



CellAdvisor™

CA5000 CellAdvisor 5G

Release Notes for Version 5.050.022r

Welcome to release 5.050.022r for CA5000 CellAdvisor 5G. This document provides version numbers, a description of new features, and a list of unresolved issues associated with this release, unless otherwise specified.

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Version Numbers

The following table lists the versions of related VIAVI hardware and/or software that can be used in conjunction with this release for CA5000 CellAdvisor 5G.

Installed Software

VIAVI Software	Version
Celladvisor5G-solution	5.050.022r-1 (04/11/2019)
Platform - version	2.0.17-ef8c056 (13/08/2019)

Hardware Configuration

CellAdvisor 5G	Version	
	F001	F002
RF Module	1.0 / 2.0 / 4.0	1.0 / 2.0 / 1.0
DSP Module	1089 / 2134 / 3029 / 4033 / 5014	1089 / 2134 / 3029 / 4033 / 5014
CPRI Module	7001	7001
CAA	Version	
RF Module	1.0	
DSP Module	6001 / 2019/05/11	

Recommended Application Software

VIAVI Software	Version
JDMapCreator	1.8 and after

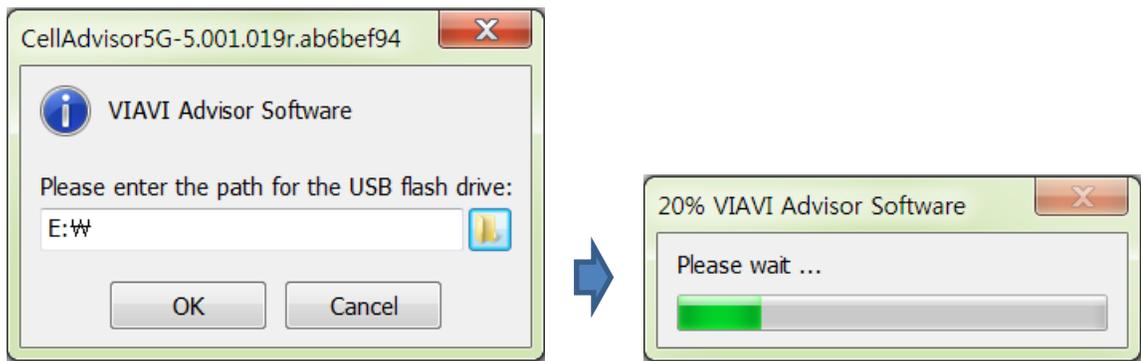
What's New in Version 5.050.022r

- 5G NR Enhancements
 - 5G NR measurements (beam analyzer, Carrier scanner and Route map).
 - Auto pre-amp and attenuation
 - SSB Auto search for OTA analysis measurement
 - Added Fast and Normal mode for measurement speed
 - Improved power plotting measurement & PCI plot (20 different PCI colors) method in route map
 - Multi PCI display in fast mode for OTA analysis measurement
 - Added sweep tuned RF measurement capabilities into 5G NR Trigger Spectrum mode.

- Improvements in RFoCPRI Spectrum
 - Added Multi Active Trace
 - Added PRB Table
- Upgrade path recommendation
 - Need to upgrade to 5.030 first for 5.021 or earlier released firmware versions before an upgrade to the latest firmware version.

Installation Instructions

1. Visit the linked website below to find the latest firmware and compare it with your version. If your version is older than the latest firmware, download the newest one available.
<http://celladvisor.updatemyunit.net/>
2. Unzip the downloaded file and check that there are *.exe file extracted



Upgrade File Name:

- CellAdvisor5G-5.XXX.xxxx.xxxxxxxx.exe

3. Installing upgrade file to USB memory stick and that at least 1 GBytes available, but its maximum capacity not greater than 32 GB for the FAT32 file system.
4. Plug in the USB memory stick to the USB Host port on the top side of your CellAdvisor 5G, which is powered via the AC-DC adapter.
5. Press the **SYSTEM** Touch key, and then select **Upgrade > USB**.
6. Display Upgrade Version, Installed Version and then press the **Start Upgrade** touch key.
7. Upgrade screen changes well and the progress bar continues. The upgrade time is 10 minutes to 20 minutes.

