



CellAdvisor™

CA5000 CellAdvisor 5G

Release Notes for Version 5.090.018r

Welcome to release 5.090.018r 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	5.090.018r
Platform - version	3.3.0

Hardware Configuration

CellAdvisor 5G	Version		
	F001	F002	F030 / F044
RF Module	1.0 / 2.0 / 4.0	1.0 / 2.0 / 1.0	2.0 / 3.0 / 3.0
DSP Module	1103 / 2203 / 3029 / 4145 / 5145 / 7003 / 8145 / 9134 / 10001	1103 / 2203 / 3029 / 4145 / 5145 / 7003 / 8145 / 9134 / 10001	1309 / 2309 / 8349 / 8349 / 8349 / 9336
CAA	Version		
Firmware	6.052.001r		
RF Module	1.0		

DSP Module	6001 / 2020/10/20
RFMP	Version
Firmware	7.010.001r

Recommended Application Software

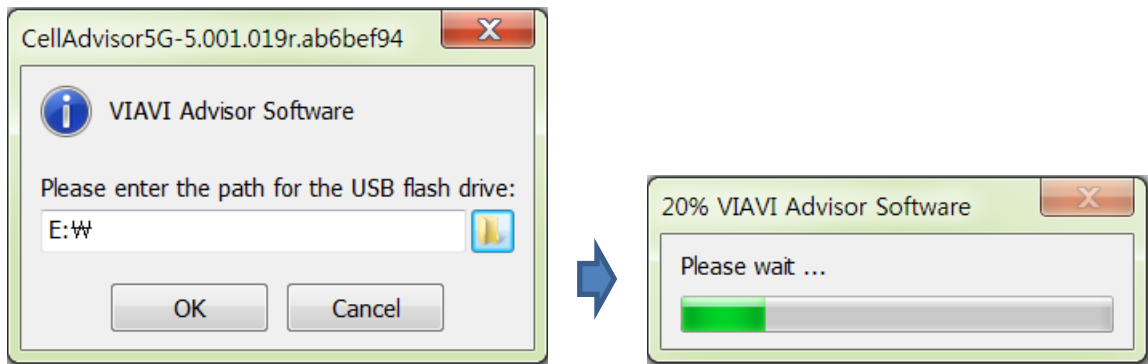
VIAVI Software	Version
JDMapCreator	1.8 and after

What's New in Version 5.090.018r

- Supportability of EMF Analyzers with the following capability:
 - Spectrum
 - Scanner
 - 5GNR Beam Analysis
- Supportability of Blind Scanner
- LTE Performance Enhancement
 - Improved Dynamic range at Multi PCIs
- Supportability of Custom Favorite
- RFoCRI Interference Analyzer Enhancement
 - Adding Ericsson RFoCPRI 9/1 mapping
 - Enhancing Spectrum Speed and GUI
- RF Power Meter
 - Moving Internal RF Power Meter to the Utility of Spectrum Analyzer
 - Supporting External RF Power Meter when connected 730 series RF Power sensor using an USB cable

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:

- Ca5g_caa-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. Open the downloaded zip file and you will see an exe file that needs to be extracted (not copy and paste) to a USB stick.
5. Place a USB stick in PC port.
6. Double-click the .exe file, and you will see a new window asking, "Please enter the path for the USB flash drive", and then select your USB stick OK.
7. Once the extraction is done, you will see a file folder named 'advisor' on the USB stick.
8. 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.
9. Press the **SYSTEM** Touch key, and then select **Upgrade > USB**.
10. Display Upgrade Version, Installed Version and then press the **Start Upgrade** touch key.
11. Upgrade screen changes well and the progress bar continues. The upgrade time is 40 minutes to 50 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 an error that brings wrong value when selecting a Plot Item as Peak in Route Map of Spectrum Analyzer
- Fixed an error that alerts a pop-up asking to configure the corresponding channel band even though correct channel band was already defined
- Fixed an error that displays -999 in EMV value when the signal is not received: The negative value is not applied for average calculation and not displayed
- Fixed multi-tab setup file recall issue
- Fixed an error that incorrect audio sound decode in AM/FM Sound Demodulation

- Fixed an issue in CAA that causes the trace disappeared after performing a calibration with an EZ-Cal kit when the system language is in German.

