Honeywell

Experion PKS
LCNP Status User's Guide

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Disclaimer

Contents

1 About This Document

This document describes the LCNP Status display that is the 'control panel' for the TotalPlant Solution (TPS) System portion of your station. The LCNP status is available on Experion and TPS nodes using the LCNP/ LCNP4/LCNP4M boards.

Attention

Beginning with Experion R431, the Enhanced TPS Node (ETN) has been introduced. In ETN, the LCNP4 card has been removed and is replaced by a combination of Enhanced TPS Node Interface card (ETNI) and K4LCN board which provides the same functionality as the LCNP4 card. Throughout the document, unless specifically mentioned, the term LCNP4 can be interchangeably used with the terms ETNI-K4LCN hardware.

Revision history

Revision	Date	Description
A	December 2013	Initial release of document.

2 References

The following list identifies all documents that may be sources of reference for material discussed in this publication.

Document Title	Document ID
Native Window User's Guide	EPDOC-XX74-en-410
Configuration Utility User Guide	EPDOC-XX14-en-410

3 Determining LCNP Status

3.1 LCNP Status Introduction

The LCNP Status Dialog is the 'control panel' for the TotalPlant Solution (TPS) System portion of your workstation. It provides information previously available in physical LEDs and other alphanumeric board indicators.

The LCNP status is available on Experion and TPS nodes using the LCNP/LCNP4/LCNP4M boards. This includes the following node types:

- Global User Station (GUS)
- Application Processing Platform (APP)
- LCN-connected ES-C
- LCN-connected Server
- LCN-connected ACE

3.1.1 Relationship to Native Window

The LCNP Status Dialog functions independently of the Native Window. Although much of the data displayed may be found among various Universal Station displays, additional information is presented that is not readily available elsewhere.

3.1.2 Modes of operation

The LCNP Status Dialog runs in three modes:

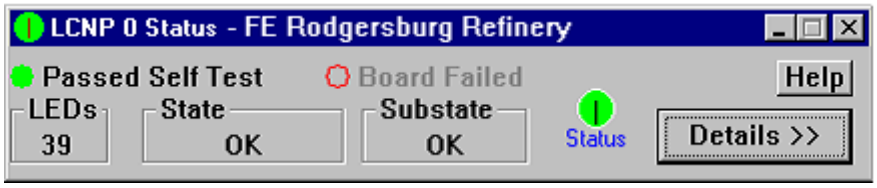
- Normal (No Details)
- Extended (Details)
- Iconized

LCNP Status can also be connected remotely. Refer to 'Native Window User's Guide' topic **Remoting** for details.

3.2 Interpreting Normal Mode Indicators

3.2.1 Invoking the LCNP status

Select the LCNP Status menu selection from the Start menu. The LCNP Status dialog opens in normal (No Details) mode, as pictured below.



3.2.2 Normal mode information

Normal mode provides the following critical information for monitoring the overall status of the LCNP:

- Passed Self Test indication
- Board Failed indication
- LEDs values
- State
- Substate
- Status indication
- Help
- Details

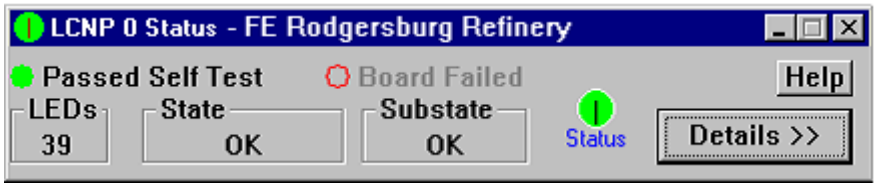
3.2.3 About normal mode indicators

When using the status in normal mode, you typically view the state and status indications to determine the node's operational and loading states.

3.2.4 Passed self test indicator

Passed Self Test is an indicator of the self-test status of this LCNP board.

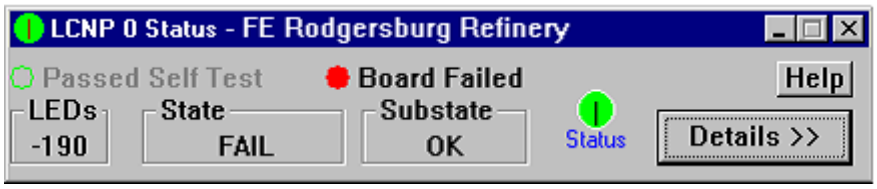
The hollow green circle fills *solid* green, as pictured below, if the LCNP board has successfully passed self-test.



