

N5227A-04

# Information Only Service Note

Supersedes:  
NONE

## N5227A - 10 MHz to 70.0 GHz PNA network analyzer

Serial Numbers: ALL

The purpose of this service note is to aid in providing support for A to B upgrades kits. "B" models require the latest CPU, SPAM, and synthesizer boards. Some older instruments will require upgrades of this hardware, before installing the A to B Upgrade kit. Refer to Solution/Action section for details.

### Parts Required (Maximum possible required per instrument):

| P/N         | Description                                     | Qty. |
|-------------|-------------------------------------------------|------|
| W1312-60210 | System CPU                                      | 1    |
| N5240-60078 | DSP (SPAM V) board*                             | 1    |
| N5247-60023 | Cables (2-Port PNA SPAM boards only)            | 1    |
| N5247-60024 | Cables (2-Port PNA SPAM boards only)            | 1    |
| N5240-60074 | SAM Synthesizer (with tabs s/n >5200 and above) | 3    |
| N5240-60076 | SAM Synthesizer (with tabs s/n <5200)           | 3    |

\*Any SPAM V board is OK. Order this part number, if a SPAM V is not installed.

### ADMINISTRATIVE INFORMATION

Calibration Required

PRODUCT LINE: PLWN

AUTHOR: KS

### ADDITIONAL INFORMATION:

This service note applies to all PNA models including the N5264A.

## Situation:

The purpose of this service note is to aid in providing support for A to B upgrades kits. "B" models require the latest CPU, SPAM, and synthesizer boards. Some older instruments will require upgrades of this hardware, before installing the A to B Upgrade kit. Refer to Solution/Action section for details.

## Solution/Action:

The purpose of this section is to verify where the instrument should begin the front panel installation process. This section verifies, if the instrument has a version 7 CPU installed and if all of the required board assemblies for a B model upgrade have been installed.

If your instrument does not have the correct version 7 CPU or any of the other required board assemblies, order up all of the new upgrade kits and boards or contact the customer, because they need to order up all of the new upgrade kits and boards, before the "B" model upgrade can be completed.

The following board assemblies need to be verified and installed during the upgrade:

1. Press Help > About NA...
2. In the About Network Analyzer window that opens and make a note of the following:
  - System CPU Version
  - DSP Version
  - The system CPU must indicate version 7 or greater. This CPU is not included in this kit. Please contact Keysight if you need to replace the CPU and order CPU board number: W1312-60210.
  - The DSP (SPAM) board must be version 5 or greater. The SPAM V boards are not included in this kit. Please contact Keysight if you need to replace the SPAM boards and order N5240-60078 SPAM V. If you have a 2-Port instrument, you will also need to order one of each cable numbers: N5247-60023 and N5247-60024.
3. Press Utility > System > Service > Diagnostics > EEPROM Headers
  - Verify the **LO Synth**, **Src1 Synth**, and **Sr2 Synth** board part number is "N524063074" (s/n >5200 and above) or "N524063079" (s/n <5200). These boards are not included in this kit. Please contact Keysight if you need to replace any of the **LO Synth**, **Src1 Synth**, and **Sr2 Synth** boards, and order up a new 13.5 GHz synthesizer board(s), p/n: N5240-60074 (for s/n 5200 and above) or N5240-60076 (for s/n <5200). And, once received, install using the associated Installation Note.

**IMPORTANT:** Do NOT install any boards yet. Instructions for the appropriate timing to install the new boards are included in the A to B Installation Note for your PNA.

Before proceeding with ordering these parts, read one of the three PNA family Upgrade Install Notes listed below to ensure that the proper tools and expertise are available before proceeding with the upgrade.

PNA-X: N5242-90023  
PNA: N5222-90115  
PNA-L: N5232-900115

Revision History:

| Date      | Service<br>Note<br>Revision | Author       | Reason for Change |
|-----------|-----------------------------|--------------|-------------------|
| 15Mar2016 | 04                          | Keith Stengl | As Published      |
|           |                             |              |                   |
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|           |                             |              |                   |