Known Limitations

- None

Previous Version History

This section provides history of previous firmware versions.

Release 5.086.000r

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	5.086.000r (19/07/2021)
Platform - version	3.2.1-r0. (04/05/2021)

Hardware Configuration

CellAdvisor 5G	Version		
	F001	F002	F030 / F044
RF Module	1.0 / 2.0 / 4.0	1.0 / 2.0 / 1.0	2.0 / 3.0 / 3.0
DSP Module	1103 / 2203 / 3029 / 4144 / 5144 / 7001 / 8144 / 9134	1103 / 2203 / 3029 / 4144 / 5144 / 7001 / 8144 / 9134	1307 / 2309 / 8349 / 8349 / 8349 / 9336
CAA	Version		
Firmware	6.051.001r		
RF Module	1.0		
DSP Module	6001 / 2020/10/20		

Recommended Application Software

VIAVI Software	Version
JDMapCreator	1.8 and after

What's New in Version 5.086.000r

- Fast Gated Sweep
 - Improved sweep speed
- NR Performance Enhancement
 - Improved Dynamic range at Multi PCI

Fixed Problems

- Fixed a bug in the CAA that causes the limit line on the bottom or right window missed from loading in the dual display mode
- Fixed a bug in RFoCPRI quad spectrum view that causes four charts display the same spectrum due to wrong RX map positioning setup

Known Limitations

- None

Release 5.081.000r

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	5.081.000r (18/05/2021)
Platform - version	3.2.1-r0. (04/05/2021)

Hardware Configuration

CellAdvisor 5G	Version		
	F001	F002	F030 / F044
RF Module	1.0 / 2.0 / 4.0	1.0 / 2.0 / 1.0	2.0 / 3.0 / 3.0
DSP Module	1101 / 2203 / 3029 / 4144 / 5144 / 7001 / 8144 / 9134	1101 / 2203 / 3029 / 4144 / 5144 / 7001 / 8144 / 9134	1305 / 2309 / 8347 / 8347 / 8347 / 9336
CAA	Version		
Firmware	6.050.002r		

CellAdvisor 5G	Version		
	F001	F002	F030 / F044
RF Module	1.0		
DSP Module	6001 / 2020/10/20		

Recommended Application Software

VIAVI Software	Version
JDMapCreator	1.8 and after

What's New in Version 5.081.000r

- None

Fixed Problems

- Fixed an error that SSB frequency has a difference of 1 KHz when executing GSCN search

Known Limitations

- None

Release 5.080.032r

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	5.080.032r (10/05/2021)
Platform - version	3.2.1-r0. (04/05/2021)

Hardware Configuration

CellAdvisor 5G	Version		
	F001	F002	F030 / F044
RF Module	1.0 / 2.0 / 4.0	1.0 / 2.0 / 1.0	2.0 / 3.0 / 3.0

CellAdvisor 5G	Version		
	F001	F002	F030 / F044
DSP Module	1101 / 2203 / 3029 / 4144 / 5144 / 7001 / 8144 / 9134	1101 / 2203 / 3029 / 4144 / 5144 / 7001 / 8144 / 9134	1305 / 2309 / 8347 / 8347 / 8347 / 9336
CAA	Version		
Firmware	6.050.002r		
RF Module	1.0		
DSP Module	6001 / 2020/10/20		

Recommended Application Software

VIAVI Software	Version
JDMapCreator	1.8 and after

What's New in Version 5.080.032r

- Frequency Expansion
 - Added Frequency Option up to 30 GHz and 44 GHz with two RF ports
- NR Performance Enhancement
 - Improved algorithm for SSB search
- Other Enhancement
 - Added Auto Preamp feature in 5G NR Analyzer, NSA Analyzer, LTE OTA Analysis, DSS OTA Analysis
 - Added Dual gated sweep

