G1 Device Software Release Notes 0.988.004

vRN-G1-2022-11

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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 0.988.004

Released Version: 0.988.004

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 0.988.004 version.

Backward Compatibility

BN ---> / RN	0.913	0.967 (CBRS only)	0.975	0.977	0.988
0.913	✅	✅	✅	✅	✅
0.967 (CBRS only)	✅	✅	✅	✅	✅
0.975	✅	✅	✅	✅	✅
0.977	✅	✅	✅	✅	✅
0.988	✅	✅	✅	✅	✅

- For the 0.988 software, 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 0.988.004.

- If a prior 0.98x build was provided as part of early access, Tarana mandates upgrading to the stable released build - 0.988.004.

- 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:

  - 0.967 (CBRS only) - November 30, 2022

  - 0.913 - December 31, 2022

Release 0.988.004 Features

#	Feature	Description
1	**RN Search Enhancements**	The RN search mechanism has been improved for multi-sector scenarios. When an RN detects multiple BNs during the search, it connects to the BN that has the strongest signal strength (Search Metric).
2	**Primary BN**	This feature allows configuring each of the RNs with a 'Primary' BN. During an RN's subsequent search attempts, if its Primary BN is detected, it is chosen for network entry (even if it is not the best-serving BN). Notes: - When an RN is configured with a Primary BN that has a Search Metric weaker than the strongest BN by 12 units, the Primary BN may not be detected. Tarana strongly recommends against assigning a very weak Primary BN as this can have detrimental performance impact across multiple sectors. - To make the best use of this feature, upgrade all BNs in a Market before upgrading the RNs.
3	**DHCP Option 82**	The Tarana G1 devices now support DHCP Option 82 with the BN's and RN's serial number (or MAC address) being used for remote-id and circuit-id, respectively. This can be configured from the BN Device UI.
4	**Device UI Improvements**	The RN Device UI will now notify the installer of the following: - unsaved configuration - failure reasons for CBRS - Diagnostics page
5	**Long-Range Profile (30 km)**	The Tarana G1 devices now support Network Profile 2, which enables links of distances up to 30 km.
6	**RN Ethernet Diagnostics**	Ethernet cable diagnostic feature is available on the RN Device UI.

Defects Fixed

The following defects have been fixed in the 0.988 release.

#	Description
1	The diagnostics 'Speed Test' occasionally stopped working from the BN DeviceUI.
2	The BN Device UI showed successful connectivity to TCS even when the BN was not connected to TCS.
3	On failure of the primary DNS server, the BN was not failing over correctly to the secondary DNS server, causing loss of connectivity to TCS.
4	CBRS BNs showed incorrect Active Connections count.
5	In rare situations, the RNs were not able to connect to the BN when certain device operations (snapshot, software upgrade) were running.
6	Downlink user traffic was getting 100% dropped on some links.
7	If an incorrect CPI ID was entered on a CBRS RN, the device entered an infinite connect loop, without giving the user an option to correct the CPI ID.
8	In rare situations, where the BNs did not receive a GPS signal, the Device UI indicated that the BN GPS is locked.
9	On the CBRS Devices, the Device UI, "Hostname" and "Data VLAN" updates required entering CBRS CPI ID.
10	False SFP unplugged alarms were being raised.
11	CPI ID remained visible on the Device UI after configuration.

Known Limitations

#	Description	Workaround
1	If DHCP servers are configured with an 'Always broadcast' option for DHCP offers, the CPEs will not be able to complete the DHCP process.	Please turn off the 'Always broadcast' option on DHCP servers.
2	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.
3	Downlink broadcast and multicast traffic is not supported.	None. Under Evaluation for Roadmap
4	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.
5	Device UI does not load on browser refresh.	Please login again.