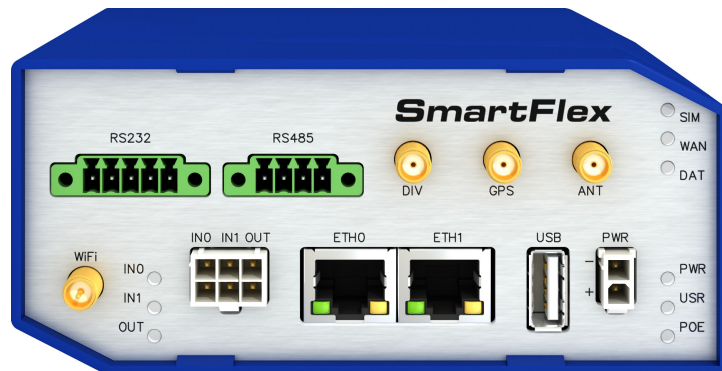


Firmware 6.1.9

RELEASE NOTES



ADVANTECH

Abstract

This document describes:

- Firmware upgrade instructions.
- Description of all new features, fixes and other changes implemented in firmware 6.1.9.
- Known issues.

For detailed information about firmware 6.1.9, see the Configuration Manual for your router.

Firmware Details

- **Version:** 6.1.9
- **Release date:** April 23, 2019
- **Hardware compatibility:** This firmware is applicable to any router made by Advantech B+B SmartWorx s.r.o.



Please note that not all new Advantech routers are produced and shipped with the latest release of the firmware. The reason usually is an existing certification made for a specific carrier or a region. For more information see document **Firmware Distribution Overview**.

Part I

Firmware Upgrade Instructions

General Upgrade Instructions and Notices

HTTPS certificates: The HTTPS certificate creation in the router was updated in FW 5.3.5 in order to improve security. Existing HTTPS certificates on previously manufactured routers will not automatically be upgraded with the firmware upgrade! It is possible to upgrade HTTPS certificates by deleting the files within /etc/certs/https* in the router (e.g. via SSH). The certificates will be re-created automatically during the router's next start.



Python user module is not uploaded by default to the produced routers with firmware of version 6.0.2 and later. Python user module can be downloaded from [Engineering Portal](#) on [this](#) link.



The **SPECTRE v3 LTE** and **SPECTRE v3 ERT** routers were renamed to **SmartFlex**. You will find them under this name in the Changelog below.

Specific Upgrade Instructions – new filename

If the filename of a firmware for your router was changed recently, then you can have an issue during manual firmware updating or with automatic firmware update feature. Following warning message will appear during the firmware updating process: *"You are trying to upload file "xx.bin" but "yy.bin" is expected. Are you sure to continue?"*

To proceed with the firmware updating please follow these steps: Check the table below with details of recent firmware filename changes for routers and make sure you have the correct firmware file for your router. Go ahead with manual firmware updating and confirm displayed warning message.

To proceed with automatic firmware updating, rename new firmware files (*.bin and *.ver) to filenames valid before the filename change. This should allow the router to pass through the process of automatic firmware updating. Next time, the automatic firmware update feature will work as expected and no other file renaming will be required.

Router model	FW ver.	New filename	Original filename
SmartMotion ST352 SmartMotion ST355	6.0.2	SPECTRE-v3T-LTE.bin	BIVIAS-v3LL.bin
SmartStart SL302	6.0.3	SPECTRE-v3L-LTE-US.bin	SPECTRE-v3L-LTE-AT.bin

Table 1: Recent firmware filename changes

Specific Instructions for Upgrading from Firmware Older than 5.3.0



It is necessary to follow specific upgrade instructions below only if you are upgrading from firmware older than 5.3.0.

Due to a (now fixed) bug in the firewall when a WAN device is part of a bridged interface, caution should be taken when upgrading in following case:

- Condition:** When a WAN device is part of a bridged interface, access to that WAN device (HTTPS, SSH) is always granted regardless of configuration.
- Problem:** If this is your configuration, it is highly likely that you are not aware of this, so the undesired effect of the bridge firewall fix may render the router inaccessible.
- Recommended Action:** Enable access to both the web and ssh services before upgrading if you want to retain the current behavior (access to the WAN interface). This can be done on the *NAT* page in the *Configuration* section of the router's Web interface.