Fixed Problems

- Fixed an error that displays wrong sync indication in 5G NR Beam Analyzer and Route Map
- Fixed an error that decodes the wrong LTE Antenna port
- Fixed an error that CDM JSON file is not created when there is space in the file name to be saved
- Fixed an error that CAL status changes when loading a trace result saved after an EZ-Cal Calibration
- Fixed an error that sets the inappropriate attenuation value and result display when auto scale function is executed in Gated Sweep mode
- Adjusted S-SS SINR's max range scale to 20 in 5G NR Route Map
- Fixed an error that Replayer does not display information for the saved data and time when logging in Interference Analyzer, Real-time Spectrum Analyzer, and CPRI Analyzer

Known Limitations

- None

Release 5.076.002r

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	5.076.002r (11/03/2021)
Platform - version	3.0.2-39f413a. (10/02/2021)

Hardware Configuration

CellAdvisor 5G	Version	
	F001	F002
RF Module	1.0 / 2.0 / 4.0	1.0 / 2.0 / 1.0
DSP Module	1098 / 2203 / 3029 / 4143 / 5143	1098 / 2203 / 3029 / 4143 / 5143
	7001 / 8143 / 9134	7001 / 8143 / 9134
CAA	Version	
Firmware	6.030.001r	
RF Module	1.0	
DSP Module	6001 / 2020/10/20	

Recommended Application Software

VIAVI Software	Version
JDMapCreator	1.8 and after

What's New in Version 5.076.002r

- Frequency / Time / Power Variation Enhancement
 - Improved to change units (nsec/usec) corresponding to scale based on the measurement result
 - Adjusted the trigger information menu location in the Top Information
 - Forced the strongest PCI setting and changed the PCI status to Manual at the measurement

- GUI Enhancement
 - CAA
 - Changed the Mode and Measure icon in the title bar and the Hold icon in the side bar
 - DSS OTA Channel Scanner
 - Added new menus for SSB Auto/Manual Search and PCI Auto/Manual setting
- DSS Performance Enhancement
 - OTA ID Scanner
 - Improved algorithm for power measurement
- Other Enhancement
 - Added Auto Preamp feature in Sweep tuned Spectrum Analyzer, Real-time Spectrum Analyzer, and Interference Analyzer
 - Added a display selection option to plot results in different displays for the LTE chart in NSA Analyzer
 - Added additional LTE-FDD new bands 73, 74, 85, 87, and 88 to the channel standard list
 - Added distance menu setting by each multi carrier in Configuration of Carrier Scanner in 5G NR Signal Analyzer
 - Added a reference level menu to DSS OTA ID Scanner

Fixed Problems

- Fixed an issue that displays the SSB unlock and no SSB detected message when a logged file is loaded in the NR route map measurement
- Fixed a problem that causes the Wi-Fi and Bluetooth option activation issue
- Fixed an issue that a pop-up message and a menu to be selected are overlaid in Full Menu screen

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.

Release 5.070.021r

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	5.070.021r (16/11/2020)
Platform - version	3.0.1-f33895a. (12/11/2020)

Hardware Configuration

CellAdvisor 5G	Version	
	F001	F002
RF Module	1.0 / 2.0 / 4.0	1.0 / 2.0 / 1.0
DSP Module	1098 / 2203 / 3029 / 4143 / 5143	1098 / 2203 / 3029 / 4143 / 5143
CPRI Module	7001 / 8143 / 9134	7001 / 8143 / 9134
CAA	Version	
Firmware	6.030.001r	
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 5.070.021r

- Supportability of 5G NR PDSCH Analyzers with the following capability:
 - PDSCH Constellation
 - EVM vs Subcarrier
 - Allocation Mapper
- 5G NR Enhancement
 - New Decoding
 - Added channel PBCH-DMRS, S-SS RSSI in 5GNR Beam Analyzer, Beam Availability Index, Carrier Scanner
 - Added channel PBCH-DMRS, S-SS RSSI in NSA and DSS OTA ID Scanner
 - Added Multi PCIs decoding
 - New capability
 - Added Multipath Profile
 - Added new indicators for No-SSB detection (Sync) and removed a warning message when the SSB is not detected
 - Added Time offset for beam index in Mult-PCIs
 - Added a feature to enter SSB frequency with GSCN number

