAN even with new SIM cards in slow provider networks.
 - 5 min after a SIM error has been detected, the device reboots automatically.

2.3.6 Profile handling

- Character set for profile names defined:
() . - 0 1 2 3 4 5 6 7 8 9 A B C D E F G H I J K L M
N O P Q R S T U V W X Y Z [] _ a b c d e f g h i j k
l m n o p q r s t u v w x y z
- You cannot use profile names with other characters to store new profiles in the TAINY.
- Profiles with a file name containing any other than the characters above cannot be loaded to the device.
- Profiles with a profile name containing any other than the characters above cannot be activated.
- Invalid characters or entries are detected and notified by the web server.

2.3.7 Reset button

- Improved timing of the reset button on the TAINY's front.

2.3.8 NTP server

- Problems with the deactivation of the NTP server function fixed

2.3.9 Web server

- Revision of all web pages
- *Maintenance* -> *Hardware information* fixed.
- Functionality of the *Reset* button on the web site *Maintenance* -> *Update* fixed. The *Reset* button sets web site and all of its parameters back to default.
- With this version the TAINY's system time is used as the preset for scheduled firmware updates. In previous firmware versions the system time of the connected PC was used.
- Optimized time stamp for scheduled firmware updates (web site *Maintenance* -> *Firmware info*)

2.3.10 System Resources

- Optimized handling of system resources for enhanced stability of the operation of the TAINY.

2.4 Known Bugs

2.4.1 SMS

- Contrary to the information on the respective web sites and in the user manual, the characters '_', '[' and ']' will not be transmitted correctly via SMS and therefore should not be used in the message text. This refers to *SMS over IP* as well as to any notification SMS (e.g. *Alarm SMS*).
- The default message texts of the SMSes for volume monitoring contain the '_' character and should be altered if volume monitoring is used.

3 Version 1.309

This release note describes the major differences of the Version 1.309 software compared to Version 1.214. It provides information on new and improved functions.

3.1 Compatibility

The previously made settings remain valid after a software update.

3.2 New Functions

3.2.1 Method of Provider Authentication

- It is possible to select the method of provider authentication manually now. There are three different modes:
 - Auto - The device selects the authentication method automatically
 - CHAP - The device uses CHAP (Challenge Handshake Authentication Protocol) exclusively to log on to the provider
 - PAP - The device uses exclusively PAP (Password Authentication Protocol) exclusively to log on to the provider
- This function enables the user to set the register protocol required by the provider manually, which may speed up the log-on procedure and make it more reliable.

3.2.2 Network Selection mode „UMTS only“

ONLY TAINY EMOD-V2-IO and
TAINY HMOD-V2-IO

- In addition to those “Network selection” modes already available, the mode “UMTS only” has been introduced. In this mode, a fallback to the GPRS network in case of an unavailable UMTS network is disabled by the device.

3.2.3 Error handling concerning the entry of connection data

- Entries to the parameters “APN”, “User name” and “Password” will be parsed according to the respective product type and the selected method of provider authentication (PAP/CHAP). Misentries (e.g. invalid characters, input string too long, ...) will be rejected. Thus such misentries or other unsupported connection data will be identified directly whilst being entered.
- Detected misentries will be displayed in the dialogue “System - Status” (see “Connection”) and written to the logbook.
- In this case the device remains in the state ‘CSD idle’.

3.3 Improved Functions

3.3.1 VPN

- ONLY TAINY EMOD-V2-IO and
TAINY HMOD-V2-IO
- Enhanced monitoring and indication of the VPN-ISAMMP-SA and IPsec-SA status.

3.3.2 SNMP

- Enhanced handling and stability of SNMP transmission

3.3.3 DynDNS

- Enhanced start-up behaviour of the DynDNS service

3.3.4 GSM-Layer

- General adaptations

3.3.5 Firmware-Update

- Enhanced stability of the update function in case of an error.

3.3.6 Roaming

- Enhanced stability of the roaming function.

3.3.7 NTP

- Enhanced handling in case of a breakdown of the connection to NTP servers.
- Further logbook entries concerning the NTP functionality added.

4 Version 1.214

This release note describes the major differences of the Version 1.214 software compared to Version 1.107. It provides information on new and improved functions.

4.1 Compatibility

The previously made settings remain valid after a software update.

4.2 New Functions

4.2.1 System status overview

- The contents of the "Overview" website will be combined with the "System->Status" website to bundle all the system-relevant information on one website.

4.2.2 SNMP- (Simple Network Management Protocol) and SNMP trap support

- A number of configuration parameters and status parameters are available to management in SNMP V2. The following are supported:
 - SNMP network management write
 - SNMP network monitoring read
 - SNMP trap

4.2.3 Installation mode

- The "installation" mode provides GSM/UMTS network information quickly to enable the proper positioning of the GSM/UMTS antenna.

4.2.4 Device identification fields

- The "Memo" website includes 4 device identification fields, into which any given characters can be entered, e.g. to identify the device, the location, etc.