Changing the password

It is necessary to change the password for user "root" (or enter it again) when upgrading to firmware version 5.3.0. or newer. The reason for this is an upgrade of the authentication system (encryption algorithm *crypt* was changed to *MD5*; passwords are now stored in the */etc/shadow* file instead of */etc/passwd*). Changing of the password is required before it is possible to set up remote access on the *NAT Configuration* page.

Please note that when downgrade from 5.3.0+ to previous firmware versions, the password for user *root* is reset to default ("root").

Part II
Changelog



Legend: Affected products are marked as shown below for every changelog item:

Affected product Not affected product

Added *nohup* Command

ER75i SPECTRE 3G SPECTRE RT SPECTRE LTE-AT SPECTRE LTE-VZ
 ER75i v2 UR5i v2 XR5i v2 LR77 v2 CR10 v2 UR5i v2L RR75i v2 LR77 v2L XR5i v2E
 Bivias v2HC Bivias v2LC Bivias v2LL Bivias v2LH Bivias v2HH
 SmartFlex SR300 SmartFlex SR303 SmartFlex SR304 SmartFlex SR305 SmartFlex SR306 SmartFlex SR307
 SmartFlex SR308 SmartFlex SR309 SmartStart SL302 SmartStart SL304 SmartStart SL306
 SmartMotion ST352 SmartMotion ST355 ICR-321x ICR-323x

The *nohup* command is supported by the firmware from now. *Nohup* is short for “No Hang-up”. *Nohup* is a supplemental command that tells the system not to stop another command once it has started. That means it will keep running until it is done, even if the user, that started it, logs out.

Synopsis:

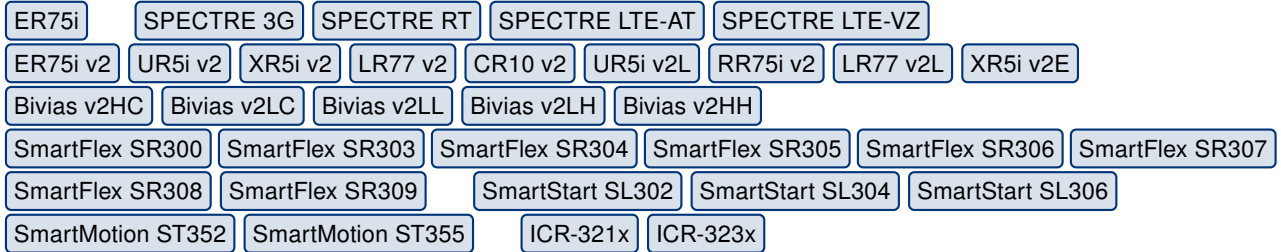
`nohup <program> [<arguments>]`

Options:

Option	Description
program	Program to be run immune to hang-ups with output to a non-tty.
arguments	Arguments for the program.

Table 2: *nohup* options

Added *report* Command



The *report* command is supported by the firmware from now. This command can be used for creating of a report from the command line.

Synopsis:

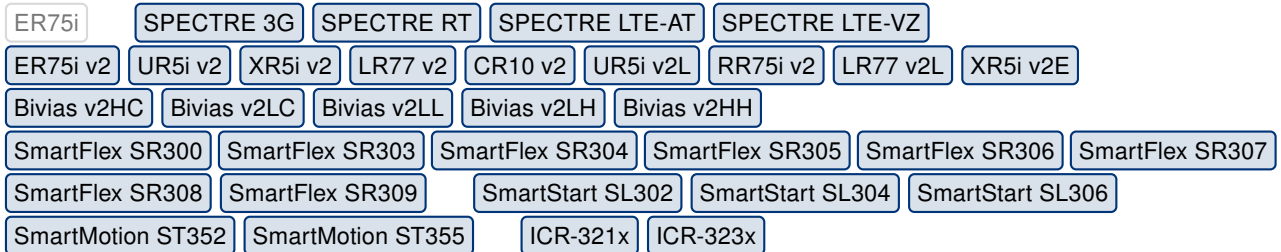
`report [<options>]`

Options:

Option	Description
<i>no option</i>	Report all sections except the configuration one.
-a	Report all sections.
-s	Report status section.
-m	Report user modules section.
-l	Report log section.
-c	Report configuration section.

Table 3: *report* options

Added *umupdate* Command



The *umupdate* command was developed and is supported by the firmware. This command can be used for adding or deleting of a user module from the command line.