- Added a feature to sort beam measurement result in Beam Analyzer with RSRP and PCI
- Added a feature to distinguish different PCIs clearly
- Added P vs T Frame Mask
- LTE Enhancement
 - Added Auto Preamp function in LTE
- Other Enhancement
 - Added Freq/Time Offset variation at multi carriers
 - Added a feature to untie the GOMV file from the MCFV file to zoom in farther as needed
 - Added Beam Display up to 64 on the screen
 - Added EIRP1, EIRP2, SUM, and MAX values in NR Channel Power
 - Added a pop-up window to show all channels if LTE/NR channel is selected in two different frequency range with the same center frequency
 - Added a feature to load a result file with data with map or data only in Route Map
- Supportability of Job Manager
- Unit change from ppm and usec to ppb and ns in Freq/Time/Power Variation (In the case of unit change in thousands, it is to be displayed in ppm and usec)

Fixed Problems

- Fixed an issue that the imported cellsite in Route Map does not move when zooming the map
- Fixed an issue that the color codes do not match with changed Plot Item in Route Map
- Fixed an issue that the activation of the Gated Sweep option does not properly work in Global 30 Days License
- Fixed an issue that the x- and y-coordinates are seen (0,0) in the result csv file for Indoor Map
- Fixed an issue that some SCPI commands are not working and missing
- Fixed an issue that unmatching color codes are displayed when gomv file is loaded
- Fixed an issue that the saved result csv file shows incorrect measurement data in DSS Signal Analyzer
- Fixed an issue that CA5G is unable to get stable measurements in a location with good reception in Time Alignment Error in DSS Signal Analyzer
- Fixed an issue that USB Flash is not recognized in the following menu, System -> video player -> file open

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.

Release 5.066.001r

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	5.066.001r (30/07/2020)
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	1097 / 2202 / 3029 / 4033 / 5014	1097 / 2202 / 3029 / 4033 / 5014
CPRI Module	7001 / 8143 / 9134	7001 / 8143 / 9134
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 5.066.001r

- None

Fixed Problems

- Fixed an issue regarding unable to connect to StrataSync

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.

- If you encounter an error when connecting to the StrataSync server, please install the latest recovery file. (Note that running the recovery file erases all the saved user files in the internal memory. Please make sure to back up all the saved user files in advance)

Release 5.065.041r

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	5.065.041r (23/07/2020)
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	1097 / 2202 / 3029 / 4033 / 5014	1097 / 2202 / 3029 / 4033 / 5014
CPRI Module	7001 / 8143 / 9134	7001 / 8143 / 9134
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 5.065.041r

- Added DSS signal analysis option
- Added NSA signal analysis option
- Improved Probability of Intercept (POI) spec in Real-Time Spectrum Analyzer
- Supported InterferenceAdvisor
- Added logging capability for NR carrier scanner and LTE (FDD/TDD) channel scanner result as csv format

Fixed Problems

- Fixed an issue regarding unable to change Start/Stop Frequency between FR1 and FR2
- Fixed an issue regarding unable to work Preamp for RSRP
- Fixed an issue regarding recognition error for effective beam in NR
- Fixed an issue regarding Gated Sweep trigger drift @ no GPS locking
- Fixed an issue regarding unable to change the Integrated BW in the Channel Power of RF Analysis mode
- Fixed an issue regarding unable to search SSB automatically with proper pre-amp status

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.

Release 5.061.002r

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	5.061.002r (18/05/2020)
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	1095 / 2140 / 3029 / 4033 / 5014	1095 / 2140 / 3029 / 4033 / 5014
CPRI Module	7001 / 8133 / 9134	7001 / 8133 / 9134
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 5.061.002r

- None

Fixed Problems

- Fixed an issue regarding not showing selected manual PCI information when selecting PCI Mode to Manual and Sweep Speed to Fast in 5G NR Route Map
- Fixed an issue regarding unable to change PCI Mode to Manual in 5G NR Carrier Scanner
- Fixed an issue regarding unable to set frequency extension for F002N and F002NO
- Fixed an issue regarding unable to perform RF calibration when executing a self-test

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.

