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, S911T and N1.2

Version 18.1.1
- Fixed a bug related to the TCP socket interface

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
- COM / SCPI automation commands have been added to control the vector voltmeter mode
- Integrated the data from the S1P / S2P files to the calibration kit file

Version 17.4.0
- Improved the functionality of vector voltmeter mode

Version 17.3.4
- Added vector voltmeter mode function
- Fixed a bug related to ACM calibration error when using segmented sweeps

Version 17.3.3
- Improved data resolution of memory trace

Version 17.3.2
- Isolation calibration step has been added to one path 2-port calibration

Version 17.3.0
- Fixed a conflict between the old and the new driver versions

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
- Unlocked IFBW range up to 1 Hz

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.

Version 17.2.0
- Added COM commands to read and write data of calibration standards for performance testing
- Fixed a bug related to malfunctioning of the embedded print function

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 S911
- Increased size of calibration kit list to 50
- Added calibration kit descriptions

Version 16.4.2
- 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
- Added automatic port extension to the TR family of 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 16.1.3
- Fixed a bug related to recalling Channels A, B, C, and D

Software Release Notes

TR Family
Non-reversing 2-port VNAs of Planar and TR Series

Planar TR1300/
TR5048/TR7530

COPPER MOUNTAIN
TECHNOLOGIES

Version 16.1.2
- Fixed a minor bug related to font size on certain buttons in the GUI

Version 16.1.0
- IMPORTANT: All instruments in the TR Family (non-reversing 2-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 TR1300/1, TR5048, and TR7530 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 to display properties
- Changed the application icon

Version 15.4.0
- Unified the software installer across all non-reversing 2-port VNAs (TR family of instruments)
- Changed the COM interface to the more universal name: ITRVNAPtr
- Added a new more universal name for the COM server: TRVNA.Application

Version 0.8.15
- 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 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 N911 / 912
- Fixed a bug related to ACM information requests via the COM interface
- Optimized memory usage when working with a large number of points
  Fixed a bug causing frequency offset at low frequencies, including at 300 kHz

Version 0.8.14
- Added support for plugin programs
- Fixed a bug in the COM server interface related to obtaining raw complex data
- Added version information to the splash screen
- Added support for keyboard input of metric prefix (p, n, u, m, k, M, G)
- Enhanced management of external trigger (TR5048 and TR7530)
- Added control of overload protection (TR5048 and TR7530)
- Fixed display of Smith Chart scale
- Reworked programming examples and guides

Version 0.8.13
- Fixed the frequency offset mode algorithm. Now two measurements are used: vector S11 and scalar S21). User calibration is disabled and factory receiver calibration is used
- Added support for trace math when frequency offset mode is enabled
- Markers reflect the true receiver port measurement frequency when frequency offset mode is enabled
- 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 0.8.11
- Fixed a bug in the COM server associated with marker numbering when marker statistics are calculated over a specified

frequency range

Version 0.8.10
* 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 TR series
* LabView driver released (CMT TR Series VNA)

Version 0.8.9
* 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 0.8.8
* Fixed a bug related to power unit labeling

Version 0.8.7
* Added user power calibration
* Fixed a bug related to loading of some state files
* Fixed a bug in math traces related to Z transform

Version 0.8.6
* Added control trigger (trigger on the stroke of the trigger to the point)

Version 0.8.5
* Changed reverse frequency sweep to be a channel-wise setting
* Added warning message when the ACM is used outside its characterized frequency range
* Fixed COM/DCOM bugs related to calibration of channel 2+, Thru, and selection of port for extension
* Improved display of time and frequency scales along the X-axis
* Added new commands for automation as documented in the programming manual

Version 0.8.4
* Added reverse frequency sweep feature
* Added feature to turn off the frequency axis and marker times/frequencies
* Added Cable Selection, Velocity Factor, and Cable Loss as new time domain features
* Added Reflection Type setting for time domain measurements (one way or round trip)
* Fixed spurs introduced with maximum number of points increase in version Version 0.8.2