Synopsis:

```
umupdate [-a <filename>] [-d <name>]
```

Options:

Option	Description
-a	Add a new or update an installed user module. Enter path to the installation file.
-d	Delete an installed user module with the specified module name. List of installed user modules can be obtained by <code>service module list</code> command.

Table 4: *umupdate* options

ping Program Enhancement



ping program was enhanced with the *-I* (capital i) option which can be used for specification of a specific source interface or a source IP address.

Added Support for eMMC 5.1 Specification

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

Support for eMMC 5.1 flash memory was added to the firmware. This kind of flash memory will be assembled into the affected products in the future. Minimal version of firmware required for such products will be 6.1.9.

Added Configurable Timeout for Connection Checking

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

Added configurable timeout for checking of connection on MWAN interface. It can be configured by *Ping Timeout* item on *Mobile WAN Configuration* page.

Added Configurable Port Ranges

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

Port ranges can now be set in *Firewall* and *NAT* configuration pages instead of one static port. To enter a port interval, enter into the *Port(s)* field the initial and final port numbers separated by the hyphen mark. One static port is still allowed to be entered into this configuration field.

Support for New SNMP OIDs

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	GR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

SNMP information related to the 1st and the 2nd cellular module is now separated into two independent sections. Support for the 2nd and the 3rd Ethernet interface was added as well. See the tables below for more information.

Modified information for active cellular module (now only the 1st cellular module)

OIDs	Description
.1.3.6.1.2.1.2.2.1.x.2	Contains information related to the 1 st cellular module.
.1.3.6.1.4.1.30140.4.1 to 27	Cellular information related to the 1 st cellular module.
.1.3.6.1.4.1.30140.5.x.1 to 15	Statistical data of the 1 st cellular module.
.1.3.6.1.4.1.30140.6.4 to 7	IMEI, ESN, MEID and ICCID numbers of the 1 st cellular module.

Added information for the 1st cellular module

OIDs	Description
.1.3.6.1.4.1.30140.6.8	IMSI number of the SIM card on the 1 st cellular module.

Added information for the 2nd cellular module¹

OIDs	Description
.1.3.6.1.2.1.2.2.1.x.3	Information related to the 2 nd cellular module.
.1.3.6.1.4.1.30140.4.101 to 127	Cellular information related to the 2 nd cellular module.
.1.3.6.1.4.1.30140.5.x.101 to 115	Statistical data of the 2 nd cellular module.
.1.3.6.1.4.1.30140.6.104 to 108	IMEI, ESN, MEID, ICCID and IMSI numbers of the 2 nd cellular module.

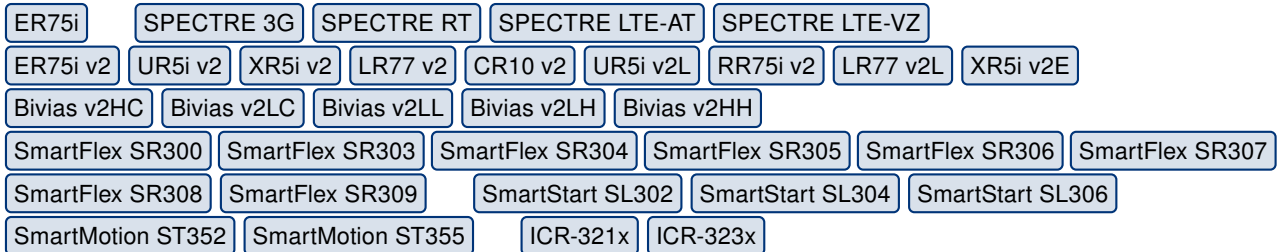
Added information for the 2nd and the 3rd Ethernet interfaces²

OIDs	Description
.1.3.6.1.2.1.2.2.1.x.4	Information related to the 2 nd Ethernet interface.
.1.3.6.1.2.1.2.2.1.x.5	Information related to the 3 rd Ethernet interface.

¹ Available only if the 2nd cellular module is installed.