4.2.5 Activation of a profile using secure download via SSH

- Stored configuration profiles can be transferred to a router via an SSH/SCP remote connection and activated automatically.

4.2.6 1to1 NAT

ONLY TAINY EMOD-V2-IO
and TAINY HMOD-V2-IO

- The router supports 1to NAT connections via IPSec VPN tunnel connections. The source and destination IP address of the IP packets (SNAT/DNAT) are assigned.

4.2.7 Connection statistics for VPN tunnel setup

ONLY TAINY EMOD-V2-IO
and TAINY HMOD-V2-IO

- Connection statistics on the frequency with which VPN tunnel connections are set up are collected.

4.2.8 Connection statistics for GPRS and IP use

- Connection statistics on the frequency with which GSM tunnel connections are set up are collected.

4.2.9 Network selection - Roaming

- Once the simple-roaming function was activated, the EMOD will only log into the network provider indicated.

4.2.10 Data/volume meter

- The EMOD counts all the data (bytes) that is transmitted over the external network (GPRS/EGPRS/UMTS). The data refer to a fixed interval of one month. If the volume is exceeded, a warn-and-alarm text message can be sent.

4.2.11 PIN change

- The PIN can be set and changed on the website or via SNMP.

4.3 Improved Functions

4.3.1 VPN

ONLY TAINY EMOD-V2-IO
and TAINY HMOD-V2-IO

- The setup of the VPN-client connection was improved.

4.3.2 SMS over IP

- SMS over IP will only be sent if an IP address was assigned.

4.3.3 GSM layer

- General connection improvements and adjustments

5 Version 1.107

This release note describes the major differences of the Version 1.107 software compared to Version 1.038. It provides information on new and improved functions.

5.1 Compatibility

The previously made settings remain valid after a software update.

5.2 New Functions

5.2.1 Automatic provider selection

- The provider configuration used can now be selected automatically on the basis of a previously defined parameter list while the connection is being set up.

5.2.2 Secure DynDNS

- Similar to DynDNS, Secure DynDNS can now be used to transmit the device's own IP to a server via an HTTPS connection.

5.2.3 SMS over IP

- A command can now be sent to the TAINY via a socket connection to send a text message.

5.3 Improved Functions

5.3.1 Web interface

- The # character can now be used in passwords.
- The input check was improved.
- The port parameter area check was corrected in the port forwarding settings.
- Input of the pre-shared key parameter is protected by asterisks (*).
- It is now possible to use longer pre-shared keys for roadwarrior connections.

ONLY TAINY EMOD-V2-IO
and TAINY HMOD-V2-IO

5.3.2 VPN

- ONLY TAINY EMOD-V2-IO
and TAINY HMOD-V2-IO
- VPN connections with an invalid receiver (NONE) no longer lead to a reboot because of the failure to make a connection.

5.3.3 General

- Changes in the time zone settings are now accepted more reliably.
- In the event that the ICMP connection test fails, a logbook entry is produced.
- NTP synchronization starts now when the GPRS connection was made.

6 Version 1.038

This release note describes the major differences of the Version 1.038 software compared to Version 1.036. It provides information on new and improved functions.

6.1 Compatibility

The previously made settings remain valid after a software update.

6.2 New Functions

6.2.1 VPN monitoring

- ONLY** TAINY EMOD-V2-IO
and TAINY HMOD-V2-IO
- It is now possible to define a list of IP addresses on the side of the VPN receiver to perform a check of the ICMP connection for the VPN tunnel. If the check fails, the VPN client will be rebooted.

6.2.2 VPN - Extended

- ONLY** TAINY EMOD-V2-IO
and TAINY HMOD-V2-IO
- It is now possible to enter parameters for the number of connection attempts until the VPN client is rebooted and the number of attempts until the device is rebooted following the unsuccessful reboot of the VPN client.

6.3 Improved Functions

6.3.1 Logbook

- A error with respect to the rotating logbook archive was corrected.

6.3.2 NTP

- The system time accuracy when using NTP synchronization was improved.

6.3.3 Troubleshooting

- In the event of GPRS connection problems, the GSM module will now be rebooted once before a new attempt is made. This makes it possible to eliminate a number of errors more quickly.
- A problem, whereby there was no reboot following a fatal error, was corrected.

7 Version 1.036

This release note describes the major differences of the Version 1.036 software compared to Version 1.035. It provides information on new and improved functions.

7.1 Compatibility

The previously made settings remain valid after a software update.

7.2 New Functions

7.2.1 Remote logging

- The logbook files in the upload are now displayed on the "Remote Logging" page in the web interface. This makes it possible to still access these log files in the event of an error.

7.2.2 Firewall logbook

- The action being performed is now also recorded in the firewall logbook.

7.2.3 Operating logbook

- The type of connection is now also recorded in the regular entries in the operating logbook.

7.3 Improved Functions

7.3.1 Security – Packet filters / port forwarding

- An error with respect to the rotating logbook was corrected.

