Probe Ranger™ is designed and assembled by

www.ccnlabs.com
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**Probe Ranger Circuit Board Tests**

The **Probe Ranger** empowers board-level electrical testing of interconnections and devices with precision probe positioning and contacting over large PCB areas.

Use **Probe Rangers** to test:
- Differential & Single-Ended Devices
- Scattering Parameters
- Time-Domain Reflectometry
- Live Signals
- Eye Patterns
- Signal Jitter
- Interconnect Impedance
- Interconnect Total Loss
- Interconnect Delay
- Differential Delay Skew
- Differential Mode Conversion
- SMT Components
- Capacitor ESL and ESR
- Pad Admittance
- Via Impedance

**Order Worksheet**

Complete worksheet then visit www.ccnlabs.com/contact to request quotation, or to complete online RFQ form.

Maximum board size?
- Order **PR1200** for 10in x 12in (257mm x 304mm)
- Order **PR1800** for 16in x 24in (406mm x 610mm)
- Order **PR2400** for 22in x 24in (559mm x 610mm)

Differential channels or 4-port devices?
- Order Option 4P Four Positioners

25 GHz circuit probes?
- Order **FP25** FastProbes

Components requiring 2 inch rail clearance?
- Order **XNTD** 2in (50.8mm) Rail Height Extender Kit

High-definition or high-magnification USB microscope?
- Order **DinoLite AM4113TL**
- Order **MCH01** Low-Vibration Microscope Mount

Testing small wafers or PCB coupons?
- Order **VAC01** Vacuum Chuck 2.75in x 2.75in (70mm x 70mm)

Testing from front to back of board?
- Order **VR12** Vertical Ranger for probing vertical boards

Visit [www.ccnlabs.com](http://www.ccnlabs.com) to see videos of our products in action.
**Probe Ranger PR1800 Standard Specifications**

- **Maximum Board Area**: 24in x 16.1in (609mm x 409mm)
- **Sliding Rail Gantry**: 2 assemblies with locking roller-bearing travelers
- **USB Microscope Cameras**: 2 Dino-Lite AM2011 with gooseneck holders
- **Circuit Board Clamps**: Set of 4 with hardware to match Base
- **XYZ Probe Positioners**: 2 micropositioners with brackets & rail mounts
- **Micropositioner Travel**: 0.375in (9.5mm) in X, Y, and Z directions
- **Probe Tip Vertical Range**: 4.25in (108mm) using adjustable probe bracket
- **Probe Mount**: Standard 3-hole microprobe mount, 3x 8-32
- **Sliding Rail Clearance**: 0.75in (19mm) base to rail
- **Micropositioner Rotation**: ±50° for fixed probes on 3-hole mount
- **Probe Rotation**: 90° for probes using 1-hole mount as pivot
- **Dimensions**: 24in x 18in x 6.5 in (609mm x 277mm x 165mm)
- **Net Weight**: 9.6 lbs (4.4 kg)

**Probe Ranger PR1800 Options and Add-Ons**

- **4P**: Four XYZ Probe Positioners
- **71**: Onsite Installation and Training
- **81**: Maintenance & Support, 3-years
- **FP25**: FastProbe, 25 GHz circuit board probe
- **VR12**: Vertical Ranger, Vertical Card Holder and Probe Rail Kit
- **XTND**: Rail Height Extender Kit, 2in (50.8)
- **AD4113TL**: HD Microscope with Dimensional Measurements
- **MCH01**: Low-Vibration Microscope Mount
- **VAC01**: Vacuum Chuck Coupon Holder, 2.75in x 2.75in (70mm x 70mm)
- **SPQBN**: Teledyne LeCroy SPARQ, B Bandwidth, N Ports

**Make reliable and repeatable high-frequency measurements**

Learn more at [www.ccnlabs.com](http://www.ccnlabs.com)
View probe touch-down with USB microscope cameras

"Fly" probe over large board area using gantry on roller-bearings

Make quick Y-position changes on sliding rail

Clamp and hold PCBs above surface of base

Avoid vibration issues with low and heavy base

Rotate probes and micropositioners to accommodate pad angles

Reduce ESD damage with provided grounding cables

Make final and precise probe adjustments with XYZ Micropositioners

Use CCN’s FastProbes & most third-party microprobes

Adjust planarity and starting height (Z) with sliding Probe Bracket
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