3.2.5 Board failed indicator

Board Failed is an indicator of the runtime status of this LCNP.

The hollow red circle fills *solid* red, as pictured below, if the LCNP has failed.



3.2.6 LEDs

The LEDs field represents the LCN address of the node. The LEDs field number is previously defined from the Configuration Utility Board dialog to match the address number defined in the NCF.

This data is equivalent to the K2LCN/K4LCN board alphanumeric LEDs in classic TPS nodes. During the power-up/self-test sequence, the values displayed denote progress through self-test. If the self-test program completes without failure, the configured LCN node address is displayed. If a failure occurs during self-test or normal operation, an error identification code is displayed.

3.2.7 State

This data reflects the current TPS node state.

When the State indicator reads	The node
NOT CONFIG	is not configured
OFF	is powered off
PWR_ON	is powered on and awaiting load
LOC LOAD	is loading from a local source
NET LOAD	is loading over the LCN network
TEST	is under test
QUALIF	has passed self-test
READY	has completed loading and is in initialization
OK	is running normally
TERM	is terminating
FAIL	has failed
CONN_FAIL	has detected a connection failure with ETNI. Note: This state is only available in Enhanced TPS Nodes.
MISMATCH	is connected to an ETNI with a different personality type. Note: This state is only available in Enhanced TPS Nodes.

3.2.8 Substate

This data reflects the current TPS node substate.

When the Substate indicator reads	The node
OK	is running normally
WARNING	has experienced minor difficulty loading
SEVERE	has experienced major difficulty loading
FAILED	has failed

When the Substate indicator reads	The node
ISOLATED	is isolated from the network

3.2.9 Status applet

The vane in the Status Applet moves at the refresh rate specified to illustrate that the display is functioning properly.

The LCNP Status Applet's color indicates status as follows:

If the Status Applet color is	TPS node is in one of the following states
Red	FAIL TERM OFF NOT CONFIG
Yellow	QUAL PWR ON LOC LOAD NET LOAD TEST READY
Green	OK

If the Status Applet is connected REMOTELY to an LCNP, it should not be set at update rates faster than once per second except for diagnostic purposes. Doing so will adversely affect the update rates achievable by the Native Window.

3.2.10 Help button

The **Help** button calls up the on-line help documentation.

3.2.11 Details>> button (from normal mode)

You will usually be operating in the normal mode, but on occasion will need to access the details to:

- Get substate information for Honeywell field technicians
- Reset the LCNP
- Specify optional time set settings

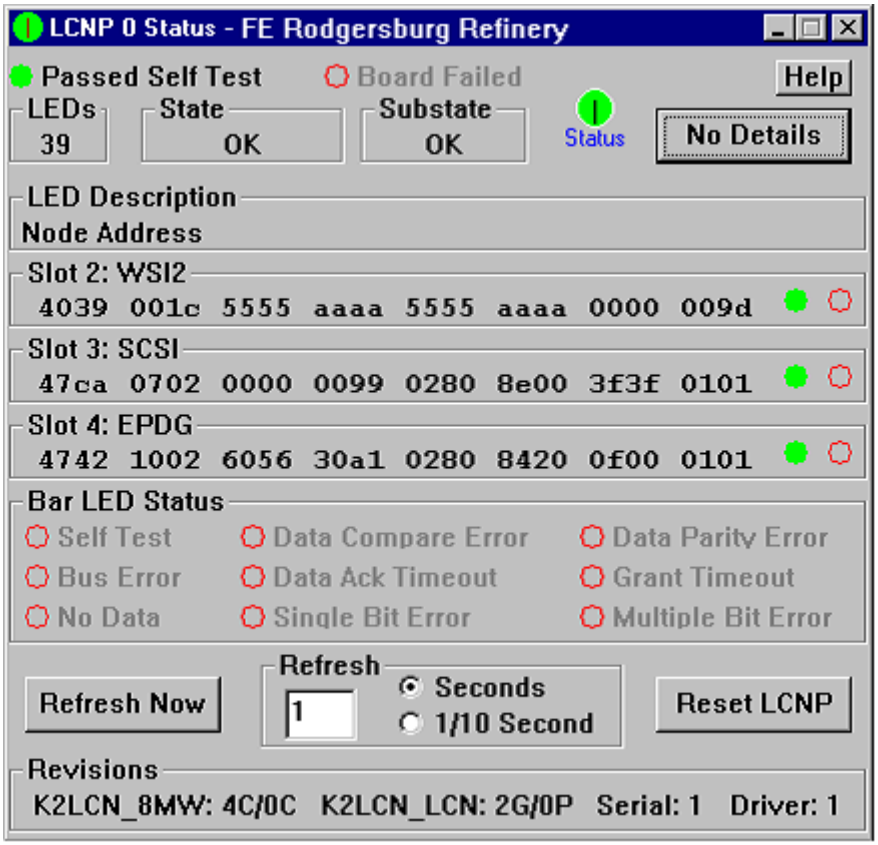
Click the **Details>>** button to expand the LCNP Status dialog to the extended mode.