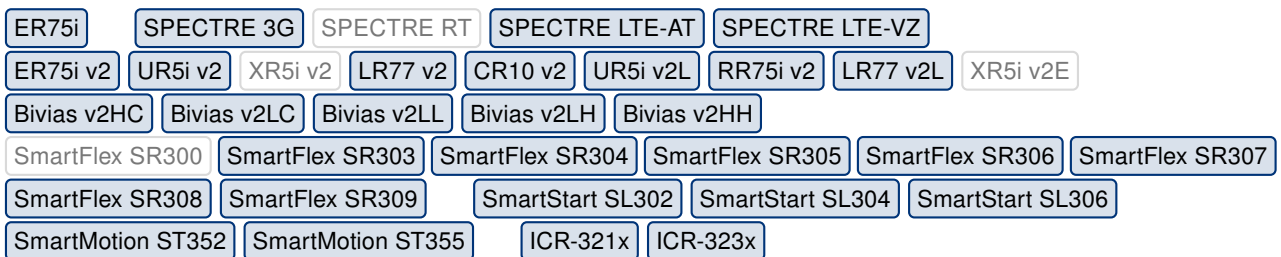
² Available only if the 2nd eventually the 3rd Ethernet interface is installed.

Modified Comparison of Firmware Versions



Modified method of firmware versions comparison to compare all parts of the firmware number as separate numbers instead of strings. Current solution did not allow to increase a part of firmware number to number higher then 9, because higher number would not be recognized by automatic update as a newer firmware version. Only function of automatic firmware update was affected by this issue.

Modified SIM Card Switching Mechanism



Some mobile operators may remotely terminate the data connection after a few hours even if there is some data traffic. A "modem hang-up" state is detected on the cellular module in this case. For this reason, the following modification was made: The router will not switch to another SIM card in case the mobile connection was up for at least one hour. This is true only in case the switching is enabled (see *Switch to other SIM card when the connection fails on Mobile WAN* page) and the "modem hang-up" state is detected. For all other states, the router will switch to another SIM card as usual.

Modified Reading of ICCID

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

Modified method for SIM card ICCID reading. From now, specific AT command is used for every model of the cellular module. Current solution was causing some issues for a few cellular module types.

Increased WiFi Throughput

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

Made a fix in Linux kernel which leads to increasing WiFi data throughput.

Increased Buffer Size for USB Bulk Transfers

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

Increased buffer size for USB bulk transfers to fix an issue when flashing the cellular module. The buffer size is now set to 4096 bytes.

Fixed Setting of PDP Context

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

Fixed setting of APN in the first PDP context for the Verizon environment.

Fixed IPv6 Connection Checking

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

Fixed an issue with IPv6 connection checking on MWAN interface. Under certain conditions, the connection checking feature might stop working.

Modified IPv6 Prefix Delegation

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

Modified algorithm for IPv6 prefix delegation on all affected interfaces. This change was made due to the support for some new hardware components.

Fixed Command for LPM

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

Fixed an issue with execution of *lpm* command, which is the command for entering into the Low Power Mode (LPM).

Issue description:

- *lpm -b* command will typically switch the router into the LPM and wake up it again once the binary input is activated.
- In case this command is executed while the binary input is activated, the router will go into an incorrect state.
- In this state the cellular interface is shut down and the execution of the *lpm* command is interrupted.

After the fix:

- If the *lpm -b* command is executed while the binary input is activated, the router will go into the LPM correctly.
- Router will stay in LPM for about one second and then will return back to the running state.

Notes:

- The *io* command can be used in a script to check state of the binary input prior to the execution of the *lpm* command.
- For more information about commands and scripts usage see [Advanced usage and scripting](#) page where is reference to the *Commands and Scripts for v2 and v3 Routers* application note.

Fixed RS485 Detection

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

Fixed detection issue of the RS485 interface on the second serial port. This issue was caused by different I²C chip used for this new platform.

Fixed JavaScript for SMTP Configuration

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

Fixed issue on *SMTP configuration* page with *SMTP Server Address* item. Due to the bug in validation function, a domain name could not be entered into this field, just an IP address.

Fixed JavaScript for SMS Configuration

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

There is a router's functionality for sending SMS message in case the binary input of the router was just activated. Content of this SMS message should be specified as well. All this setting can be done on *SMS Configuration* page under *Configuration -> Services -> SMS* menu item.

If this function was enabled and the content of SMS was not specified, no message has been sent. This fix has changed this mechanism to check if the text for SMS is specified (in case SMS sending is enabled). If the SMS text is missing, a warning message will appear after the *Apply* button is pressed.

Fixed Kernel Crash Related to Bridge Configuration

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

Fixed issue with kernel crash which may occur after the change of the bridge configuration. This issue was observed in rare cases on our testing environment.

Upgraded *OpenSSH* Program

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

OpenSSH program was upgraded to version 8.0p1. This update has fixed [CVE-2019-6110](#) and [CVE-2019-6111](#).

