Version 26.2.1

- Added support for SN0904

Version 25.4.1

- Added support for ACM2202

Version 25.1.2

- Fixed a bug with the FIFO buffer not working with the S5243
- Linux version now detects new VID VNAs

Version 25.1.1

- Fixed a bug with FET1854 devices showing “Factory Failure: xALC” error message

Version 24.4.2

- Added ACM user characterization capability for 2-port ACMs

Version 24.3.4

- Fixed a bug with WinUSB driver. The driver was missing the configuration file.

Version 24.3.3

- Added support for Mini Circuits USB power sensors. Note that these power sensors does not have zeroing functionality
- Added support for new CMT USB VID

Version 24.2.2

- Data is now saved without frequency information in high security mode

Version 24.1.5

- Added SCPI command for naming traces “DISP:WIND:TRAC:PAR:ALI”
- Removed “Analyzer model/Serial number” and “Enable Demo mode” pages from the installer

Version 24.1.3

- Added “frequency” in trace calculator

Version 23.4.7

- Added F7511, N1.2, N3.5 calibration kit definitions

Version 23.4.1

- Fixed a bug with VNA.SCPI.SENSe.SEGMent.DATA COM function

Version 23.3.4

- Removed executables in the programming examples for IT security reasons

Version 23.3.3

- Added support for new Cobalt VNA hardware releases

Version 23.2.4

- Fixed a bug in the Custom Frequency Extender menu

Version 23.2.3

- Added support for CobaltFx FET-WR series Frequency Extenders (System > Misc Setup > Frequency Extender)

Version 23.1.2

- Fixed spikes seen at certain frequencies in the Cobalt 20 GHz VNAs. These spikes were visible only with a narrow frequency span.

Version 22.3.2

- Fixed a bug related to connection of the LadyBug Power Sensor with new drivers

Version 22.3.1

- Added the option to control the auxiliary source's power in the segment table

Version 22.2.3

- Fixed a bug with **SENS:CORR:INF?** command where the query returned the current date and time instead of the actual for a previously saved state file

Version 22.2.2

- Added SCPI command to support 4-port calibration using a 2-port ACM

Version 22.2.1

- Extended the lower frequency limit for the RF and the LO output from the C4xxx VNAs when using custom frequency extenders

Version 22.1.0

- New USB driver was implemented starting 22.1.0 based on WinUSB. This new driver resolves issues for users having problems with the memory integrity feature enabled on newer Windows 10 PCs.

Version 21.4.1

- Added N1802 cal kit to the table
- Added a SCPI command *MMEM:LOAD:SNP:FREQ <number>* to choose between keeping current stimulus settings or allow interpolation when loading a touchstone file using MMEM:LOAD:SNP command
- Added 2-port 1-path calibration for ACMs

Version 21.3.4

- Fixed a bug where the system impedance changed to the offset impedance value when using unknown thru

Version 21.3.3

- Fixed a bug where the RF output was set to max whenever toggled between on/off state

- Added ‘Offset Unit’ and ‘Offset Permittivity’ buttons under standards definitions in the calibration menu

Version 21.3.2

- Fixed a bug where the measurements showed a 15 dB gain when using trigger external trigger with trigger per point setting
- Fixed an issue related to trigger delay setting where the actual delay was half the entered value
- Added SCPI commands for offset adjust menu

Version 21.3.1

- Added SCPI commands to select ports under scalar mixer calibration
- Added SCPI command to support ACMs for Scalar and Vector Mixer Calibrations
- Fixed a bug related to time domain gating with one way reflection type

Version 21.2.5

- Supports new C2409s shipped after May 2021 which includes new factory calibration to reduce ripples
- Added SCPI command to support cycle time functions
-

Version 21.2.1

- Fixed bug with selecting ‘Ref Source’ from the drop-down menu
- Fixed bug related to writing user characterization into the ACM with proper indexing

Version 21.1.7

- Added support to assign VNA serial numbers through SCPI command or command line interface */serialnumber:<num>* (or see command help S2VNA /?)
  The SCPI command is *SYST:CONN:SER:NUMB* (or see the programing manual)
- Added a field to input DC value correction in time domain
- Fixed bug with *CALC1:DATA:FDAT?* SCPI command for Smith and Polar formats when selecting various output Log/Phase, Lin/Phase, Re/Im, R/X, G/B

Version 21.1.6

- Added SCPI command for ‘Theory’ selection under Port Z conversion menu

Version 21.1.5

- Added ACM support for Scalar Mixer Calibration method

Version 21.1.1

- Fixed bug with Vector Mixer Calibration when the operating frequency exceeded instrument's frequency range

Version 20.4.1

- Added ACM support for Vector Mixer Calibration, adapter removal
- Removed '+' sign in saved touchstone files

