

# USB Test Hosts for Manufacturing Product Development Quality Assurance

RPM Systems Corporation's Root 2 USB test hosts are design specifically for manufacturing test, development and QA testing of USB peripherals and hubs.

Root 2 supports **USB 1.1 and USB 2.0 Low Speed, Full Speed and High Speed** devices and **EHCI** USB traffic patterns. Root 2 provides both EIA-232 and Ethernet 10/100 control ports.

Root2 places all USB operations directly under the control of the test engineer, including:

- **Vbus Voltage Level Control**
- **Vbus power on/off Control**
- **Vbus Current Measurement**
- **Suspend/Resume Control**
- **USB Reset Control**

Root 2 provides a variety of special features including:

- **RootScript Scripting Capability**
- **Automatic Mode operation**
- **Stand-alone Operation**
- **Field Replaceable USB connectors**
- **Rugged Anodized Aluminum Enclosures**
- **Two external trigger inputs**
- **8-bit general purpose triggered output port**



## Root Testers in Manufacturing: Fast. Reliable. Repeatable.

**Root testers are fast.** A basic USB functional test takes less than 1/2 second.

**Root testers are reliable,** built to survive in a manufacturing environment, accommodating tens of thousands of test cycles without operator intervention. In manufacturing test, device insertions can measure in the millions of cycles. Root testers provide field replaceable Series A connectors which can be hot-swapped in seconds.

**Root tester performance is repeatable,** ensuring that each device is subjected to the same precise set of test conditions.

## Root Testers in Development: Take Control of the USB

**Root testers provide the control** to allow you to verify each discrete function of your product design, precluding weeks of trial-and-error debugging. Then you can approach your Windows or Mac O/S integration with a proven functional device.

## Root Testers in Design Verification: Cover the Corners

Test your USB design on one, ten or a hundred PC hosts, and you haven't begun to explore the worst-case conditions your design could be expected to face in the real world. Root testers provide the unique capability to generate test conditions which seldom occur in normal operation. **Root testers verify that your design functions properly** across the full range of real-world USB conditions.

# USB Test Hosts

## Specifications

### Root 2

#### USB Standards Supported

- USB 1.1
- USB 2.0
- Low Speed
- Full Speed
- High Speed
- UHCI
- OHCI
- EHCI

#### Vbus Power Supply

Range 4.25 - 5.50V  
Current Limiting 750mA Max.

#### Vbus Current Measurement

Measurement Range 0 - 750mA  
Measurement Resolution 2.96uA  
Measurement Accuracy 1% +/- 50uA

#### Control Port

- EIA-232
- Ethernet 10/100

#### Advanced Features

- Automatic Mode
- On-demand Suspend/Resume
- Field Replaceable USB Connectors
- On-demand USB Reset
- RootScript Scripting
- External Trigger bus

#### Support Software

- TapRoot Graphical User Interface
- Function libraries for custom test applications