The **Details>>** button becomes the **No Details** button.

3.3 Interpreting Extended Mode Indicators

3.3.1 Expanding LCNP status

Click **Details>>** on the normal mode LCNP Status display. The LCNP Status dialog expands to extended mode, as pictured below.



3.3.2 Extended mode information

Extended mode provides additional hardware and diagnostic information, such as:

- LED descriptions
- Slot designators
- TPS slot assignments
- Slot register contents
- Various LED indicators
- LCNP board hardware/firmware revision information

Extended mode is intended as an aid to the field technician.

3.3.3 No Details button (from extended mode)

Click **No Details** to return the LCNP Status dialog to the normal mode of operation. The **No Details** button becomes the **Details>>** button.

3.3.4 LED Description

LED Descriptions explain the meaning of codes that appear in the LEDs field.

3.3.5 Slot Designators

These labels reflect the names of the boards being emulated on a slot-by-slot basis.

Board selection and activation is specified via the Configuration Utility.

3.3.6 Slot # assignments

Three slots can be assigned to contain emulated TPS boards of the following types:

- WSI - Work Station Interface board

  This emulator supports X-layer functions.
- SCSI - Disk Drive board

  This emulator supports emulated disks.
- PDG - Human Interface board

  This emulator supports video, keyboard, mouse, and touchscreen.

TPS boards are also referred to by their slot numbers.

