Information Only Service Note

Supersedes:
N9000A-03

N9000A CXA Signal Analyzer

Serial Numbers: ALL

Selecting Proper CPU and Disk Drive Replacement Part Number

The standard CPU used in the N9000A CXA has changed since the product was introduced. Replacing the CPU and hard disk with the proper part number will ensure that the analyzer is returned to the end-user with the same performance level as was installed in the analyzer prior to the repair.

Parts Required:

Refer to Solution / Action below

ADMINISTRATIVE INFORMATION

[[]] Calibration Required	PRODUCT LINE: CM
X Calibration NOT Required	AUTHOR: KJ

ADDITIONAL INFORMATION:

Situation:

The standard CPU used in the N9000A CXA has changed since the product was introduced. The current standard CPU looks very similar to the earlier CPUs. Replacing the CPU and hard disk with the proper part number will ensure that the analyzer is returned to the end-user with the same performance level as was installed in the analyzer prior to the repair.

There are four CPU replacement assemblies available:
- N9020-60031 KIT, CPU BOARD REPLACEMENT W/O HARD DRIVE 2GB RAM
- N9020-60115 KIT, CELERON PROCESSOR BOARD REPLACEMENT
- N9020-60140 KIT, OPTION PC5 PROCESSOR BOARD REPLACEMENT
- N9020-60248 KIT, OPTION PC7/PC7S PROCESSOR BOARD REPLACEMENT

There are four disk drive replacement assemblies available:
- N9020-60066 KIT, HARD DISK DRIVE REPLACEMENT
- N9020-60125 SOLID STATE DRIVE REPLACEMENT WINXP
- N9020-60355 SOLID STATE DRIVE REPLACEMENT 256 GB W7X
- N9020-60356 SOLID STATE DRIVE REPLACEMENT 256 GB W10

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. Refer also to http://www.keysight.com/find/cxa_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 & Disk Drive Identification Based Upon Properties of My Computer

Properties of My Computer	CPU Replacement Part Number	Disk Drive Replacement Part Number
Intel® Pentium ® M processor 1600 MHz	N9020-60031	N9020-60066
Intel ® Celeron ® M CPU 440 @ 1.86 GHz	N9020-60115	N9020-60125
Intel ® Celeron ® CPU P4505 @ 1.87 GHz	N9020-60140	N9020-60355
Intel ® Dual-Core Celeron ® CPU @ 2.2 GHz	N9020-60248	N9020-60356

Method 2: If X-Series SA Measurement Application is Running
If the X-Series SA Measurement Application is running, press System, Show, System. One of the first

two entries in the Options list should identify the type of CPU installed. The CPU option will be N9000A-PC1, N9000A-PC3, N9000A-PC5, N9000A-PC7 or N9000A-PC7S. Select the appropriate CPU or disk drive replacement part number based upon the CPU Option as shown in Table 2 below.
Table 2. CPU Identification Based Upon CPU Option and Instrument SW Revision

CPU Option	CPU Replacement Part Number	Disk Drive Replacement Part Number
N9000A-PC1 Intel® Pentium ® M processor 1600 MHz	N9020-60031	N9020-60066
N9000A-PC3 Intel ® Celeron ® M CPU 440 @ 1.86 GHz	N9020-60115	N9020-60125
N9000A-PC5 Intel ® Celeron ® CPU P4505 @ 1.87 GHz	N9020-60140	N9020-60355
N9000A-PC7 Intel ® Dual-Core Celeron ® CPU @ 2.2 GHz	N9020-60248	N9020-60356
N9000A-PC7S Intel ® Dual-Core Celeron ® CPU @ 2.2 GHz	N9020-60248	N9020-60356

NOTE: The CPU replacement part number N9020-60248 is the same for both N9000A-PC7 and N9000A-PC7S. Functionally, the only difference between 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 physical attributes of the CPU assembly itself.

Start with the CPU installed in the CXA. View the CPU from the rear panel of the CXA 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, 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. In some cases, the CPU part number will appear on a label below the LAN connector on the rear panel. If not, 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
W1312-60072	N9020-60115
W1312-60191	N9020-60115
W1312-60197	N9020-60140
W1312-60210	N9020-60248
W1312-60213	N9020-60248

Revision History:

Date	Service Note Revision	Author	Reason for Change
7 Dec 2011	01	Jian Kang	As Published
30 May 2024	01A	Jian Kang	Added reference to PC5, PC7/PC7S