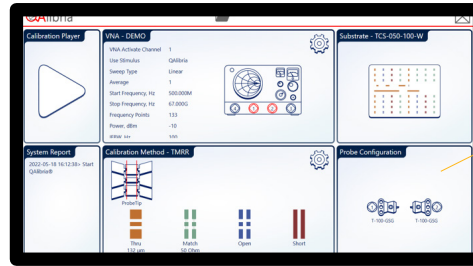


MPI ITS150-THZ | 150 mm Manual Probe System

Industry's first explicitly designed probe system for accurate mmW and THz measurements



Microscope Mount and Movement

- Stable bridge for high quality optics
- 90° tilt for easy reconfiguration
- 50 x 50 mm linear XY movement

4-Port Bridge

- Two: in North and South
- Rectangular adjustments for RF positioners
- Designed as standard feature for DC biasing or 4-port RF
- For single DC or RF MicroPositioners

MicroPositioners

- Unique over-travel control option
- MP80-DX option for accurate multi-line TRL calibration
- Supports max. 2 bold down large area MP80 MicroPositioners

Probe Platen

- Single large probe platen in rigid design
- 4 probe platen supports for max. stability
- Designed especially to accommodate large positioners for mmW and THz applications

Unique Platen Lift

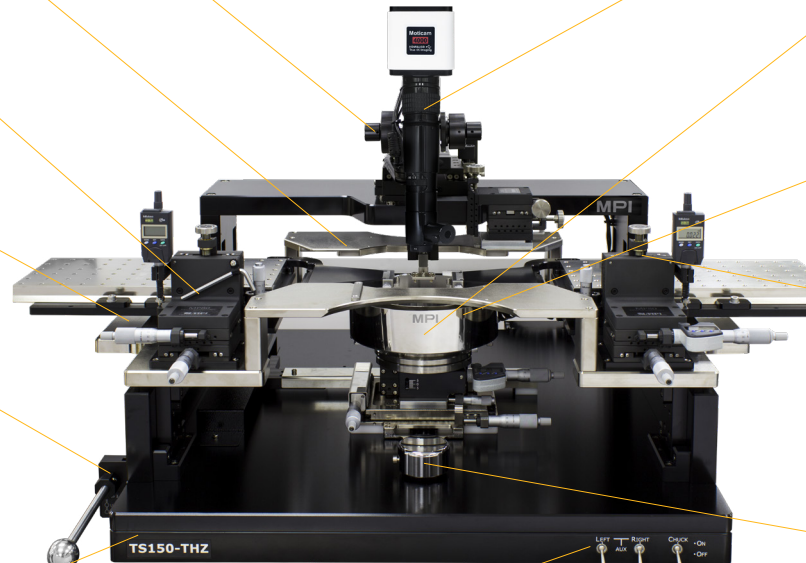
- Three discrete positions for contact, separation (300 µm) and safety loading 3 mm
- Safety lock function at loading position
- "Auto Contact" position with ±1 µm repeatability for consistent contact quality

Small Footprint

- Designed for bench top use
- Comes with vibration absorber base
- Low profile design for maximum usability
- Ideal for mmW, THz and load pull applications

Front Mounted Vacuum Control

- Easy access
- Clearly marked



Available Options

- Various adaptations for different frequency extenders
- Vibration isolation table
- Table with integrated rack for thermal controller, computer and keyboard push tray
 - Dual monitor stand option
 - Instrument shelf option
- MEGAZOOM MZ12 / UPGRADE ITSX-THZ PACKAGES

QALibria® - RF Calibration Software

- Multi-touch
- Multi-language
- Multiline TRL

Microscope and Optics

- Single tube MPI SZ12 with up to 10x zoom and 86 mm working distance
- 4K HDMI camera, monitor user interface w/o computer

Modular Chucks

- Non-thermal or hot only chucks
- Dedicated RF or mmW designs
- Field upgradable for reduced cost of ownership
- Easy switch between center and small wafer size control

RF Calibration

- 2 auxiliary chucks for calibration substrates
- Built-in ceramic for accurate calibration
- 1 µm flatness for consistent contact quality