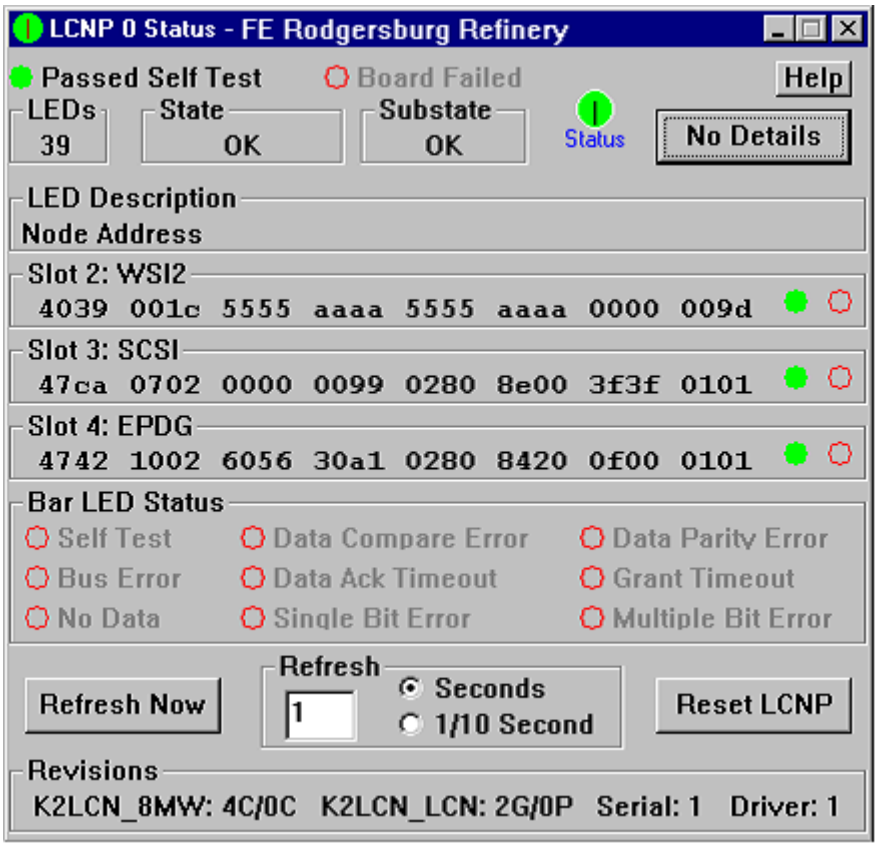
3.3.7 Slot register contents

This data reflects the slot register contents for each of the emulated slots. During operations, the register contents change at a very high rate, but the data is updated only at the designated refresh rate. Slot Register data is of a diagnostic nature and is normally of use only to Honeywell Field Service personnel.

3.3.8 Slot passed-self-test indicators

Each emulated slot has a self-test status indicator.

The hollow green circle fills *solid* green, as pictured below, if the emulator slot has successfully passed self-test.



If neither circle is solid, the corresponding slot emulation is disabled.

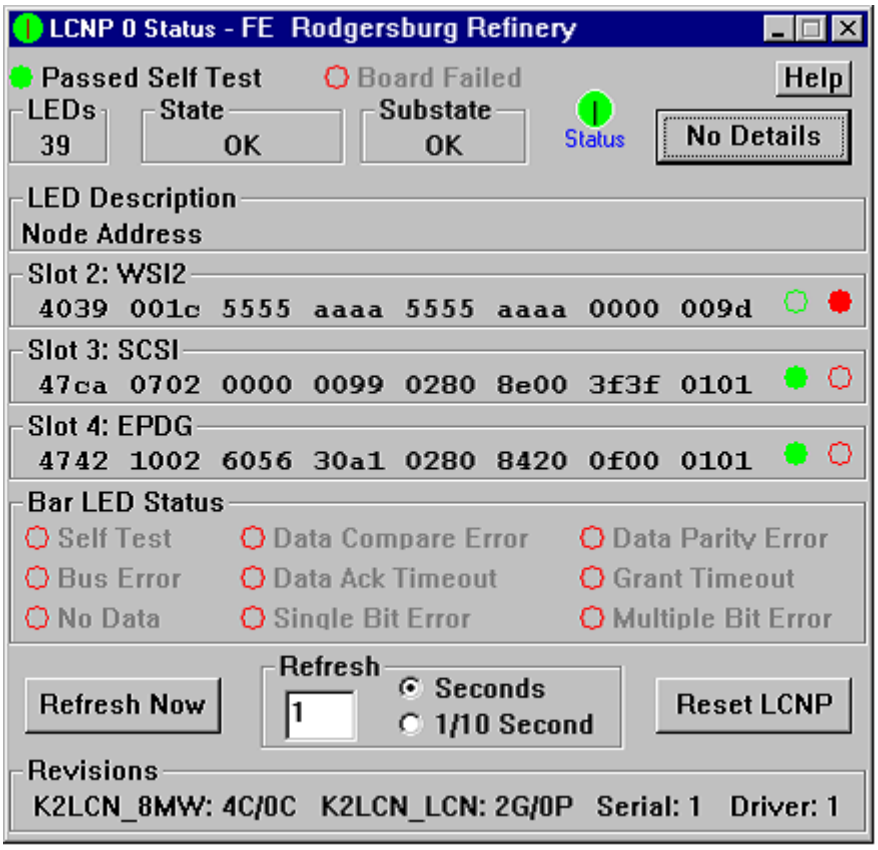
Attention

After reset and self-test, the WSI2 Slot self-test indicators are not set. They become set only after the initial load sequence is complete and QLT tests have evaluated the board for proper functioning.

3.3.9 Slot failed indicators

Slot Failed is an indicator of the runtime status of a board in a slot.

The hollow red circle fills *solid* red, as pictured below, if the emulator slot has failed.