At the end of the process the test set will reboot itself to complete the upgrade.

For more information, refer to CellAdvisor 5G User`s Guide.

Fixed Problems

- Fixed the error of logging file replay in Real time spectrum menu.
- Fixed the problem of no moving or too slow moving of marker when amplitude changed in CAA mode.
- Fixed the problem of trace overlay and UI display when upload the saved file by 'Trace Type -> Load' in CAA mode.

Known Limitations

- Need to upgrade to 5.030 first for 5.021 or earlier released firmware versions before an upgrade to the latest firmware version.

Previous Version History

This section provides history of previous firmware versions.

Release 5.045.032r

Version Numbers

The following table lists the versions of related VIAVI hardware and/or software that can be used in conjunction with this release for CA5000 CellAdvisor 5G.

Installed Software

VIAVI Software	Version
Celladvisor5G-solution	5.045.032r-1 (30/09/2019)
Platform - version	2.0.17-ef8c056 (13/08/2019)

Hardware Configuration

CellAdvisor 5G	Version	
	F001	F002
RF Module	1.0 / 2.0 / 4.0	1.0 / 2.0 / 1.0
DSP Module	1089 / 2134 / 3024 / 4025 / 5010	1089 / 2134 / 3024 / 4025 / 5010
CPRI Module	7001	7001
CAA	Version	
RF Module	1.0	
DSP Module	6001 / 2019/05/11	

Recommended Application Software

VIAVI Software	Version
JDMapCreator	1.8 and after

What's New in Version 5.045.032r

- CA5G supports RFoCPRI interference Analysis up to 10.1G link rate
 - Enhanced IQ Data Block Viewer
 - Enhanced Rx Settings
 - RFoCPRI Spectrum
 - RFoCPRI Spectrogram
 - RFoCPRI PRB Table
 - RFoCPRI Alarm Sound indicator
 - Spectrum logging and Replay
 - Support Setup and Favorite

Fixed Problems

- Improved flatness of RTSA noise floor in panorama view
- Added the option of logging as CSV in LTE Channel scanner & ID scanner
- Changed the default setting of limit lines of SS-RSRP & SS-SINR in beam analyzer from On to Off

Known Limitations

- None

Release 5.041.001r

Version Numbers

The following table lists the versions of related VIAVI hardware and/or software that can be used in conjunction with this release for CA5000 CellAdvisor 5G.

Installed Software

VIAVI Software	Version
Celladvisor5G-solution	5.041.001r-1 (27/08/2019)
Platform - version	2.0.17-ef8c056 (13/08/2019)

Hardware Configuration

CellAdvisor 5G	Version	
	F001	F002
RF Module	1.0 / 2.0 / 4.0	1.0 / 2.0 / 1.0
DSP Module	1089 / 2134 / 3024 / 4025 / 5010	1089 / 2134 / 3024 / 4025 / 5010
CAA	Version	
RF Module	1.0	
DSP Module	6001 / 2019/05/11	

Recommended Application Software

VIAVI Software	Version
JDMapCreator	1.8 and after

What's New in Version 5.041.001r

- None

Fixed Problems

- CA5G Unit freezes sometimes when playing around with the FO (Fiber Optics) application.
- When CA5G turns on, CA5G focuses the CellAdvisor 5G application regardless of external module attachment condition.

Known Limitations

- None

Release 5.040.028r

Version Numbers

The following table lists the versions of related VIAVI hardware and/or software that can be used in conjunction with this release for CA5000 CellAdvisor 5G.

