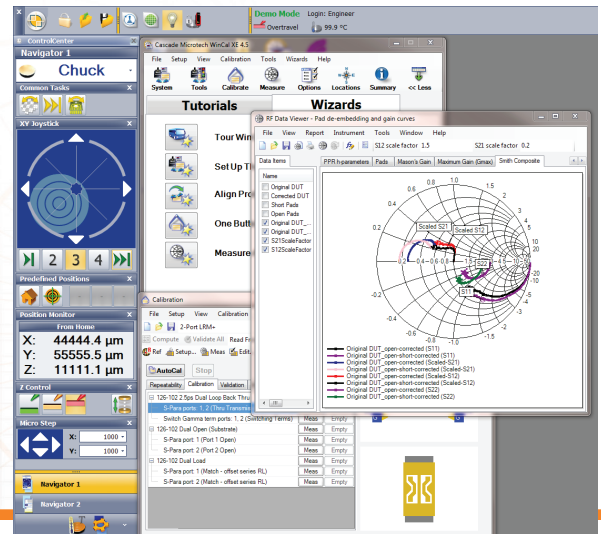


WinCalXE

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 4.6.2, covers all of Cascade Microtech's probe families - Infinity Probes®, ACP probes and |Z| Probes®, and is compatible with Velox™, 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
Supports up to 12 VNA ports that can be mapped to four logical ports for 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-automated probe stations with Velox 1.0 or later, 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-automated probe station

Compatible with a wide variety of probes and calibration standards

Supports Infinity, ACP and |Z| Probe families

Supports ISS and CSR calibration standards

Compatible with most industry standard network analyzers

Supports Keysight (formerly Agilent), Anritsu, Rohde & Schwarz analyzers

VNA SUPPORT

Supported VNAs

Tested Models and Firmware Version (FW)

Keysight 8510C

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

Keysight 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

Keysight ENA

E5070/71-B FW 6.01 or later

E5070/71-C FW 9.1 or later

E5061-B FW A.02.06 or later

E5070/71 needs FOM option for advanced calibrations

E5072A A.01.06 or later

ENA-L is not supported

Keysight

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 and ZNB (FW 2.20 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 7 (32 or 64-bit) or Windows 8.1 (32 or 64-bit)
Semi-automated probe station control	Velox 1.0 or later, Nucleus 4.0 or later, or ProberBench 7 or later
Connected VNA and/or probe station using VISA-based GPIB, LAN or USB	National Instruments hardware: NI-VISA 5.4, NI-488.2 2.3 or later Keysight hardware: IO Libraries 16.x or later
Tutorials requirements	Internet Explorer 8.0 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

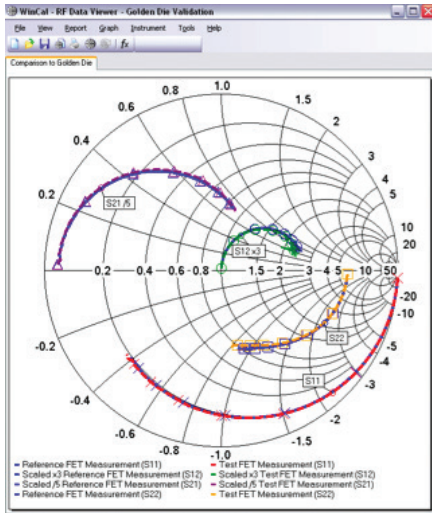
Part Number	Description
142-171	WinCal XE, full version (USB)
142-173	WinCal XE, 30-day demo (USB)
142-178	WinCal XE, field upgrade from demo to full version
153-950	WinCal XE, university version
153-952	WinCal XE, field upgrade from earlier versions

ISS SUPPORT

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

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

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



When the corrected S-Parameter measurements are acquired from the device under test, WinCalXE 4.6 offers a variety of options for formatting, transforming and displaying the result

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Data subject to change without notice

WinCalXE-DS-0715

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