Information Only Service Note

Supersedes:
N9010B-07

N9010B EXA Signal Analyzer

Serial Numbers: ALL

Selecting Proper CPU Replacement Part Number

The standard CPU used in the N9010B EXA has changed since the product was introduced. The first two versions of the CPU look very similar, but the current CPU is noticeably different. 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:

Refer to Solution / Action below

ADMINISTRATIVE INFORMATION

[ ] Calibration Required	PRODUCT LINE: 12
X Calibration NOT Required	AUTHOR: BDT

ADDITIONAL INFORMATION:

Situation:

The standard CPU used in the N9010B EXA has changed since the product was introduced. The first two versions of the CPU look very similar, but the current CPU is noticeably different. 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 three CPU replacement assemblies available:

- N9020-60248 KIT, OPTION PC7/PC7S PROCESSOR BOARD REPLACEMENT
- W1312-60686 CPU Module, Core i3-9100HL, 16GB RAM no HDD
- W1312-60563 CPU Module Nimitz4, LC i3 9100HL 16GB RAM no HDD

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 recommended CPU replacements listed in this service note should not be used to upgrade from one type of CPU to another. The N9094BU Windows Operating System and PC Processor / Drive Upgrade is available to obtain the latest CPU and operating systems. Refer also to http://www.keysight.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 “Computer” or “System” (depending upon operating system) and select Properties. Look for information about Processor. Select the appropriate CPU replacement part number based upon the Processor as shown in Table 1 below.

Table 1. CPU Identification Based Upon Processor

Processor	CPU Replacement Part Number
Intel ® Dual-Core Celeron ® CPU @ 2.2 GHz	N9020-60248
Intel ® Core ™ i3 9100HL CPU @ 1.60 GHz	W1312-60686
Intel ® Core ™ i3 9100HL CPU @ 1.60 GHz 1.61 GHz	W1312-60563

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. One of the first two entries in the Options list should identify the type of CPU installed. The CPU option will be N9010B-PC7, N9010B-PC7S, N9010B-PC9, or N9010B-PCB. 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
N9010B-PC7 Intel ® Dual-Core Celeron ® CPU @ 2.2 GHz	>= A.16.05	N9020-60248
N9010B-PC7S Intel ® Dual-Core Celeron ® CPU @ 2.2 GHz	>= A.25.08	N9020-60248
N9010B-PC9 Intel ® Core ™ i3 9100HL CPU @ 1.60 GHz, 16GB	Any	W1312-60686
N9010B-PCB Intel ® Core ™ i3 9100HL CPU @ 1.60 GHz, 16GB	Any	W1312-60563

NOTE: The CPU replacement part number N9020-60248 is the same for both N9010B-PC7 and N9010B-PC7S. The CPU will be the N9010B-PC7S CPU but will identify as a PC7 if the instrument SW revision is <A.25.08. Functionally, the only difference between the PC7 and PC7S is the that the PC7S includes internal cal memory (referred to as Internal Flash in the Alignment Data Wizard).

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 part number of the currently installed CPU.

Start with the CPU installed in the EXA. View the CPU from the rear panel of the EXA. The CPU part number, which will begin with "W1312", should appear on a label near the LAN 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
W1312-60210	N9020-60248
W1312-60211	N9020-60248
W1312-60213	N9020-60248
W1312-60522	W1312-60686
W1312-60686	W1312-60686
W1312-60563	W1312-60563

Revision History:

Date	Service Note Revision	Author	Reason for Change
29 May 2024	01	Brian Torr	As Published
6 Feb 2024	02	Brian Torr	Add Opt PCB CPU option