Release 5.060.067r

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	5.060.067r (06/05/2020)
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	1095 / 2140 / 3029 / 4033 / 5014	1095 / 2140 / 3029 / 4033 / 5014
CPRI Module	7001 / 8133 / 9134	7001 / 8133 / 9134
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 5.060.067r

- Supportability of 5G TM Signal Analyzer with the following capability:
 - BS Output Power
 - Occupied Bandwidth
 - ACLR
 - Multi-ACLR
 - Operation Band Unwanted Emissions
 - Transmitter Spurious Emissions
 - Transmit ON/OFF Power
 - Modulation Quality
 - MIMO Time Alignment Error
 - CA Time Alignment Error
- 5G NR Enhancement
 - Added SSB Auto Search mode (Auto / Manual)
 - IQ logging capability in some measurements
 - Added Logging as CSV in Carrier Scanner
- LTE Enhancement
 - IQ logging capability in all measurements except Multi-ACLR and Spurious Emissions
 - Added PCI manual setup to support LTE OTA PCI forcing
 - Added Logging as CSV in Channer Scanner
- Graph plot and ability to save time offset and frequency error in NR and LTE in a log file
- Support Chinese language
- Added a pop-up message after logging to save the result. When you tap Yes, it directs you to save a file type as Result and Result to CSV as a default in Route Map
- Added Sweep Once feature in top panel

Fixed Problems

- Fixed an issue regarding unable to switch Preamp to on when changing mode after using Preamp on in Real-time Spectrum Analyzer
- Fixed an issue regarding reverse limit Pass or Fail judgement in CAA one port cable
- Fixed an issue regarding unable to input a specific frequency, SCS, and SSB frequency in 5G NR Carrier Scanner
- Fixed an issue regarding wrong Preamp 1 and 2 status (gray-out) when changing to DNC frequency range

- Fixed an issue regarding logging file compatibility in old Real-time Spectrum Analyzer and Interference Analyzer
- Fixed an issue regarding unable to do PCI forcing when manually setting PCI in LTE OTA Control Channel

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.

Release 5.055.025r

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	5.055.025r (19/12/2019)
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	1095 / 2140 / 3029 / 4033 / 5014	1095 / 2140 / 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 5.055.025r

- Added Beeper On/Off function in System Settings menu when IF overloaded.

Fixed Problems

- Improved Spectrum Noise Level in RFoCPRI 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.

Release 5.055.021r

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	5.055.021r-1 (13/12/2019)
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	1095 / 2140 / 3029 / 4033 / 5014	1095 / 2140 / 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 5.055.021r

- Added new hardware frequency options (F018 and F018-O) up to 18.5 GHz.
- 5G NR Enhancements

- Improved NR beam decoding algorithm
- Improved SINR measurement result with a new algorithm
- Added PS-SNR into 5GNR OTA Beam analyzer and Carrier Scanner
- Added Beam Availability Index into NR OTA analysis measurement
- Added EIRP (Equivalent Isotropically Radiated Power) into NR Channel Power measurement
- Added PS-SNR into LTE OTA ID Scanner measurement
- RtSA POI enhancement from 100 usec to 34 usec.

Fixed Problems

- Usability enhancement by improved Calculated PIM operation method and the interwork of frequency & span in PIM Detection menu.
- Added SCPI commands for frequency Error & Time Error of NR Carrier Scanner

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.

Release 5.050.022r

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.

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	

CellAdvisor 5G	Version	
	F001	F002
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.

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.

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 5G NR 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
22125691 rev 015	Dec 17, 2019	5.055.021r Firmware Release
22125691 rev 016	Dec 26, 2019	5.055.025r Firmware Release
22125691 rev 017	May 07, 2020	5.060.067r Firmware Release
22125691 rev 018	May 21, 2020	5.061.002r Firmware Release
22125691 rev 019	Jul 23, 2020	5.065.041r Firmware Release
22125691 rev 020	Jul 30, 2020	5.066.001r Firmware Release
22125691 rev 021	Nov 18, 2020	5.070.021r Firmware Release
22125691 rev 022	Mar 12, 2021	5.076.002r Firmware Release
22125691 rev 023	May 12, 2021	5.080.032r Firmware Release
22125691 rev 024	May 21, 2021	5.081.000r Firmware Release
22125691 rev 025	July 21, 2021	5.086.000r Firmware Release
22125691 rev 026	Aug 18, 2021	5.090.018r Firmware Release



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