

## Version 19.3.0

- Marker values now round properly
- Error correction information (for example F1) in the trace status field is hidden when the correction is turned off

## Version 19.1.1

- Updated bootloader R60 (rev.3)

## Version 19.1.0

- Added automation commands for confidence check and ACM orientation function
- Fixed a bug where 'dB' was shown on the trace status field for linear display format

## Version 18.4.0

- Optimized data averaging algorithm

## Version 18.3.3

- Fixed an issue related to cycle time when having multiple channels
- Updated the COM and SCPI programming manuals

## Version 18.3.0

- Fixed an error with LabVIEW AutoCal function

## Version 18.2.6

- Disabled the "new analyzer model detected" dialogue boxes when the program is run in invisible mode

## Version 18.2.3

- Fixed a bug related to automation

## Version 18.2.1

- Fixed a bug where the error dialogues pop up whenever the application was turned on/off constantly.

## Version 18.2.0

- Added the SCPI command to load the touchstone file MMEM:LOAD:SNP

## Version 18.1.5

- Fixed a bug with COM automation

## Version 18.1.2

- Additional calibration kits are added to the cal kit table: S2611, N1801, Sg11T and N1.2

## Version 18.1.0

- Improved the auto-detect functionality
- Added the possibility of connecting a device with the specified serial number
- Added the following SCPI commands:
  - DISPlay: UPDate [: IMMEDIATE]
  - DISPlay: ENABLE
  - TRIGger [: SEQuence]: WAIT {HOLD | MEASURE | WAIT}
- Added the ability to turn on/off cycle time
- Added the ability to turn on/off the display update

## Version 17.4.4

- Fixed a bug related to the de-embedding function

## Version 17.4.3

- Fixed a bug which caused an error when saving polar graph into a \*.csv file

## Version 17.4.2

- Added support for ACM2509 (version 2)

## Version 17.4.1

- Fixed a bug related to the stimulus output power
- Integrated the data from S1P/ S2P file to the calibration file

## Version 17.4.0

- Modified the control of time domain mode. It is now available under the 'Analysis' menu
- Extended set of data trace formats (Smith, Polar, etc.)

## Version 17.3.2

- Automation commands have been added to control Avoid Ripple feature: SCPI.SYStem.ARIPple.STATe and SYSTem:ARIPple [: STATe]
- Improved algorithm avoiding ripple for R180 devices

## Version 17.3.1

- Fixed a bug related to marker behavior on stored traces when using polar chart display formats

## Version 17.3.0

- Fixed a bug in R60/R180 Demo Mode

## Version 17.2.5

- Driver and installer are digitally signed using an enhanced certificate. Enables driver installation on all Windows versions including fresh (non-upgraded) installations of Windows 10, version 1607 with Secure Boot ON.
- "Reflectometer" renamed "1-Port VNA".

## Version 17.2.2

- Fixed a bug related to "SCPI.CALCulate(Ch).SElected.MARKer(Mk).X = Value" behavior. Now COM and SCPI operations read and set a delta value if the reference marker is enabled. Also modified reading of Y values.
- Fixed a bug related to ACM Calibration and Confidence Check feature. The bug was introduced starting from version 16.3.6.

## Version 17.2.0

- Added COM commands to read and write data of calibration standards for performance testing

## Version 17.1.5

- Added vertical functionality to the limit line feature

## Version 17.1.4

- Added COM and SCPI commands for deleting the memory trace in a channel
- Fixed a bug related to turning off the signal generator on TR5048 and TR7530
- Added COM and SCPI commands for recording calibration coefficients

## Version 17.1.3

- Fixed a bug related to the auto port extension algorithm

## Version 17.1.2

- Fixed a bug associated with launching a new window scan when using the channel placement function
- Optimized drawing of graphs when using a large number of points

- Added SCPI and COM commands for data functions
- Fixed a bug in the operation of the TCP server when using multiple clients

## Version 17.1.1

- Fixed a bug related to traces loaded from a state file being overwritten by inadvertent sweeping immediately after loading

## Version 17.1.0

- Added calibration kit Sg11
- Increased size of calibration kit list to 50
- Added calibration kit descriptions

## Version 16.4.2

- Added display for temperature readout
- Fixed a bug related to the capitalization of Touchstone files
- Fixed a bug causing a crash when certain settings were input to port extension
- Fixed a bug that caused Demo mode to hang when using segmented sweep

## Version 16.3.5

- Fixed a bug causing a crash when using automatic port extension
- Fixed a bug related to SCPI commands including SENS:CORR:EXT:PORT:xxx
- Improved the Phase Offset feature so it is no longer limited to a range of +/- 360 degrees
- Improved auto-detection algorithms for connected devices
- Fixed a bug related to limit line behavior in the log sweep mode