Installed Software

VIAVI Software	Version
Celladvisor5G-solution	5.040.028r-1 (16/08/2019)
Platform - version	2.0.17-ef8c056 (13/08/2019)

Hardware Configuration

CellAdvisor 5G	Version	
	F001	F002
RF Module	1.0 / 2.0 / 4.0	1.0 / 2.0 / 1.0
DSP Module	1089 / 2134 / 3024 / 4025 / 5010	1089 / 2134 / 3024 / 4025 / 5010
CAA	Version	
RF Module	1.0	
DSP Module	6001 / 2019/05/11	

Recommended Application Software

VIAVI Software	Version
JDMapCreator	1.8 and after

What's New in Version 5.040.028r

- Supportability of Cable Antenna Analyzer with the following capability:
 - Reflection VSWR and Return Loss
 - DTF VSWR and Return Loss
 - 1 Port Cable Loss
 - 1 Port Phase
 - 2 Port Transmission
 - Smith Chart
 - RF Source
- Supportability of Optical Time Domain Reflectometer with the following module:
 - E4106MA2 – APC, PC
 - E4126MA2 – APC, PC
 - E4126MA3 – APC, PC
 - E4136MA2 – APC, PC
 - E4136MA3 – APC, PC
 - E4146QUAD
- Capability of RF CW source only when connected with a CAA module
- Enhancement of Gated Sweep with 5G NR signal support

Fixed Problems

- With the modified Antenna detection and Peak Antenna indication functions in LTE menu, you can measure according to the manual setting of Antenna port (1, 2, 3, 4 not Auto).
- Improved to be possible to measure when you set Auto mode in LTE Test Model 3.x (QPSK and 16 QAM mixed) signals supplied, i.e., PDSCH Modulation type set to Auto.

Known Limitations

- For beam analyzer feature, Ericsson and Huawei BCH 3GPP NR standard (Release-15) following confirmed. Samsung and Nokia BCH not confirmed.
- Downgrade is only supported through re-image. (Platform version 2.0.x --> 1.0.x)

Release 5.030.049r

Version Numbers

The following table lists the versions of related VIAVI hardware and/or software that can be used in conjunction with this release for CA5000 CellAdvisor 5G.

Hardware Configuration

VIAVI Hardware	Version(s) Compatible with this Release 5.030.049r	
	F001	F002
RF Module	1.0 / 2.0	1.0 / 2.0 / 1.0
DSP Module	1089 / 2134 / 3024 / 4025 / 5010	1089 / 2134 / 3024 / 4025 / 5010

Recommended Application Software

VIAVI Software	Version(s) Compatible with this Release 5.030.049r
JDMapCreator	1.8 and after

What's New in Version 5.030.049r

- Supportability of LTE FDD TDD Analyzer
 - Capability of LTE FDD TDD RF Analysis
 - Capability of LTE FDD TDD Modulation
 - Capability of LTE FDD TDD OTA

Fixed Problems

- Fixed SSB detection failed message pop-up after SSB detection in normal condition in 5GNR Spectrum Emission Mask.
- Improved the way to adjust the reference level: by sliding a finger on the screen, reference level can be adjusted in 5GNR beam Analyzer, carrier scanner, Power vs Time.
- Channel step boundary range of 5GNR Signal Analyzer broadened from 100 to 10000.
- Multi-ACLR frequency range support up to 24 - 40 GHz in 5GNR Analyzer.
 - Previous: 9 kHz – 6 GHz

- Current version: 9 kHz – 6 GHz, 24 - 40 GHz

Known Limitations

- For beam analyzer feature, Ericsson and Huawei BCH 3GPP NR standard (Release-15) following confirmed. Samsung and Nokia BCH not confirmed.

Release 5.022.009r

Version Numbers

The following table lists the versions of related VIAVI hardware and/or software that can be used in conjunction with this release for CA5000 CellAdvisor 5G.

Hardware Configuration

VIAVI Hardware	Version(s) Compatible with this Release 5.022.009r	
	F001	F002
RF Module	1.0 / 2.0	1.0 / 2.0 / 1.0
DSP Module	1089 / 2134 / 3024 / 4022	1089 / 2134 / 3024 / 4022

Recommended Application Software

VIAVI Software	Version(s) Compatible with this Release 5.022.009r
JDMapCreator	1.8 and after

What's New in Version 5.022.009r

- NA

Fixed Problems

- Route Map menu - In case of In-door map file, deleted x, y coordinates. Latitude, longitude display replaced by x, y coordinates in CSV Result file.
- Fixed Wi-Fi connection issue.
- Fixed the screen display problem of noise level and signal in frequency change.
- Fixed AA Handle Azimuth accuracy issue: Resolved Azimuth value display problem in measurement after AA Handle connected to CA5G and initialization.