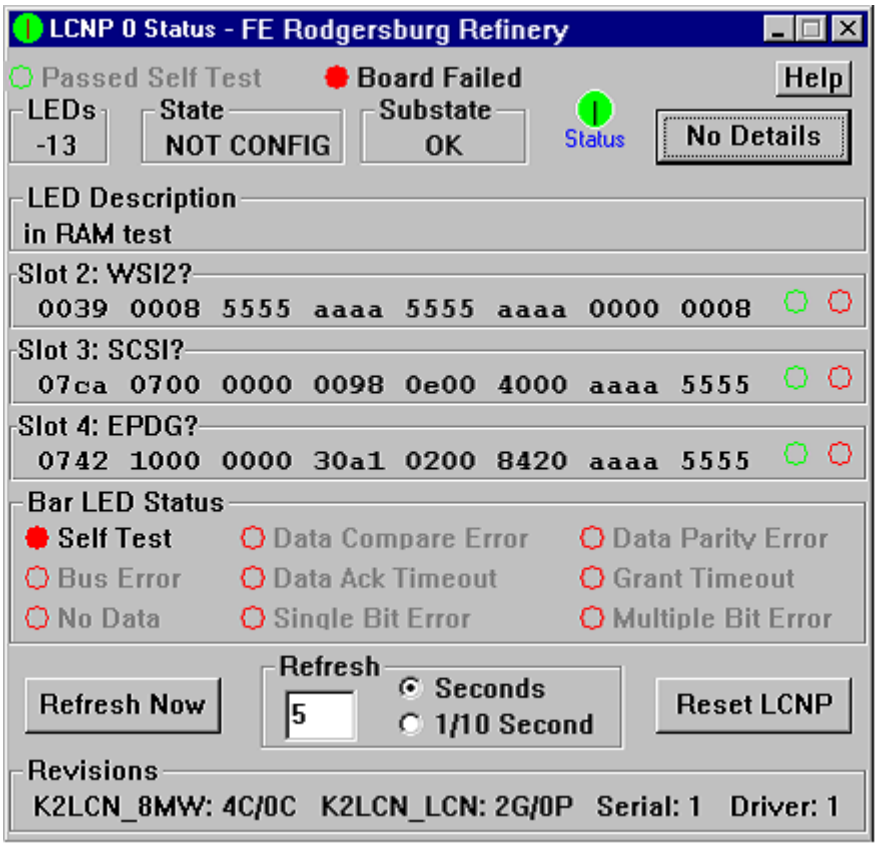


If neither circle is solid, the corresponding slot emulation is disabled.

3.3.10 Bar LED status

The red circles in the Bar LED Status area are indicators for specific functions and errors on the LCNP board.

Following reset, the red **Self Test** circle fills *solid* red during the LCNP board self-test, as pictured below, and then returns to a hollow circle.



The hollow red circles fill *solid* red if there is a problem in any of these areas.

3.3.11 Refresh Now button

The **Refresh Now** button causes a manual refresh of all data displayed in the LCNP Status dialog.

3.3.12 Refresh interval

This control allows the user to select the rate at which the LCNP Status dialog refreshes its data.

One of two time increments can be specified:

- Seconds

  A rate of one second provides a reasonable balance between freshness of data and overhead to the system.
- Tenths of seconds

  The maximum rate of 1/10 second is useful only in certain diagnostic situations and is not recommended during normal operation.

Setting the update rate to zero inhibits automatic update. In this case, the **Refresh Now** button must be used to update data.

The vane in the Status icon moves at the rate specified to illustrate that the display is functioning properly.