Version 0.8.3
* Fixed a bug related to the sign of marker bandwidth search function results when accessed through COM/DCOM
* Fixed COM/DCOM command for IF bandwidth to disallow prohibited values

Version 0.8.2
* Improved handling of USB connection status following PC hibernate/sleep and wake cycle
* Increased maximum number of measurement points to 200,001 for TR5048 and TR7530

Version 0.8.1
- Improved control of trace allocation and maximization
- Changed marker placement to be proportional to graph size

Version 0.8.0
- Fixed bug in color property commands for saving "screenshots" through COM/DCOM
- Added saving and loading of calibration kits
- Fixed bug related to timing of single measurements made through COM/DCOM; in some cases, control was returned prior to completion of the measurement
- Added Trace Allocation and maximization of traces via softkey

Version 0.7.17
- Removed limitations on trace format according to measurement mode

Version 0.7.16
- Fixed a bug related to COM interface and server release during program termination

Version 0.7.15
- Fixed a bug related to saving state after removing the reference marker

Version 0.7.14
- Added display of center while selecting "Center/Span" for stimulus
- Fixed minor issues in VSWR calculation
- 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
- Added Exit submenu to avoid inadvertent exit
- Changed behavior of color selection when inversion is enabled
- Added a button for auto-scaling all traces simultaneously
- Duplicated IF bandwidth selection on Stimulus menu

Version 0.7.11-Version 0.7.13
- Enabled polar and Smith Chart formats for transmission coefficients.
- Minimized registry access
- Optimized algorithm for adjustment of the mirror channel at startup
- Changed the averaging algorithm behavior

Version 0.7.10
- Added print to MS Word with templates
- Added calibration kit parameters for N611, N612
- Fixed bug related to saving trace data in the state file

Version 0.7.9
- Added loading Touchstone (S1P, S2P) files into memory the active trace, the memory trace, or measured S-parameters (stops scanning)
- Extended menu for saving (trace, trace + calibration + state, all available options)
- COM/DCOM command set supplemented to store the calibration file
- Increased the maximum number of channels to nine
- Implemented independent calibration indication for each channel
- Added option for port extension
- Added Max Hold function
- Added option to save/restore the state of the channel
- Fixed bug related to marker behavior near the reference line; marker now flips when off screen
- Added automatic driver installation and registration of COM-server to installer

Version 0.7.8
- Added support for Automatic Calibration Modules ACM6000T, ACM8000T
- Added loading to the memory trace from Touchstone files (S1P, S2P)
- Added display of calibration status in the channel window
- Fixed a bug related to averaging with impedance conversion

Version 0.7.7
- Fixed a bug in the COM/DCOM "Remote" Operation Mode

Version 0.7.6
- Added ability to maximize the channel window
- Added mouse control for the input fields
- Fixed incorrect unit of measurement for the markers on the Smith charts
- Added to the COM/DCOM blocking/unblocking manual program control management program
- Added to the COM/DCOM control of visibility of the main program window
- Updated Programming and Operating Manuals

Version 0.7.5
- Added example of COM programming with LabVIEW
- Fixed issue with retaining user's calibration after recalling stats
- Fixed issue with incorrect number of frequency points being returned to COM client when segment frequency scan is used
- Fixed issue with rounding segment boundaries to integer

Version 0.7.2 – Version 0.7.4
- Fixed issue with exporting data into .S1P format (touchstone); S21 option was removed and the ability to export .S2P format was added.
- Fixed issue with saving trace data using csv format in the time domain for distance units of measure (meters, feet, etc.)
- Added additional program switches to be used by authorized service centers

Version 0.7.1
- Fixed incorrect handling of complex data in averaging over n-dimensions

Version 0.6.9 – Version 0.7.0
- Added COM/DCOM server to the program. The installer included the first version of programming manual

Version 0.6.8
- Added distance units of measure (meters or feet) for use in the time domain; introduced the parameter Velocity Factor