Known Limitations

- For beam analyzer feature, Ericsson and Huawei BCH 3GPP NR standard (Release-15) following confirmed. Samsung and Nokia BCH not confirmed.

Release 5.021.003r

Version Numbers

The following table lists the versions of related VIAVI hardware and/or software that can be used in conjunction with this release for CA5000 CellAdvisor 5G.

Hardware Configuration

VIAVI Hardware	Version(s) Compatible with this Release 5.021.003r	
	F001	F002
RF Module	1.0 / 2.0	1.0 / 2.0 / 1.0
DSP Module	1088 / 2133 / 3024 / 4022	1088 / 2133 / 3024 / 4022

Recommended Application Software

VIAVI Software	Version(s) Compatible with this Release 5.021.003r
JDMapCreator	1.8 and after

What's New in Version 5.021.003r

- NA

Fixed Problems

- Resolved current GPS position update issue when zoom into the Map in Route Map menu.
- Fixed Route Map display error by GPS number of digits in Route Map in 5.020.029r release.
- Fixed color display error for 5G NR P vs T (Symbol) Slot format DL/UL in some format part.

Known Limitations

- For beam analyzer feature, Ericsson and Huawei BCH 3GPP NR standard (Release-15) following confirmed. Samsung and Nokia BCH not confirmed.

Release 5.020.029r

Version Numbers

The following table lists the versions of related VIAVI hardware and/or software that can be used in conjunction with this release for CA5000 CellAdvisor 5G.

Hardware Configuration

VIAVI Hardware	Version(s) Compatible with this Release 5.020.029r	
	F001	F002
RF Module	1.0 / 1.0 / 4.0	1.0 / 1.0 / 1.0
DSP Module	1088 / 2133 / 3024 / 4022	1088 / 2133 / 3024 / 4022

Recommended Application Software

VIAVI Software	Version(s) Compatible with this Release 5.020.029r
JDMapCreator	1.8 and after

What's New in Version 5.020.029r

- Supports Auto Select in Clock Source.
- Added Confirm button (play and stop button) and Undo function(only available when Plot Point switches to Position) at Route Map menu.
- Added Cellsite icon with Azimuth & it is activated when Cellsite information is imported at Route Map menu.
- Enhancement of 5G NR Signal Analyzer
 - Automatic calculation of the SCS offset
 - SSB GSCN Auto: New method to search 5G beams (SSB block) center frequency according to 3GPP global synchronization channel number (GSCN)
 - SSB Full Auto: New method to search 5G beams (SSB block) frequency down to sub-carrier spacing, e.g. 120KHz or 240KHz
 - Beam Power Accuracy: reference signal received power (RSRP) and signal to interference noise ratio (SINR) with revised calculated values
 - Added Triggered Spectrum Menu in 5GNR ACLR
 - P vs T symbol time span expansion
 - P vs T symbol UL/DL indicated by different colors
 - At Route Map menu, added SS-SINR, SS-RSRQ measurement items under Map conf / Plot Item

Fixed Problems

- Resolved the issue to import sizeable maps on Route Map and the ability to set a single layer map
- Resolved the bug issue 'No GPS or No RSRP value in 5G NR Signal Analyzer & Route Map' for all regional settings.
- The 1st carrier center frequency set in 5G NR Carrier Scanner is now maintained in other modes.
- Fixed X,Y coordinate indication error for Position at Indoor Map in Route Map menu.
- Fixed Spectral Density calculation error in 5G NR Channel Power.
- Fixed the error of no GPS Point indication at single map file in Route Map menu

Known Limitations

- For beam analyzer feature, Ericsson and Huawei BCH 3GPP NR standard (Release-15) following confirmed. Samsung and Nokia BCH not confirmed.

