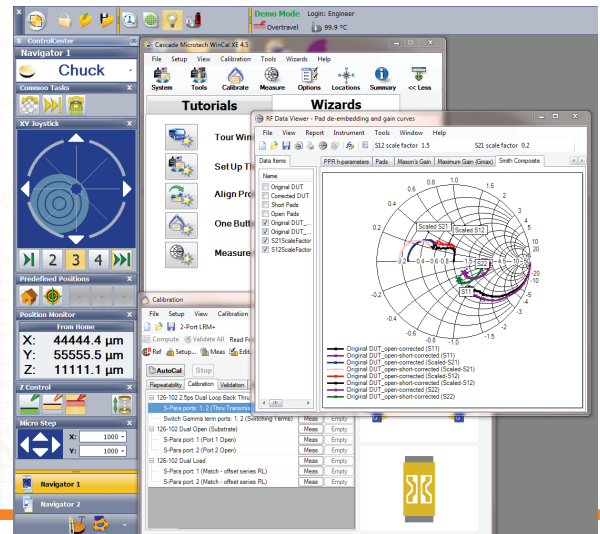


# WinCalXE

High-performance RF calibration software

DATA SHEET



Cascade Microtech's WinCalXE™ software is a comprehensive and intuitive on-wafer RF measurement calibration tool to achieve accurate and repeatable S-parameter measurement, which is crucial for precision device modeling/characterization and engineering RFIC test.

The WinCalXE features a guided system setup complete with customizable Wizards to ensure fast and easy access to reliable VNA calibration and repeatable data. Automated and intelligent functions minimize operator errors and troubleshooting time, resulting in reliable and accurate results and higher productivity.

The WinCalXE features include exclusive 1-, 2-, 3-, and 4-port calibration algorithms, immediate and live data measurement and viewing, LRRM™, LRM+™, SOLT-LRRM hybrid and NIST-style multi-line TRL calibrations, as well as an Error Set Management capability for data comparison and augmentation.

The latest version, WinCalXE 4.5, covers all of Cascade Microtech's probe families - Infinity Probes®, ACP probes and |Z| Probes®, and is compatible with both Nucleus™ and ProberBench™ prober control software.

## FEATURES / BENEFITS

Automatic calibration setup, measurement, result data conversion and report creation

Extensive guidance facilitates correct system setup and calibration

Error Set Manager provides error-set augmentation and error-set comparison tools

ISS management function prevents accidental navigations to the invalid calibration sites

S-parameters can be converted to a device-appropriate or preferred format

Display templates and Wizards can be customized for your specific needs

Accurate and advanced multi-port calibrations

LRRM-SOLT hybrid calibration method enables precision 4-port calibrations

Multi-line TRL cal compares your preferred calibration methods to a NIST style calibration

Second-tier calibration capability simplifies mixed-connector/probe-tip reference plane calibration

Achieve the most repeatable calibrations every time

Automatic Load Inductance compensation removes any probe placement errors experienced during the calibration procedure

## COMPATIBLE SYSTEM CONFIGURATIONS

Cascade Microtech's semi-automatic probe stations with ProberBench 7 or later or Nucleus 4.0 or later, optional programmable positioners and VNA

Manual probe stations with VNA

Virtual mode – simulated VNA, with manual or semi-automatic probe station

### Compatible with a wide variety of probes and calibration standards

Supports Infinity, ACP and IZI Probe families

Supports ISS and CSR calibration standards

### Compatible with most industry standard network analyzers

Supports Agilent, Anritsu, Rohde & Schwarz analyzers

## VNA SUPPORT

### Supported VNAs

### Tested Models and Firmware Version (FW)

Agilent 8510C

8510C - 7.14, 7.16, 8.10 (8510B is not supported)

Agilent PNA

Original Windows 2000 based models  
2-port FW 4.x - can only use the limited 'PNA (GPIB) Legacy...' driver  
  
Newer Windows XP based models  
2-port - FW 6.x or later  
4-port with external test set - FW 7.50.60 or later  
  
PNA-X  
Any port configuration. FW 8.2 or later

Agilent ENA

ENA-B FW 6.01 or later  
ENA-C FW 9.1 or later  
ENA 5061B FW A.02.06 or later  
ENA-B needs FOM option for advanced calibrations  
ENA-L is not supported

Agilent

8719, 8720, 8722, 8753 FW 6.x or later

Anritsu Lightning™

37xxx-series 2-port, FW 5.03 or later

Anritsu Scorpion®

MSxxx-series 2-, 3- or 4-port, FW TA2.03  
Sensor-only ports will not be calibrated