MP80 Integration Modules

- 2 options for waveguide or coax application
- Universal large area platforms for integrating various frequency extenders up to 1.1 THz
- Micrometer screws for fine waveguide probe leveling on the platforms
- Dove-tail interface for dedicated adaptations for easy setup and switching between different frequency bands

Chuck XYZ Stage Movement

- Unique puck controlled air bearing stage for quick single-handed operation
- Large vacuum base for max. stability
- 180 x 300 mm XY total stage movement
- Resolution < 1.0 µm (0.04 mils) @ 500 µm/rev
- 25 x 25 mm micrometer fine XY adjustment
- 10 mm fine Z, resolution < 1.0 µm (0.04 mils) @ 500 µm/rev, with digital indicator
- ±5° Theta fine adjustment
- Extra wide Y-range for easy loading

The complete test package includes:

TS150-THZ ADVANCED MANUAL TEST SYSTEM / MMW

With puck-controlled air-bearing stage

- 180 x 300 mm (7.1 x 11.8 in) XY total stage movement
- 25 x 25 mm fine stage movement by large rotary knobs
- 10 mm Z movement with 1 micrometer digital resolution
- +/- 5 degree fine chuck Theta rotation
- Platen lift with discrete contact, separation (300 µm) and loading (3 mm) positions for ease of use, safety lock function at loading position
- Probe Hover Control PHC™ for convenient alignment of the probes to the pads in case of higher magnification, adjustable DOF from 50, 100 or 150 µm
- Safe Contact where the XY Air-bearing stage is locked at soon in Contact, to prevent accidental movements, LED lights on for visual warning in addition
- Stable microscope bridge mount with embedded platforms for accessories
- Auto-contact function with 1 micrometer repeatability
- Large area probe platen for two MP80 MicroPositioner mounting,
- Additional North & South bridge for DC Biasing
- Stable microscope bridge mount
- Vibration absorbing base
- Integrated vacuum for main chuck and AUX chuck and illumination (coaxial and/or ring) controls to the front
- Service loop for stable XYZ stage movement

150 MM RF AMBIENT CHUCK / COAXIAL

- Nickel plated chuck top with vacuum holes
- Auxiliary chuck made in ceramic for placement of calibration substrate and accurate RF calibration
- COAX (female) chuck connection

LINEAR MICROSCOPE MOVEMENT / 50x50MM

- Precision 50 mm x 50 mm X-Y microscope transport
- Linear movement for independent operation of X & Y
- 90 degree tilt for easy and safety probe replacement or reconfiguration
- Ideal for accurate field of view navigation at higher magnification

MPI SUPERZOOM SZ12 MICROSCOPE

- MPI SuperZoom™ SZ12 single tube microscope
- Optical zoom factor 0.83x to 10.0x (10:1)
- Excellent optical resolution down to 3.4 µm
- Working distance 86 mm
- Including 32 mm fast/fine focus block
- C-mount adapter
- Coaxial LED illumination, optional ring
- C-mount adapter
- Coaxial LED illumination, external remote control, 100 - 240 V AC, CE

HDMI CAMERA MOTICAM 4000

- 8 MP active resolution, 30 fps
- Versatile 4K HDMI camera
- No requirement of a computer for standard operation and measurement function
- Image can be captured directly onto the included 16 GB micro SD card or a flash drive (not included)
- 4k video can be store onto included 16GB micro SD card or a flash drive (not included)
- On Screen Display UI controlled by mouse
- Ideal for documentation on the MPI manual TS series
- USB 2.0 interface allows using the provided software: includes measurement, annotation, and reporting tools
- Wireless mouse and all necessary cables are included

21.5 INCH SCREEN DISPLAY

- TV monitor, dimension 21.5", 16:9 ratio
- Resolution 1920 x 1080
- Table stand
- VESA interface, compatible to MPI monitor stands