Release 5.011.008r

Version Numbers

The following table lists the versions of related VIAVI hardware and/or software that can be used in conjunction with this release for CA5000 CellAdvisor 5G.

Hardware Configuration

VIAVI Hardware	Version(s) Compatible with this Release 5.011.008r	
	F001	F002
RF Module	1.0 / 1.0 / 4.0	1.0 / 1.0 / 1.0
DSP Module	1087 / 2133 / 3024 / 4022	1087 / 2133 / 3024 / 4022

Recommended Application Software

VIAVI Software	Version(s) Compatible with this Release 5.011.008r
JDMapCreator	1.8 and after

What's New in Version 5.011.008r

- Added Time Alignment Error in 5G NR Signal Analyzer
 - Carrier Scanner
 - Constellation
 - Power vs Time (Frame)

- Added EVM in 5G NR Signal Analyzer
 - Constellation
 - Carrier Scanner

Fixed Problems

- Fixed an issue where the RF spectrum signal disappears.
- Not properly working touch function when user is using the stylus pen or touching the screen by a finger.
- System hang up happened when user is entering NR measurement mode or changing the measurement mode after the system turns up.

Known Limitations

- For beam analyzer feature, Ericsson and Huawei BCH 3GPP NR standard (Release-15) following confirmed. Samsung and Nokia BCH not confirmed.
- Not supportability Auto Select in Clock Source.

Release 5.010.031r

Version Numbers

The following table lists the versions of related VIAVI hardware and/or software that can be used in conjunction with this release for CA5000 CellAdvisor 5G.

Hardware Configuration

VIAVI Hardware	Version(s) Compatible with this Release 5.010.031r	
	F001	F002
RF Module	1.0 / 1.0 / 4.0	1.0 / 1.0 / 1.0
DSP Module	1087 / 2133 / 3024 / 4022	1087 / 2133 / 3024 / 4022

Recommended Application Software

VIAVI Software	Version(s) Compatible with this Release 5.010.031r
JDMapCreator	1.8

What's New in Version 5.010.031r

- Added 5G NR Signal Analyzer

- Trigger Spectrum
- Channel Power
- Occupied Bandwidth
- Spectrum Emission Mask
- ACLR
- Multi-ACLR
- Spurious Emissions
- Beam Analyzer
- Carrier Scanner
- Route Map
- Constellation
- Power vs Time (Symbol)
- Power vs Time (Frame)
- Enhanced Real-time Spectrum Analyzer
 - Support narrow span from 20MHz to 100MHz (1MHz Step)

Fixed Problems

- Set the attenuation to 0 dB when the pre-amp is on.

Known Limitations

- None

Release 5.003.007r

Version Numbers

The following table lists the versions of related VIAVI hardware and/or software that can be used in conjunction with this release for CA5000 CellAdvisor 5G.

Hardware Configuration

VIAVI Hardware	Version(s) Compatible with this Release 5.003.007r	
	F001	F002
RF Module	1.0 / 1.0 / 4.0	1.0 / 1.0 / 1.0
DSP Module	1086 / 2127 / 3020	1086 / 2127 / 3020

Recommended Application Software

VIAVI Software	Version(s) Compatible with this Release 5.003.007r
JDMapCreator	1.8

What's New in Version 5.003.007r

- None

Fixed Problems

- Fixed the global 30 days license issue
- Fixed the frequency, amplitude and spur issue when the language is set to other than English
- Fixed the frequency locking issue in Beam Analyzer
- Fixed the SCPI RF Control command issue

Known Limitations

- The real time spectrum logging has time constraints, Internal memory is up to 4 GBytes and has limiting spectrum logging for maximum 48~50 min or so. For long time logging, use of external memory is recommended.

Release 5.002.007r

Version Numbers

The following table lists the versions of related VIAVI hardware and/or software that can be used in conjunction with this release for CA5000 CellAdvisor 5G.