## Version 16.3.1

- Fixed a bug related to programmatically defining a segment table when the first segment has a single point

## Version 16.3.0

- Added default to last path for each save and load file according to type, including across sessions
- Changed output power adjustment to use increments of 0.1 dB
- Added an option to fix the grid. When enabled, the plot is always divided into 10 vertical grid lines
- Added files regserver.bat and unregserver.bat to installer package, for easier registration of the COM server
- Improved calibration status and progress indications when used with an ACM module
- Fixed the commands SCPI.CALCulate.SELected.MARKer.Y and CALCulate # [ SELected] MARKer # Y; data is now returned correctly
- Fixed a bug related to recall of State files of type All with time domain enabled
- Markers now persist across switches between frequency and time domain
- During calibration, measurement results are now displayed in the measurement window
- Added support for COM DCOM and SCPI commands for charting a memory trace and data trace

## Version 16.2.1

- Added a control for displaying data and/or memory traces
- Added markers capability to the memory trace
- Fixed a bug related to simultaneous use of Gating and Z-transform

## Version 16.2.0

- Added automatic main window and font size adjustments according to screen resolution
- Disabled access to plug-ins menu when COM server is unregistered
- Added the software version number to the header of the main window

## Version 16.1.7

- Improved buffering of SCPI commands for TCP Socket

- Fixed a bug in the SCPI command for calibration of THRU
- Added independent control of marker color

## Version 16.1.4

- Fixed a bug related to use of socket interface in binary data format (REAL, REAL32)
- Added power calibration support for the Keysight U8481A power meter
- Added support for recall of \*.ckd files created with S2VNA and S4VNA
- Added a COM command for control of standby mode SCPI.SYSTem.STANdby

## Version 16.1.2

- Fixed a bug related to recalling Channels A, B, C, and D

## Version 16.1.0

- **IMPORTANT:** All instruments in the R Family (1-Port VNAs) now share a common installer and software; device type can be dynamically detected or manually set on the System->Misc Setup menu. Version 16.1.2 supports the Planar R54 and R140 devices
- **IMPORTANT:** This software release includes significant changes to of demo/simulator mode: During installation, select whether the software should run in a demo/simulator mode or not. This setting can be changed later on the System->Misc Setup menu
- **IMPORTANT:** The version number now reflects the year of release, major, and minor revisions; it is unified across software families
- Updated the LabView driver to match the new COM interface name
- Updated Programming Examples and Guides to reflect the new COM interface name
- Added independent marker color control and improved the color theme of the user interface
- Changed the application icon

## Version 15.4.0

- Unified the software installer across all Planar series reflectometers (R family of instruments)
- Changed the COM interface to the more universal name: IRVNAPtr
- Added a new more universal name for the COM server: RVNA.Application
- Added a panel at the top of the UI with "quick buttons"
- Fixed a bug related to disabling output power via COM interface; added new COM command for RF output control

## Version 2.6.0

- Added SCPI interface for remote control via IP/TCP socket
- Added SCPI programming guide and sample program in Visual C ++
- Added error messages related to failed loading of an S2P file
- Added a graphical indication of gating time range when time domain mode is enabled
- Added sliders for dialogue boxes to scroll through lists
- Added the ability to run custom extensions (plugins)
- Added plugin for simulation of matching networks defined by circuit elements
- Added ability to erase user characterizations from the ACM
- Added calibration kit definitions for Ng11 / g12
- Fixed a bug related to ACM information requests via the COM interface
- Optimized memory usage when working with a large number of points

## Version 2.5.9

- Fixed a bug in the COM server interface related to obtaining raw complex data
- Added version information to the splash screen
- Added Real and Imag display format options
- Updated and reformatted Operating Manual and Programming Manual

## Version 2.5.8

- Fixed a bug in the COM server related to the Touchstone file interface

## Version 2.5.7

- Fixed a minor bug related to the Smith Chart display Scale setting
- Added a trace pointer to Smith Chart and Polar display formats
- Added support for SCPI commands via VXI-11 remote management protocol (software is available on request)Version 2.5.6
- UI changed to resolve overloaded dialogs
- Fixed a minor bug when working with tables, including an issue related to scrolling mode after entering data
- Fixed a bug in the COM server associated with marker numbering in the calculation of statistics over a range
- Fixed a bug which could cause an application crash when switching from external to internal trigger
- Implemented segmented scan with delay enabled for points

## Version 2.5.5

- The maximum number of points is increased to 100001
- Fixed a minor bug when saving / restoring calibration kits; data save/restore was applied to the active kit instead of the kit selected in the list

## Version 2.5.4

- In absolute measurements, phase is now normalized to the reference channel
- The software has a single COM-server (type library) for all instruments of the R series
- LabView driver released (CMT R Series VNA)

