# N9010A-01B

# S E R V I C E  N O T E

Supersedes:
N9010A-01A

## N9010A EXA Signal Analyzer

**Serial Numbers: ALL**

### Selecting Proper CPU Replacement Part Number

**The standard CPU used in the N9010A EXA has changed since the product was introduced. The current standard CPU looks identical to the higher-performance optional CPUs (N9010A-PC2 or N9010A-PC4). Replacing the CPU with the proper part number will ensure that the analyzer is returned to the end-user with the same performance-level CPU as was installed in the analyzer prior to the repair.**

**Parts Required: NONE**

## ADMINISTRATIVE INFORMATION

| SERVICE NOTE CLASSIFICATION: **INFORMATION ONLY** | |
|---|---|
| [[]] Calibration Required<br>XCalibration NOT Required | PRODUCT LINE: 12<br>AUTHOR: BDT |
| ADDITIONAL INFORMATION: | |



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Agilent Technologies

**Situation:**
The standard CPU used in the N9010A EXA has changed since the product was introduced. The current standard Celeron CPU P4505 looks identical to the higher-performance optional CPUs (N9010A-PC2 and N9010A-PC4). Replacing the CPU with the proper part number will ensure that the analyzer is returned to the end-user with the same performance-level CPU as was installed in the analyzer prior to the repair.

There are five CPU replacement assemblies available:

- N9020-60031 KIT, CPU BOARD REPLACEMENT W/O HARD DRIVE 2GB RAM
- N9020-60081 KIT, DUO CORE PROCESSOR BOARD REPLACEMENT
- N9020-60115 KIT, CELERON PROCESSOR BOARD REPLACEMENT
- N9020-60135 KIT, OPTION PC4 PROCESSOR BOARD REPLACEMENT
- N9020-60140 KIT, OPTION PC5 PROCESSOR BOARD REPLACEMENT

**Solution/Action:**
There are several methods to determine what the currently-installed CPU type is depending upon whether or not the CPU is functional and whether or not the X-Series Signal Analyzer measurement application is running.

NOTE: The CPU replacement kits listed in this service note should not be used to upgrade from one type of CPU to another. The N9010AK-PC4 Upgrade to Dual Core High Performance Processor is available to upgrade from N9010A-PC1, N9010A-PC2, N9010A-PC3, or N9010A-PC5 CPU to the N9010A-PC4. Refer also to http://www.agilent.com/find/exa_upgrades for more information.

***Method 1: If CPU is functional, but X-Series SA Measurement Application is not Running***
If the CPU is functional to the point that it can display the Windows XP Desktop, connect a mouse to the analyzer and click Start. Right-click My Computer and select Properties. Look at the text following "Manufactured and Supported by:" Select the appropriate CPU replacement part number based upon the Properties of My Computer as shown in Table 1 below.

Table 1. CPU Identification Based Upon Properties of My Computer

| Properties of My Computer | CPU Replacement Part Number |
|---|---|
| Intel® Pentium ® M processor 1600 MHz | N9020-60031 |
| Intel ® Core ™ Duo CPU T2500 @ 2.00 GHz | N9020-60081 |
| Intel ® Celeron ® M CPU 440 @ 1.86 GHz | N9020-60115 |
| Intel ® Core ™ i7 CPU L 620 @ 2.00 GHz | N9020-60135 |
| Intel ® Celeron ® CPU P4505 @ 1.87 GHz | N9020-60140 |

***Method 2: If X-Series SA Measurement Application is Running***
If the X-Series SA Measurement Application is running, press System, Show, System. Note the Instrument SW Revision. Beginning with revision A.02.00, one of the first two entries in the Options list should identify the type of CPU installed. The CPU option will be N9010A-PC1, N9010A-PC2, N9010A-PC3, N9010A-PC4, or N9010A-PC5. Select the appropriate CPU replacement part number based upon the CPU Option and the Instrument SW Revision as shown in Table 2 below.

Table 2. CPU Identification Based Upon CPU Option and Instrument SW Revision

| CPU Option | Instrument SW Revision | CPU Replacement Part Number |
|---|---|---|
| N9010A-PC1 Intel® Pentium ® M processor 1600 MHz | >= A.02.00 | N9020-60031 |
| N9010A-PC2 Intel ® Core ™ Duo CPU T2500 @ 2.00 GHz | >= A.02.00 | N9020-60081 |
| N9010A-PC3 Intel ® Celeron ® M CPU 440 @ 1.86 GHz | >= A.04.21 | N9020-60115 |
| N9010A-PC4 Intel ® Core ™ i7 CPU L 620 @ 2.00 GHz | >= A.04.21 | N9020-60135 |
| N9010A-PC5 Intel ® Celeron ® CPU P4505 @ 1.87 GHz | >=A.10.00 | N9020-60140 |
| None Listed | <= A.01.99 | N9020-60031 |
| None Listed | A.02.00 to A.04.20 | N9020-60115 |

***Method 3: If CPU is Not Functional***

If the CPU is not functional, it will be necessary to determine the installed CPU based upon the physical attributes of the CPU assembly itself.

Start with the CPU installed in the EXA. View the CPU from the rear panel of the EXA and note the position of the GPIB connector relative to the USB connectors. If the GPIB connector is to the right of the USB connectors, the installed CPU is the Intel ® Pentium ® M Processor and the CPU replacement part number is N9020-60031.

If the CPU has the GPIB connector to the left of the USB connectors, the installed CPU could be either the Celeron, Duo-Core, or i7 CPU. It will be necessary to check the label on the CPU assembly to determine which of these three CPUs it is. Remove the CPU and locate the part number label on the bottom of the CPU assembly nearest the GPIB connector. Select the appropriate CPU replacement part number based upon the CPU part number as shown in Table 3 below.

Table 2. CPU Identification Based Upon CPU Part Number

| CPU Part Number | CPU Replacement Part Number |
|---|---|
| 0960-2688 | N9020-60031 |
| W1312-60068 | N9020-60081 |
| W1312-60072 | N9020-60115 |
| W1312-60190 | N9020-60081 |
| W1312-60191 | N9020-60115 |
| W1312-60196 | N9020-60135 |
| W1312-60197 | N9020-60140 |

**Revision History:**

| Revision Number | Date | Author | Reason For Change |
|---|---|---|---|
| 1.0 | 6/6/2011 | BDT | As published |
| 1.1 | 4/26/2012 | BDT | Added references to PC4 and N9020-60135 |
| 1.2 | 3/5/2013 | BDT | Added references to PC5 and N9020-60140 |