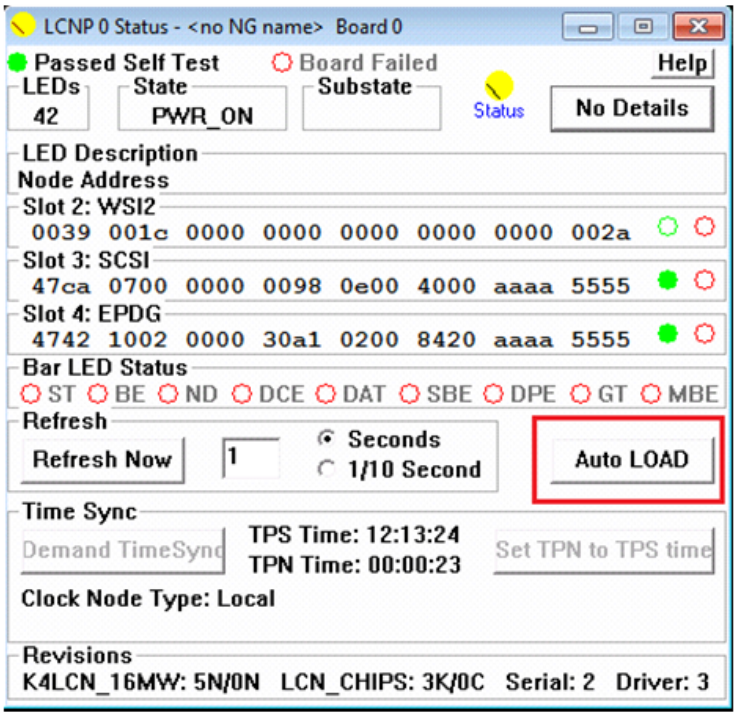
3.3.13 Reset LCNP button

This button performs a RESET on the LCNP, the same function initiated by pressing the red reset button located under the top edge of the Operator keyboard on a classic Universal Station or the white reset button on a US electronics chassis.

Attention

For the Enhanced TPS Node, the **Reset LCNP** button has been removed. You can reset the node by resetting the power supply.

Also, a new **Auto LOAD** button has been added. Using the **Auto Load** button, you can load the workstation personality on the K4LCN processor board. This button is enabled only when the node is in **QUALIF** or **POWER ON** state.



WARNING

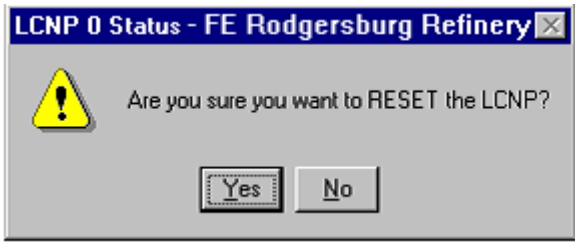
Resetting an LCNP interrupts all processing on the LCNP and causes loss of process view in operator stations. The node must be RELOADED with its personality prior to further use.

3.3.14 Resetting an LCNP

Use the following procedure to reset the LCNP.

1. Click **Reset LCNP**.

   The following dialog appears:



This provides the opportunity to cancel the reset operation by clicking **No**.

2. Click **Yes** to continue.

   The LCNP now resets.

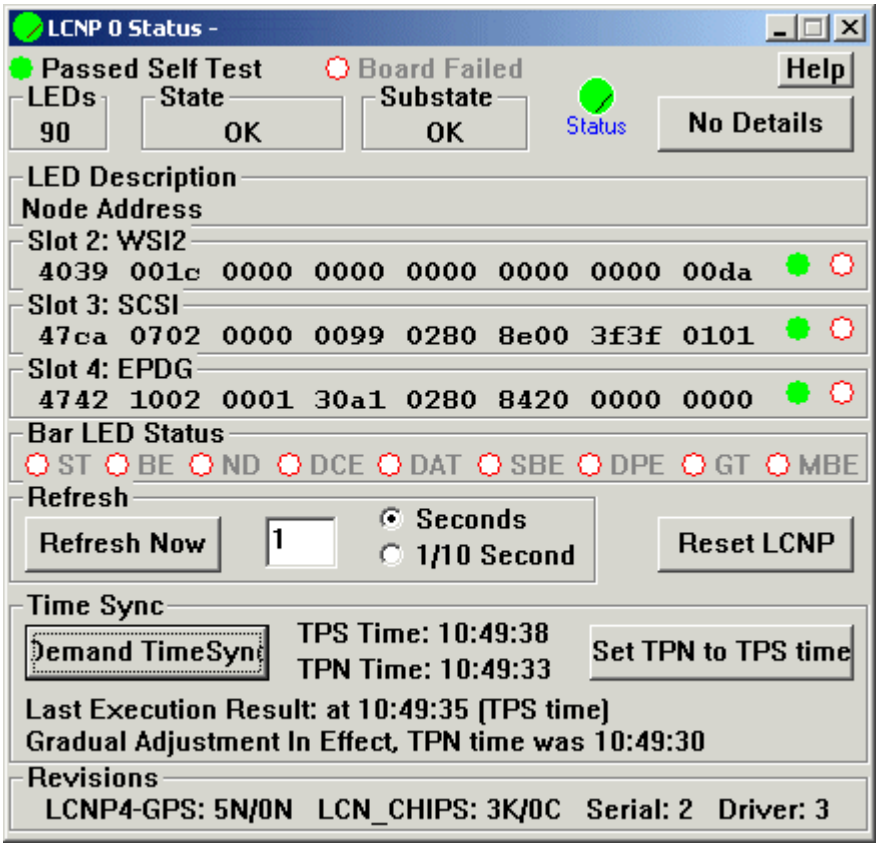
Reset LCNP is not recommended as a preferred mechanism for shutting down the LCNP. The preferred method is to perform a NODE SHUTDOWN from the Native Window's System Status display whenever possible.

