G1 Device Software Release Notes 0.989.037

vRN-G1-2023-03

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Note: For the most up-to-date manuals, please download the latest version of this document on our customer portal: https://taranawireless.zendesk.com

Intended Audience

This document is intended for use by system administrators and engineers interested in the design, daily management, operations, and troubleshooting of a Tarana G1 network including Base Nodes, Remote Nodes, and the Tarana Cloud Suite (TCS).

It is assumed that the reader has a good working knowledge of radio frequency (RF), wireless systems, and networking concepts.

The G1 products are designed for installation and use by trained professionals and require adherence to all relevant regulatory, safety, and telecom industry best practice guidelines for outdoor radios. It is assumed that the Tarana G1 Base Node and Remote Nodes have been installed onsite and are connected to the TCS.

Models Supported by Release 0.989.037

Released Version: 0.989.037

Frequency	Device Type	Part Number	Description
5.8 GHz	BN	30-0134-001	5.8 GHz Base Node
	RN	30-0128-001 30-0150-001*	5.8 GHz Residential Node
3.5 GHz	BN	30-0141-001	3.5 GHz CBRS Base Node
	RN	30-0142-001	3.5 GHz CBRS Residential Node

* The minimum required software version for 30-0150-001 hardware is 0.977.000, however Tarana **strongly** recommends upgrading to the latest 0.989.037.00 version.

Backward Compatibility

BN ---> / RN	0.913	0.975	0.977	0.988	0.989
0.913	✅	✅	✅	✅	✅
0.975	✅	✅	✅	✅	✅
0.977	✅	✅	✅	✅	✅
0.988	✅	✅	✅	✅	✅
0.989	✅	✅	✅	✅	✅

- For the 0.989 software, if upgrading from 0.913 (5 GHz only), 0.975, 0.977 it is recommended to upgrade all BNs before upgrading the RNs.

- Any device with current software revision 0.913 or higher can be directly upgraded to 0.989.035.

- Auto renewal of device certificates: To ensure devices [BN/RN] stay connected to TCS

    - Please note that only software versions 0.977.016 and later support auto renewal of device certificates before expiration. If there are devices running older software versions Tarana **strongly** recommends upgrading to the latest version.

- Deprecated SW versions : Support / Defect fixes for the following versions will be deprecated:

    - 0.913 - December 31, 2022

    - 0.975 - March 15, 2023

Enhancements & Defects Fixed in 0.989 release

#	Description
1	The 'watchdog reset' issue seen on some RNs has been resolved. Please refer to (1) in the <u>Major Announcements</u> section below for more details.
2	The Primary BN feature has been enhanced with the addition of a 15 minute timer that keeps the RNs waiting on the primary BN before moving on to alternate BNs. This is to address scenarios such as software upgrades and other short outages on the Primary-BN where the RN would latch onto non-primary BNs.
3	If DHCP servers were configured with an 'Always broadcast' option for DHCP offers, the CPEs were not able to complete the DHCP process.
4	The control channel (CCE) between the RN and the BN would drop occasionally causing link drops. CCE has been made more robust to reduce the link drops.
5	In some rare cases, the RNs connected to sub-optimal BNs due to misdetection in the search process.
6	Due to incorrect detection of spatial compatibility of users in inter-sector and inter-cell scenarios, link throughputs were degraded in some situations.
7	Some of the CPEs (WiFi APs) did not re-initiate contact after failing to connect to the DHCP server earlier upon RF link flap. The RN Ethernet port is now toggled on RF link establishment to retrigger the DHCP client process on CPE.
8	Loop detect packets from MikroTik routers connected to RNs caused link drops after 92 hrs when RN used as a backhaul link.
9	The RN Device UI was not accepting positive values for longitude.
10	In 5 GHz BNs, large temperature swings can sometimes cause the PLL to get unlocked. In such cases, the radio was being reset without allowing time for potential recovery.

Major Announcements

1. The 'watchdog reset' issue that was seen on few RNs has been root-caused and rectified in the 0.989.037 software version. Tarana strongly recommends upgrading all RNs to this version. Also, it is recommended to not downgrade to previous versions once an RN has been upgraded to 0.989.037.
2. In addition to enhancements and fixes mentioned above, the 0.989 release expands the network planning capabilities of the G1 platform - this includes the planning IDs and the operator IDs. As the deployed networks start to become denser, it is important to execute the radio network planning carefully. The Tarana Support team will be reaching out to you if there are any changes to be implemented to update your existing radio network planning parameters. These changes are expected to improve link-up times and link performance in sector-edge and cell-edge scenarios. We highly recommend upgrading to 0.989 at your earliest convenience.

Known Limitations

#	Description	Workaround
1	If the Diagnostics Subscriber test is executed with a configured rate higher than 650 Mbps, the RN might temporarily (~ 5 mins) get disconnected.	Please execute the test at a configured rate of 650 Mbps or lower.
2	Downlink broadcast (except for DHCP) and multicast traffic is not supported.	None. Under Evaluation for Roadmap
3	In heavy-interference environments, if a speed test is executed to characterize link performance, the initial results might show lower than expected speeds.	Please re-run the test multiple (4 to 5) times. The increased link utilization results in speeding up the link optimization.
4	Device UI does not load on browser refresh.	Please login again.
5	CBRS devices do not re-register when an invalid CPI is corrected	Please temporarily modify either height (by 1m) or azimuth (by 1 deg) to re-register. Once re-registered, please revert settings to the correct values.
6	Configuring the in-band Management IP address to a different value on the same subnet fails.	Please temporarily change the IP address to be on a different subnet and then change it back to the required IP address on the original subnet.