Version 20.2.4

- Realized option for saving Touchstone file including Trace Transformation (Gating and Smoothing)
- Socket binary transfer terminates by NL

Version 20.1.3

- Added the Save/Recall calibration only feature. The SCPI commands:

  MMEM:LOAD:CHAN:CAL

  MMEM:STOR:CHAN:CAL

Version 20.1.2

- Fixed the Loss Compensation bug in power calibration
- Added support for the university series VNAs: CMT808U
- Added SCPI and COM commands for the reverse sweep feature
- Added support for LadyBug LB59xx power sensors.
- Added the Step Size feature for the most used numeric input fields (the feature activates on the right mouse click on the field)

Version 20.1.1

- Fixed the ACM Auto Orientation Error when the front panel loops are open

- The frequency range of the custom frequency extenders extended by 4%
- Enhanced CW time accuracy

Version 19.4.1

- Added support for ACM2506 and ACM2504

Version 19.3.2

- Added SCPI support for the vector mixer calibration
- Added *.chm format SCPI manual

Version 19.3.1

- Added the waveguide correction in the electrical delay function

Version 19.3.0

- Added ACMB2506 support
- Turns off the RF power when the software terminates
- Added SCPI/COM command for one path 2-port calibration using AutoCal Module (SENS:CORR:COLL:ECAL:ERES)
- Added SCPI/COM command for confidence check using AutoCal Module (SENS:CORR:COLL:ECAL:CCH)

Version 19.2.6

- Added COM command for setting separator symbol in the Touchstone file (SCPI.MMEMory.STORe.SNP.Separator)

Version 19.2.5

- Changed the SCPI command SYST:READy? behavior in the S5180 model. Now the READY state arises after the frequency alignment step

Version 19.2.4

- Fixed the SCPI compound statement bug
- Added SCPI command for setting separator symbol in the Touchstone file (MMEM:STOR:SNP:SEP)

Version 19.2.1

- Fixed bug in the auxiliary source function for C1420 and C2420

Version 19.1.1

- Added support for Keysight U2000 Series USB power sensors
- Added support for Keysight U8480 Series USB power sensors

Version 18.4.3

- Added COM commands for Differential and Common Mode Z Conversions

Version 18.4.2

- Added SCPI commands for Differential and Common Mode Z Conversions

Version 18.4.1

- Implemented Differential and Common Mode Z Conversion functions for balanced measurements
- Added Adapter Removal/Insertion function
- Added Unknown Thru Addition function

Version 18.3.3

- Added support for ACM4520.1
- Added print to file function with uncial files names

Version 18.3.2

- Added an option for saving the touchstone file format with either Space or Tab as the separator character
- Fixed a bug in the Time Domain function when the number of points set was more than 50,000

Version 18.3.1

- Fixed a bug with the Vector Mixer Calibration menu. Now the *.s2p file of the mixer automatically de-embeds upon completing the calibration process

Version 18.2.4

- Added T4311 and Z5411 to the predefined list in the calibration table

Version 18.2.3

- Fixed an issue with the initialization of the software

Version 18.2.2

- Added SCPI commands for the Auxiliary Source function (see the SCPI Programming Manual). The commands start with SOUR:AUX
- Added the ability to customize the language shown on the VNA GUI using the language template file (DIY localization) and the language select menu

Version 18.2.1

- Added support for the FET1854 extenders
- Improved the Auto-orientation algorithm for poorly matched test setups

Version 18.2.0

- Improved the Automatic Calibration Module (ACM) functionality with the software
- Fixed a bug with calibration on 4-port Cobalt VNAs when the number of points were greater than 1201
- Fixed a bug with the *.CSV file output format when the saving Polar and Smith displays
- Changed the recall state logic. Now recalling the “State Only” file retains the current calibration

- Fixed a bug in the HiSLIP protocol and the SCPI command *OPC?
- Fixed the "CMT S2 and S4 VNA" LabView driver from the "Programming Examples and Guides"
  - The data fetch vi's had unnecessary delay that slow down the execution
  - Fixed a bug in the "Send Trigger.vi"
  - Fixed a bug in the "Wait for Operation Complete.vi"

Version 18.1.5

- Added the definitions of the new calibration kits: S911T, N1801 and S2611
- Fixed a few minor bugs

Version 18.1.2

- Updated the operating manual

Version 18.1.0

- Implemented S-parameters renormalization transformation to the complex reference impedance
- Added the Frequency Auto Adjust Function while measuring a mixer with an internal LO without the ability of having common reference source

Version 17.3.6

- Added support for the new ACM2509 hardware version 2.0, R&S NRP110T power sensor and FET1854 frequency extenders