Anritsu VectorStar™

46xx series 2-port and 4-port (with external test set), FW 1.2 or later

Rohde & Schwarz

ZVA, ZVB FW 2.02 or later

*WinCalXE should work with all models similar to those tested.*

## SYSTEM REQUIREMENTS

Minimum	1 GHz CPU 5 GB hard disk space available 1024 x 768 display resolution and medium color quality (16-bit) Windows XP (Service Pack 3), Windows Vista (32-bit only) or Windows 7 (32 or 64-bit)
Semi-automatic probe station control	Nucleus 4.0 or later, or ProberBench 7 or later
GPIO connected VNA and/or probe station	National Instruments driver 2.3* or later (the VISA library is also required)
Agilent driver	M1.0* or later (VISA version must be installed, which is also the default)
Network connected VNA (DCOM and/or VISA/VXI-II over LAN)	Standard Ethernet connection
Setup	LAN communication according to the VNA vendor's instructions
Tutorials requirements	Internet Explorer 7.0 or later Windows Media Player 9.0 or later Flash Player add-on to Internet Explorer (if not already included) Sound card and speakers
Recommended requirements for optimal performance	A modern, high-performance CPU 4 GB RAM or more 1280 x 1024 display resolution or better, high color quality (32-bit) Three-button or scroll-wheel mouse to enable panning in RF Data Viewer graphs

\* No support given on systems with old drivers- suggest downloading free upgrades available from vendor. A warning is displayed at runtime if an older driver is found.

## ORDERING INFORMATION

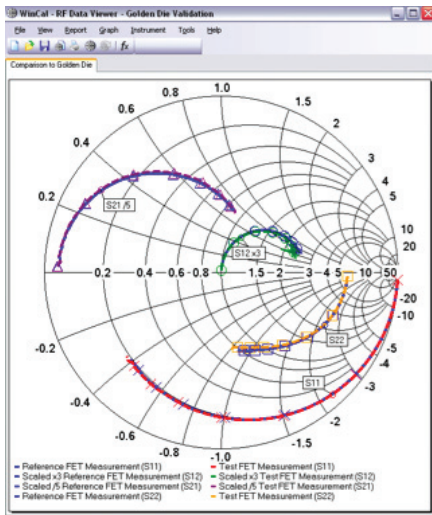
Part Number	Description
142-171	WinCal XE, full version (USB)
142-173	WinCal XE, 30-day demo (USB)
142-178	WinCal XE, field upgrade (from demo to full version)
153-950	WinCal XE, university version

## ISS SUPPORT

Part Number	Description
101-190	LRM, GSG
103-726	GS, 100-250 $\mu\text{m}$
104-783	W-band, GSG, 75-150 $\mu\text{m}$
106-682	Wide pitch, GSG
106-683	Wide pitch, GS, SG
109-531	Right angle, GSG, 100-400 $\mu\text{m}$ pitch
114-456	ACP-RC, 100-150 $\mu\text{m}$
126-102	Dual/Differential, GSGSG, GSGS, SGSG, SGS, 150 $\mu\text{m}$
129-239	Dual/Differential, GSGSG, GSGS, SGSG, SGS, 100-125 $\mu\text{m}$
129-240	Dual/Differential, GSGSG, GSGS, SGSG, SGS, 150-225 $\mu\text{m}$
129-241	Dual/Differential, GSGSG, GSGS, SGSG, SGS, 250 $\mu\text{m}$
129-246	Dual/Differential, GSSG, GSS, SSG, GS, 100-150 $\mu\text{m}$
129-247	Dual/Differential, GSSG, GSS, SSG, GS, 175-250 $\mu\text{m}$
129-248	General Purpose Thru, GSGSG (300-650 $\mu\text{m}$ ), GSSG (300-950 $\mu\text{m}$ )
129-249	General Purpose Thru, GSGSG (700-1250 $\mu\text{m}$ ), GSSG (1000-1250 $\mu\text{m}$ )
138-356	mmWave ready (220 GHz), GSG, 50-75 $\mu\text{m}$
138-357	mmWave ready (220 GHz), GSG, 100-150 $\mu\text{m}$

User-defined sites custom calibration sites are supported through the powerful Location Manager function

Part Number	Description
CSR-4	GSG (300-500 $\mu\text{m}$ )
CSR-5	GS/SG (250-500 $\mu\text{m}$ )
CSR-6	GS/SG (50-250 $\mu\text{m}$ )
CSR-8	GSG (100-250 $\mu\text{m}$ )
CSR-15	GSG (550-1250 $\mu\text{m}$ )
CSR-16	GS/SG (500-1250 $\mu\text{m}$ )
CSR-30	GSGSG (100 $\mu\text{m}$ )
CSR-31	GSGSG (150 $\mu\text{m}$ )
CSR-32	GSGSG (200 $\mu\text{m}$ )
CSR-33	GSGSG (250 $\mu\text{m}$ )
CSR-34	GSGSG (500 $\mu\text{m}$ )
CSR-35	GSGSG (125 $\mu\text{m}$ )
CSR-40	GSSG (100 $\mu\text{m}$ )
CSR-41	GSSG (125-150 $\mu\text{m}$ )
CSR-43	GSSG (200-250 $\mu\text{m}$ )
CSR-44	GSSG (400-600 $\mu\text{m}$ )
CSR-50	SGS (100 $\mu\text{m}$ )
CSR-51	SGS (125-150 $\mu\text{m}$ )
CSR-53	SGS (200-250 $\mu\text{m}$ )
CSR-54	SGS (400-500 $\mu\text{m}$ )



When the corrected S-Parameter measurements are acquired from the device under test, WinCalXE 4.5 offers a variety of options for formatting, transforming and displaying the result

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Data subject to change without notice

WinCalXE-DS-0212

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