7.3.2 Default setting

- The device can now also be reset to the default settings when an error has occurred.

7.3.3 Troubleshooting

- The device is now rebooted more quickly when an internal module error occurs.

7.3.4 GSM mode

- A problem was eliminated that led to an error when a voice or fax call was received in pure GSM mode.
- It is now also possible to send a text message by triggering the gate input in pure GSM mode and during a CSD connection.

7.3.5 Transmission speed

ONLY TAINY HMOD-L1-IO - Transmission speed was improved in UMTS mode.
and TAINY HMOD-V2-IO

7.3.6 Operating logbook

ONLY TAINY HMOD-L1-IO - The cell-ID value is now displayed correctly in the regular log entries.
and TAINY HMOD-V2-IO

8 Version 1.035

This release note describes the major differences of the Version 1.035 of the **TAINY EMOD L1-IO / EMOD V2-IO** software compared to Version 1.031. It provides information on new and improved functions.

8.1 Compatibility

The previously made settings remain valid after a software update.

8.2 New Functions

8.2.1 Web interface

- The new Dr. Neuhaus logo was added.

8.2.2 External network

- It is now possible to switch off the NAT function for the external network or to define for which internal networks the NAT function is to be used.

8.3 Improved Functions

8.3.1 SIM-card compatibility

- The compatibility for SIM cards with large internal memories was improved.
- General improvements in the interaction with different SIM cards.
- An error in the acceptance of long PIN entries was corrected.

8.3.2 Operating logbook

- A possible error in archiving older operating logbooks was eliminated.

8.3.3 Security – Packet filters

- An error in the acceptance of too long values for IP addresses was corrected.

9 Version 1.031

This release note describes the major differences of the Version 1.031 of the **TAINY EMOD L1-IO / EMOD V2-IO** software compared to Version 1.025. It provides information on new and improved functions.

9.1 Compatibility

The previously made settings remain valid after a software update.

9.2 Improved Functions

9.2.1 Web interface

- An incorrect label on a button on the English website was corrected.

9.2.2 Support Snapshot

- The data contained in the Support Snapshot was expanded.

9.2.3 NTP

- The internal firewall rules were extended to enable access to NTP servers in the local network.

9.2.4 VPN – Dead Peer Detection (DPD)

- ONLY TAINY EMOD-V2-IO
- Compatibility with the negotiation of Cisco VPN gateway dead peer detection was improved.

9.2.5 VPN - Import of machine certificates

- ONLY TAINY EMOD-V2-IO
- It is now also possible to import machine certificates that use space characters in the file name.
 - It is now also possible to use special characters in the machine certificate passwords.

10 Version 1.025

This release note describes the major differences of the Version 1.025 of the **TAINY EMOD L1-IO / EMOD V2-IO** software compared to Version 1.021. It provides information on new and improved functions.

Please perform a compatibility test with your application before you use the Version 1.025 firmware in live operation.

10.1 Compatibility

The previously made settings remain valid after a software update. Configuration profiles generated with Version 1.025 cannot be uploaded to devices that run on older versions.

10.2 New Functions

10.2.1 Automatic recognition of the language preferred in the browser

- In addition to “German” and “English”, the language selection in the title bar of the web interface also includes the option of “Automatic”. This means that the preferred language set in the browser will be used automatically for displaying the pages.

10.2.2 Support for receiver certificates in the .cer and .pem formats

- ONLY TAINY EMOD-V2-IO
- In addition to the .crt format, the import of receiver certificates with the “.cer” and “.pem” file extensions is also supported.

10.2.3 DynDNS tracking (VPN)

- ONLY TAINY EMOD-V2-IO
- The “DynDNS Tracking” function was added to the expanded IPsec settings. This makes it possible to monitor receivers with DynDNS host names at configurable intervals for a change in the IP address.

10.3 Improved Functions

10.3.1 Reset to the default functions using the hardware button

- Errors were eliminated that led to not deleting all the information when the hardware reset button was pressed.

10.3.2 Display of the data volume transmitted

- Errors that led to an incorrect calculation of the total data volume were eliminated.

10.3.3 Additional internal routes

- Problems were eliminated with the firewall rules that led to blocking the data traffic to be routed on the internal interface.

10.3.4 Activation of configuration profiles

- Errors were eliminated that could lead to not activating a profile, but rather using the default settings.
- Downloaded profiles can now also be imported again when they were renamed in the meantime.

10.3.5 Web interface

- The general screen refresh speed was improved.
- Error messages and information are now displayed in the language selected.

10.3.6 IPSec

ONLY TAINY EMOD-V2-IO

- The "Remote ID" and "Local ID" parameters now also support "email" or "hostname" IDs when working with X.509 certificates.
- Tunnel monitoring and the treatment of problems in tunnel setup were improved.
- The tunnel status displayed on the website now works with greater reliability.
- The designation "3des-192" was changed to "3des-168".