Version 17.3.2

- Introduced new LabView driver using SCPI commands and VISA library
  (The previous driver used COM commands and is not recommended for new developments)
- Added memory FIFO function, up to 8 memory traces
- Fixed limit test issue with log sweep mode
- Fixed a bug with the port selection in the 3-port SOLT calibration

- Improved termination of the VNA application when closing the COM reference

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.
- Added Invisible Mode feature. Wherein a user can hide the GUI, while programmatically access all the functions

Version 17.2.2

- Added support for the models C4409, C2409
- Fixed a bug related to conversion of S-parameters from a loaded Touchstone file to differential form
- Added the ability to assign a marker's color

Version 17.2.0

- Added HiSLIP protocol functionality: an update to TCP/IP functionality of the instrument
- Updated SxVNA programming manual to reflect additional SCPI commands

Version 17.1.2

- Improved the CSV save function with one-click, multi-trace saving and advanced formatting options

Version 17.1.1

- Added new trigger functions: averaging trigger and calibration trigger source (including point trigger for calibration)

Version 16.4.1

- Added a new Security Level feature to hide frequency values during measurement
- Fixed a bug related to manual entry of calibration kits. Some classes did not appear for assignment on ports 3 and 4

Version 16.3.2

- Fixed a bug SCPI command interface bug related to the SELected]:MARKer:FUNCtion:DOMain group of commands

Version 16.3.1

- Fixed a bug related to establishing a TCP Socket Server connection after calibration

Version 16.3.0

- Added a new automation interface: SCPI commands can be sent over TCP/IP socket

Version 16.2.5

- Fixed a bug related to discrepancy between differential parameters on the Smith chart in comparison with reflection impedance calculated by the conversion function

Version 16.2.2

- Fixed a bug related to SCPI.SENSe(Ch).CORRection.COLLect.ECAL.SOLT4 with channel numbers other than 1

Version 16.2.1

- Fixed a bug with the SCPI.SYSTem.TERMinate command

Version 16.2.0

- Added COM commands related to Analysis > Fixture Simulator > Balun and Analysis > Fixture Simulator > De-embedding S4P
- Added COM commands to perform 3-port and 4-port calibration using a 4-port Autocal Module
- Fixed a bug related to Trigger Source & Ext Trig Event buttons
- Fixed a bug related to saving Balun measurements into a state file
- Fixed a bug related to Smith chart (R + jX) marker data indication when the Balun feature is ON

Version 16.1.0

- IMPORTANT: All instruments in the S4 Family (4-Port VNAs) now share a common installer and software; instrument type can be dynamically detected or manually set on the System->Misc Setup menu. Version 16.1.0 supports the Planar 808 instrument
- IMPORTANT: This software release includes significant changes to the name of the COM interface. Legacy programs written in C# and VB.NET may experience issues related to the COM server name change, necessitating a code modification and recompile
- IMPORTANT: This software release includes significant changes to 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
- The program can be limited to connect with any particular VNA instrument type and/or serial number
- Added two kits (N611/12/911/12 S/N Axx, Bxx and N611/12 S/N 4xx, 5xx, 6xx) to the predefined calibration kit table
- Changed the application icon
- Added simulation mode for forthcoming instruments
- Added Reverse Sweep (sweeping from higher frequencies to lower frequencies)
- Improved the Gating algorithms with respect to window roll-off effects
- Changed the COM interface to the more universal name: IS4VNAPtr
- Added a new more universal name for the COM server: S4VNA.Application

Version 1.9

Updated automation examples and guides

Added support for plug-ins

Modified the auto port extension function; now the full frequency range is used to determine extension delay

Version 1.8

Added IFBW to the stimulus menu

Improved reliability of the ACM Auto-Orientation function

Version 1.7

Added the SENS:CORR:COLL:SIMP:SAVE command to the SCPI automation interface

Version 1.6

Added support for AutoCal Module (ACM) characterization using segment sweep mode, enabling ACM to be used down to 20 kHz

Added support for the 4-port AutoCal Module ACM8400T

Extended Time Doman functionality

Unit selection of seconds, meters, or feet

Reflection Type selection of either Round Trip or One Way

Cable correction function allowing for velocity factor and cable loss correction

Cable data can be entered manually or selected from a cable table

Cable table includes commonly used cables and can be extended by the user

Cable table data is saved when the program is closed

Version 1.5

Added Frequency Offset Mode functions for measuring mixers with Auxiliary Source feature

Version 1.4

Fixed a bug related to AutoCal failure on channels other then 1

Version 1.3

Exe module renamed to Planar808.exe. Operating manual and data sheet included in setup file

COPPER MOUNTAIN
TECHNOLOGIES

Software Release Notes

S4 Family

4-port VNAs

Planar 808

Cobalt x409/x420