## Version 2.5.3

- Fixed a bug causing trace statistics function to not work in the absence of markers
- Fixed a typo the command group SCPI.SENSE.SWEep.REVerse
- Eliminated fading demo mode when changing the parameters of the sweep
- Fixed a bug related to stimulus information displayed inside softkeys

## Version 2.5.2

- Added waveguide calibration (1/8 Offset Short, 3/8 Offset Short, Load)
- Added waveguide calibration kits (WR284, WR229, WR187, WR159, WR137 A-INFO)
- Fixed error related to accessing the calibration menu

## Version 2.5.1

- Fixed bug in math traces related to Z transform
- Fixed a bug related to multiple channels

## Version 2.5.0

- Added reverse frequency sweep feature
- Added feature to turn off the frequency axis and marker times/frequencies

## Version 2.4.9

- Modified the frequency synthesis algorithm to increase the precision of frequency adjustments
- Expanded the list of IF filters to include 1 Hz
- Changed the automatic frequency adjustment mechanism for the x2 devices
- Added interactive website and support email in the About dialog box
- Fixed data for N1.1 calibration kit

## Version 2.4.8

- Improved USB functionality related to PC Sleep/Standby and wake

## Version 2.4.7

- Added trace allocation/maximization within the channel window
- Added control of the user interface color scheme
- Fixed a bug in the programming command for screenshot color
- Added function to save/restore calibration kit files

## Version 2.4.6

- Improved code stability related to use of calibration standards defined by S1P files

## Version 2.4.5

- Fixed a bug related to saving state after disabling the reference marker

## Version 2.4.4

- Added display of center while selecting "Center/Span" for stimulus
- Fixed minor issues in VSWR calculation
- For trigger Mode Single/Hold, added a manual Trigger button to start the sweep
- Moved the standby softkey to the System menu
- Changed marker edit behavior when reference marker is enabled; now can edit in the offset or absolute frequency
- Bandwidth search supports notch filter, for searching from null up to a specified level
- Added selection of units for Touchstone files: Hz, kHz, MHz, GHz
- Fixed N612 calibration kit coefficients
- Fixed bug in cable loss correction (DTF Return Loss)

## Version 2.4.1 - 2.4.3

- Fixed error when loading S2P for embedding/de-embedding
- Minor changes in the interface
- Bug fixes in the COM/DCOM command for Save calibration
- Support ACM via COM/DCOM

## Version 2.4

- Examples of COM/DCOM now work with the English version of MS Excel.
- Added support for printing with chart templates into MS Word; expanded print menu.
- Added support for loading S1P, S2P files into memory as the active trace, the memory trace or measured S-parameters (which stops scanning).
- Extended menu persistence (condition, condition + calibration + track condition, all options)
- COM/DCOM command set supplemented to store the calibration file
- Implemented independent calibration for each channel
- Added the ability to save the calibration to file and restore from file
- Added option for port extension
- Added automatic port extension
- Added Max Hold function
- Added option to save/restore the state of the channel
- Fixed bug related to marker behavior when at the top of the chart (marker now flips)
- Added automatic driver installation and registration of COM server to installer
- Added support for Automatic Calibration Modules ACM6000T, ACM8000T

## Version 2.3

- Added calibration status display to the channel window
- Supplemented controls for inputting electrical delay and phase shift
- Moved submenu Gating to submenu Analysis
- Added ability to load Touchstone files into memory trace data (S11) (\*. S1p, \*. S2p)
- Added support for negative values of the stimulus (time/distance) in DTF mode
- Fixed a bug that occurs while switching averaging over N- Emersion mode measurements and / or Exceptions impedance conversion circuits

## Version 2.2

- Fixed a bug in the Display menu dialogue
- Updated Operating Manual
- For R140x2, synchronization mode has been added on the input trigger and associated mode frequency of the reference oscillator

## Version 2.1

- Fixed a bug in the COM/DCOM "Remote" Operation Mode

## Version 2.0

- Added ability to maximize a channel window.
- Added control of the synchronization source
- Any number of measuring points can be set up in an interval from 2 to 16,001
- Added time selection (Gating)
- Fixed COM/DCOM issue with starting up multiple copies of the application
- Added automatic registration of COM server at startup
- Added blocking/unblocking user intervention to COM/DCOM
- Added control on visibility of the main window to COM/DCOM
- Updated Programming and Operating Manuals

## Version 1.9

- Fixed issue with recalling user state with calibration.
- Fixed issue with incorrect number of frequency points being returned to COM client when segment frequency scan is use

## Version 1.8

- Added additional program switches to be used by authorized service centers.

## Version 1.7

- Fixed issue with saving trace data using csv format in the time domain for distance units of measure (meters, feet, etc.).
- Added ability to disable system correction

## Version 1.6

- Fixed incorrect averaging of complex data when averaging over n-measurements
- Added selection, saving, recall and editing cable description tables