

# ScanWave Pro™ ePIM

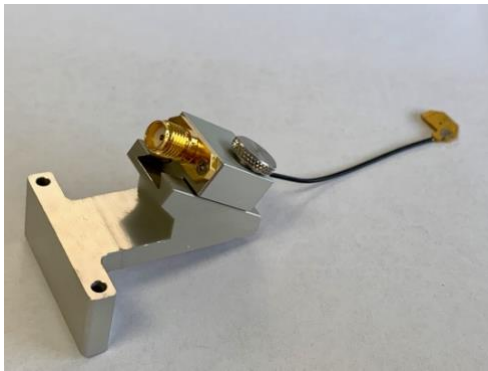
## APPLICATIONS NOTE

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### 1. INTRODUCTION

ScanWave Pro™'s unparalleled performance is achieved by industry leading engineering of all components of the measurement system. A critical part in the measurement system is the Probe Interface Module (PIM). In current systems the PIM relies on manually adjusting a micro-mechanical component in the PIM to optimize the signal for each individual Probe. (**Figure 2**). This requires a special tool and some care.

PrimeNano's new **ePIM (Figure 1)** replaces the mechanical adjustment with an electronic adjustment capability. This removes potential operator error and wear and tear of the micro mechanical component.



**Figure 1** Standard, mechanical PIM (Probe Interface Module).



**Figure 2** New ePIM.

### 2. New ePIM System

The new ePIM system is fully compatible with ScanWave Pro™ on all AFMs supported by ScanWave Pro™. It is a replacement for the current mechanical PIM or an upgrade for new ScanWave Pro™ systems.

### 3. COMPONENTS

The ePIM package consists of an electronics module (ePIM controller) with a dedicated power adapter, a probe interface module (ePIM), two cables, and software. The software (EPIM.exe) is in the ScanWave Directory and does not require installation. The ePIM electronics module case has the same form factor as PrimeNano's reflectometer case but has an MCX connector instead of an SMA connector. This ensures a single cabling orientation. The reflectometer is also connected via USB to a computer to view the reflectometer response.

## ScanWave Pro™ ePIM

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#### 4. SETUP

Probe loading with the ePIM is identical to the standard mechanical PIM. However, in addition to the reflectometer connection (SMA) of the standard mechanical PIM, the ePIM also connects to the ePIM controller (MCX – bottom connector in **Figure 3c**). The reflectometer and ePIM controller cases have the same form factor but use different connectors (**Figure 4**). This ensures the ePIM can only be connected one way.



**Figure 3:** ePIM on Probe Loading Base, side view (a), top view (b) and rear view (c).



**Figure 4:** PrimeNano ePIM controller (top left) and reflectometer (bottom left) connected to ePIM (right).