Hardware Configuration

VIAVI Hardware	Version(s) Compatible with this Release 5.002.007r	
	F001	F002
RF Module	1.0 / 1.0 / 4.0	1.0 / 1.0 / 1.0
DSP Module	1086 / 2127 / 3020	1086 / 2127 / 3020

Recommended Application Software

VIAVI Software	Version(s) Compatible with this Release 5.002.007r
JDMapCreator	1.7

What's New in Version 5.002.007r

- 5GTF:
 - Added BRS TX Period 20 ms and Auto
 - Added Ant and Sym parameters in Beam Index information in Beam Analyzer
 - Route Map:
 - Added a feature for pausing when logging
 - Changed the color map by supporting 15 different color levels
 - Added to indicate the currently measuring PCI

Fixed Problems

- The default for Plot Point menu is changed to GPS in Route Map mode.
- Fixed an error that DNC Preamp menu is not showing in 5GTF mode.
- The information tab is also saved when saving the result file in 5GTF Route Map mode.

Known Limitations

- The real time spectrum logging has time constraints, Internal memory is up to 4 GBytes and has limiting spectrum logging for maximum 48~50 min or so. For long time logging, use of external memory is recommended.

Release 5.001.022r

Version Numbers

The following table lists the versions of related VIAVI hardware and/or software that can be used in conjunction with this release for CA5000 CellAdvisor 5G.

Hardware Configuration

VIAVI Hardware	Version(s) Compatible with this Release 5.001.022r	
	F001	F002
RF Module	1.0 / 1.0 / 4.0	1.0 / 1.0 / 1.0
DSP Module	1086 / 2127 / 3018	1086 / 2127 / 3018

Recommended Application Software

VIAVI Software	Version(s) Compatible with this Release 5.001.022r
JDMapCreator	1.7

What's New in Version 5.001.022r

- Full flexibility to test multi-radio access technologies from 3G to 5G for macro-cell and small-cell site, DAS, and C-RAN.
- Small cell signal modulation quality assessment in 24 GHz and 40 GHz bands with channels up to 100 MHz.
- Real-time spectrum with persistence for effective interference analysis.
 - 50 MHz bandwidth Real-time spectrum analyzer
 - 100 MHz bandwidth Real-time spectrum analyzer
- Interference analyzer.
- Route map.
- Gated sweep.
- 5G TF Beamforming Analyzer.
- Scanner.
- RF Power Meter.
- GPS connectivity.
- Bluetooth connectivity.
- Wi-Fi connectivity.

Fixed Problems

- None

Known Limitations

- The real time spectrum logging has time constraints, Internal memory is up to 4 GBytes and has limiting spectrum logging for maximum 48~50 min or so. For long time logging, use of external memory is recommended.

Technical Assistance

For assistance related to the use of your product, call or e-mail VIAVI Technical Assistance Center (TAC) in your region. For a current listing of TAC phone numbers and e-mail addresses, go to:

<http://www.viavisolutions.com/en/services-and-support/support/technical-assistance>

Document History

Revision	Date	Reason for revision
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22125691 rev 001	June 10, 2018	5.001.007r Firmware Release
22125691 rev 002	July 12, 2018	5.001.022r Firmware Release
22125691 rev 003	Aug 09, 2018	5.002.007r Firmware Release
22125691 rev 004	Sep 17, 2018	5.003.007r Firmware Release
22125691 rev 005	Nov 30, 2018	5.010.031r Firmware Release
22125691 rev 006	Dec 06, 2018	5.011.008r Firmware Release
22125691 rev 007	Mar 21, 2019	5.020.029r Firmware Release
22125691 rev 008	Mar 29, 2019	5.021.003r Firmware Release
22125691 rev 009	April 26, 2019	5.022.009r Firmware Release
22125691 rev 010	June 05, 2019	5.030.049r Firmware Release
22125691 rev 011	Aug 21, 2019	5.040.028r Firmware Release
22125691 rev 012	Aug 27, 2019	5.041.028r Firmware Release
22125691 rev 013	Oct 08, 2019	5.045.032r Firmware Release
22125691 rev 014	Nov 06, 2019	5.050.022r Firmware Release



Viavi Solutions
 1-844-GO-VIAVI
www.viavisolutions.com