Upgraded *OpenSSL* Library

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

OpenSSL library was upgraded to version 1.0.2r. This update has fixed [CVE-2018-0734](#), [CVE-2018-5407](#) and [CVE-2019-1559](#).

Upgraded *dnsmasq* Program

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

dnsmasq program was upgraded to version 2.80. This update has fixed [CVE-2017-15107](#).

Upgraded *hostapd* Program

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

hostapd program was upgraded to version 2.8. This update has fixed [CVE-2019-9499](#), [CVE-2019-9498](#), [CVE-2019-9497](#), [CVE-2017-13088](#), [CVE-2017-13087](#), [CVE-2017-13086](#), [CVE-2017-13084](#), [CVE-2017-13082](#), [CVE-2017-13081](#), [CVE-2017-13080](#), [CVE-2017-13079](#), [CVE-2017-13078](#) and [CVE-2017-13077](#).

Upgraded *wpa_supplicant* Program

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

wpa_supplicant program was upgraded to version 2.8. This update has fixed [CVE-2019-9499](#), [CVE-2019-9498](#), [CVE-2019-9497](#), [CVE-2018-14526](#), [CVE-2017-13088](#), [CVE-2017-13087](#), [CVE-2017-13086](#), [CVE-2017-13084](#), [CVE-2017-13082](#), [CVE-2017-13081](#), [CVE-2017-13080](#), [CVE-2017-13079](#), [CVE-2017-13078](#) and [CVE-2017-13077](#).

Upgraded *curl* Program

ER75i	SPECTRE 3G	SPECTRE RT	SPECTRE LTE-AT	SPECTRE LTE-VZ				
ER75i v2	UR5i v2	XR5i v2	LR77 v2	CR10 v2	UR5i v2L	RR75i v2	LR77 v2L	XR5i v2E
Bivias v2HC	Bivias v2LC	Bivias v2LL	Bivias v2LH	Bivias v2HH				
SmartFlex SR300	SmartFlex SR303	SmartFlex SR304	SmartFlex SR305	SmartFlex SR306	SmartFlex SR307			
SmartFlex SR308	SmartFlex SR309	SmartStart SL302	SmartStart SL304	SmartStart SL306				
SmartMotion ST352	SmartMotion ST355	ICR-321x	ICR-323x					

curl program was upgraded to version 7.64.1. This update has fixed [CVE-2018-16890](#), [CVE-2019-3822](#) and [CVE-2019-3823](#).

Part III

Known Issues

5 GHz band for WiFi

The first one hundred v3 routers produced (with serial number from 6200000 to 6200099) contain a WiFi chip which does not support the 5 GHz band. There is no way of detecting this, the 5 GHz ranges on these devices will simply not work and the router will not be able to detect this.

Warning during WiFi configuration update

During a WiFi configuration update a warning may appear in syslog. This has no other known effects other than the appearance of the warning message.

Firmware Update – unexpected filename

If the filename of a firmware for your router was changed recently, you can have an issue during manual firmware updating or with Automatic Update feature. Following warning message will appear: *"You are trying to upload file "xx.bin" but "yy.bin" is expected. Are you sure to continue?"* To fix this issue follow instructions in Part I - [Firmware Upgrade Instructions](#).

SmartStart – cellular network registration

It is necessary to use router's firmware of version 6.1.5 or higher if the *Telit* cellular module installed in your SmartStart router has following version the firmware:

- *Telit LE910-EU V2* cellular module with firmware version 20.00.403 or newer,
- *Telit LE910-NA1* cellular module with firmware version 20.00.014 or newer.

Note: The model name and firmware version of the cellular module can be found on router's web GUI at *Mobile WAN Status* page in *Mobile Network Information* section.

SmartStart SL302 – cellular network authentication

It is not possible to use username and password when connecting to Mobile WAN network (on *Mobile WAN Configuration* page) if your SmartStart SL302 router has the 20.00.522 firmware version inside the *Telit LE910-NA1* cellular module. The version of cellular module firmware can be found at *Mobile WAN Status* page in *Mobile Network Information* section.

SmartStart SL302 – SMS in Verizon network

SmartStart SL302 router (equipped with the *Telit* modules *LE910-SV1* or *LE910-NA1*) supports sending and receiving of SMS in *Verizon* cellular network since the firmware version 6.1.4. Please note that to support SMS receiving, cellular module with Verizon firmware of version higher than 20.00.012 is required.