Reset LCNP can be configured in Configuration Utility to be active or nonactive for the LCNP Status display. When non-active, the **Reset LCNP** button appears with gray text.

3.3.15 TPN time synchronization

LCNP4-GPS boards support a TPN time synchronization option that allows you to synchronize TPN time to TPS time. An LCNP4-GPS board displays buttons in the details mode to adjust the time synchronization. A node can leverage this time sync capability only when configured as a Clock Source in the NCF. Other GPS-enabled nodes become listener nodes. Once configured as a Clock Source, enable and configure time sync on the clock source node.

The time synchronization configuration and operation are described in TP20W Configuration Utility.



3.3.16 Revisions

The current revision identifiers of the hardware/firmware in use are indicated as follows:

LCNP:		
	Displayed as 'AB/CD' where	
		A = Hardware Version (4)
		B = Hardware Revision (B initially)
		C = Firmware Version (always 0)
		D = Firmware Revision (B for initial version)
	of the microprocessor section of the LCNP	

LCNI:		
	Displayed as 'AB/CD' where	
		A = Hardware Version (2)
		B = Hardware Revision (G initially)
		C = Firmware Version (always 0)
		D = Firmware Revision (P initially)
	of the LCN Interface section of the LCNP	

3.3.17 Serial

Serial is indicated by 'xxx' where xxx is the version number of the Serial Port PROM.

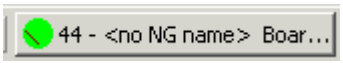
3.3.18 Driver

Driver is indicated by 'xxx' where x is the version of the workstation Driver software.

3.4 Iconized Mode

3.4.1 Iconizing the LCNP status

Click the minimize button in the upper-right corner of the LCNP Status dialog. The dialog is reduced to a button on the taskbar located at the bottom of the desktop.



The LCNP Status icon has two parts:

- Status Applet

  The Status applet shows the LCNP Status display refreshing activity.
- LEDs value

  The LEDs value displayed below the status applet is the value shown in the LEDs frame of the LCNP Status display dialog. This number corresponds to the physical 3-digit LED indicator found on the classic TPS K2LCN/K4LCN board.

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4.2 How to report a security vulnerability

For the purpose of submission, a security vulnerability is defined as a software defect or weakness that can be exploited to reduce the operational or security capabilities of the software.

Honeywell investigates all reports of security vulnerabilities affecting Honeywell products and services.

To report a potential security vulnerability against any Honeywell product, please follow the instructions at:

https://honeywell.com/pages/vulnerabilityreporting.aspx

Submit the requested information to Honeywell using one of the following methods:

- Send an email to security@honeywell.com.

  or

- Contact your local Honeywell Process Solutions Customer Contact Center (CCC) or Honeywell Technical Assistance Center (TAC) listed in the “Support and other contacts” section of this document.

4.3 Support

For support, contact your local Honeywell Process Solutions Customer Contact Center (CCC). To find your local CCC visit the website, https://www.honeywellprocess.com/en-US/contact-us/customer-support-contacts/Pages/default.aspx.

4.4 Training classes

Honeywell holds technical training classes on Experion PKS. These classes are taught by experts in the field of process control systems. For more information about these classes, contact your Honeywell representative, or see http://www.automationcollege.com.