MP80 MICROPOSITIONER SET DX

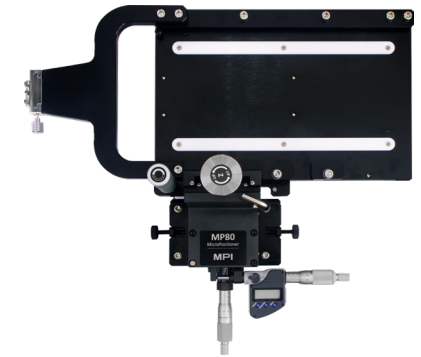
- Two MP80 High-end mmW MicroPositioner for backlash-free probe positioning
- One on the left with standard micrometers and the second one on the right with Digital Micrometer head with feedback for X navigation & multi-line TRL calibration
- 1 µm resolution allows precise definition of the Line(s) length for accurate TRL calibration
- PRESET, ZERO/ABS, DATA/HOLD and Auto- Power Off functions
- Battery is included
- Standard micrometer crew for accurate and sensitive Y navigation
- 25 mm travel range in XY, 15 mm travel range in Z
- 500 µm high screw resolution in XYZ
- Bold-down on the probe station

MP80 INTEGRATION FOR FREQUENCY EXTENDERS / WAVEGUIDE

- Two universal large area platforms for integration of frequency extenders
- With micrometer screws for fine waveguide probe planarization on the platforms
- Incl. E/W RF probe arm with Z adjustment for frequencies up to 220 GHz
- Requires FEAD-Adaptation and RF probes

QALIBRIA® SOFTWARE RF TOOLSET (see page 3)

ACCESSORIES, wafer tweezers, L-key set



ITS150-THZ IMPACT™ Test Solution, enables unsurpassed mmW and THZ testing with the highest possible measurement accuracy

- The AUX chucks are made completely by ceramics and supports both the DUT and the calibration standards. Dielectric properties of the chuck material and its design are optimized to suppress possible propagation of higher-order modes providing accurate system calibration and trustable measurement results at THz frequencies
- The set of MP80 MicroPositioners and unique integration of all types of frequency extenders available on the market is designed for direct wafer probe mount and eliminates the need for additional waveguide section. This solution guarantees the best possible measurement directivity of the system in the entire measurement frequency range of up to 1.5 THz
- MPI supports ALL available on the market: Frequency Extenders by unique Adaptation (FEAD), for easy reconfiguration, switching between bands and safety operation.

Please select the required FEAD part number (always as a set for East and West) based on your measurement configuration:

Rohde&Schwarz®	Anritsu Broadband	Anritsu ShockLine™	VDI	OML	FARRAN	Keysight Broadband
FEAD-RS-ZCXXX	FEAD-ANR-THZ	FEAD-ANR-SL-THZ	FEAD-VDI	FEAD-OML	FEAD-FARRAN	FEAD-KS-N5290-91A-THZ

All Broadband FEADs supports both single ended or differential set-ups.
Other legacy extenders are supported as well, please contact your local MPI support team.

MPI offers universal platforms with screw holes in metrics (25 mm pitch) or imperial (1-inch pitch) standard for mounting of various mmW components:

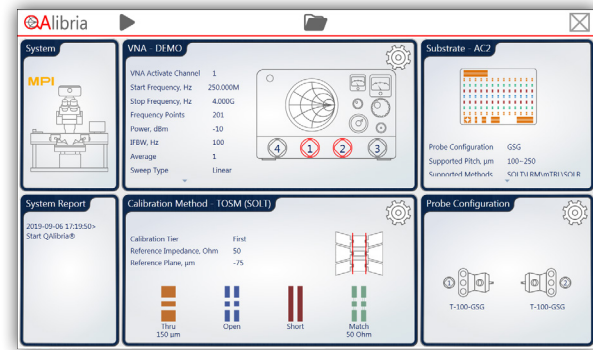
Universal Platforms
e.g. Farran source

FEAD-MM

FEAD-INCH

All pictures are copy right from the respective companies.

QAlibria® - MPIs free RF calibration software is designed to make complex and tedious task of RF system calibration as simple as possible thru the unique multi-touch operation. It offers industry standard and advanced calibration methods and is integrated with NIST StatistiCal Plus calibration packages providing easy access to the NIST multiline TRL metrology-level calibration and uncertainty analysis of calibration and measurement results.



QAlibria® registration