

N9010A-01C

# Information Only Service Note

Supersedes:  
N9010A-01B

## 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 similar to the higher-performance optional CPUs (N9010A-PC2, N9010A-PC4 or N9010A-PC6). 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

☐ Calibration Required  
☒ Calibration NOT Required

PRODUCT LINE: 12  
AUTHOR: BDT

ADDITIONAL INFORMATION:

### Situation:

The standard CPU used in the N9010A EXA has changed since the product was introduced. The current standard CPU looks very similar to the earlier CPUs. 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 seven 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
- N9020-60247 KIT, OPTION PC6 PROCESSOR BOARD REPLACEMENT
- N9020-60248 KIT, OPTION PC7 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 N9094AK-PC6 Upgrade to Quad Core High Performance Processor is available to upgrade from any earlier CPU to the current high performance CPU. Refer also to [http://www.agilent.com/find/exa\\_upgrades](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 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
<u>Intel ® Celeron ® CPU P4505 @ 1.87 GHz</u>	<u>N9020-60140</u>
<u>Intel ® Core i7 – 3615QE CPU @ 2.30 GHz</u>	<u>N9020-60247</u>
<u>Intel® Dual-Core Celeron ® CPU @ 2.2 GHz</u>	<u>N9020-60248</u>

### 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, N9010A-PC5, N9010A-PC6, or N9010A-PC7. 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
<u>N9010A-PC6 Intel® Core i7 – 3615QE CPU @ 2.30 GHz</u>	<u>&gt;= A.16.05</u>	<u>N9020-60247</u>
<u>N9010A-PC7 Intel® Dual-Core Celeron® CPU @ 2.2 GHz</u>	<u>&gt;= A.16.05</u>	<u>N9020-60248</u>
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, i7 CPU, or Dual Core Celeron. 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 3. 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
W1312-60141	N9020-60247
W1312-60210	N9020-60248

Revision History:

Date	Service Note Revision	Author	Reason for Change
6/6/2011	01	BDT	As Published
4/26/2012	01A	BDT	Added references to PC4 and N9020-60135
3/5/2013	01B	BDT	Added references to PC5 and N9020-60140
12/21/2016	01C	BDT	Added references to PC6, PC7 and N9020-60247, N9020-60248