Introduction

This is the *PXNplus CPU Board Release Notes (460634001E)* for the following GE Security documents:

- *Micro/5 Installation Guide* (460130002D)
- *Micro/PX-2000, Micro/PXN-2000, and Micro2000PXNplus Installation Guide* (460419001K)
- *Micro/PX-2000, Micro/PXN-2000, and Micro2000PXNplus Quick Installation Guide* (460435001M)
- *M3000 Installation Guide* (460630001A)

This document includes late-breaking information on this product that did not make it into the manual. Where information differs between the two documents, this document supersedes the manual.

What's new

The following sections contain new or updated information:

Build information

Note: Builds PXNP_DIST_R107, PXNP_DIST_R108, and PXNP_DIST_R109 were internal releases only.

Build PXNP_DIST_R110

Enhancements

Build PXNP_DIST_R110 provides the following enhancements to the Integrated Configuration Tool:

- Ability to disable the Integrated Configuration Tool once configuration is complete to provide increased security. Use the **Parameters/Other Parameters** tab. See *Disabling and enabling the Integrated Configuration Tool* on page 6 for more information.
- Web server updated from version 2.04 to version 2.25b.
- Ability to enable dynamic logging feature.

Known issues resolved

Build PXNP_DIST_R110 resolves the following issues:

- Access to the Main (main_ie.html) page of the Integrated Configuration Tool is provided only when the user is logged into the Integrated Configuration Tool.
- On Picture Perfect installations, this build adds the capability to configure UBF using the Integrated Configuration Tool. On Secure Perfect installations, the Secure Perfect host is used to configure UBF.
- On occasion, the micro fails to obtain the host name when configured for DHCP and DDNS operation. This prevents the micro from establishing a connection with the host. This has now been corrected for both Secure Perfect and Picture Perfect hosts.
- Updates the Integrated Configuration Tool to properly notify the user when downloading `.efl` images of type `PXNPK6xxx.efl`.
- Updates Picture Perfect to detect slow or intermittent hosts that may cause the micro to hang in an undetermined configured state never receiving the base configuration database. The micro allows a total of three attempts to download the base configuration database from the host. Upon failure to download the base configuration database from the host, the micro enters the persisted mode of operation. Upon entering the persisted mode of operation, the micro attempts to communicate with the host again after a period of ten minutes has elapsed.

Build PXNP_DIST_R106

Build PXNP_DIST_R106 resolves the following issues:

- Micro crashes when loading badges with multiple unique categories. This is often exposed when loading the database from persistent memory. The micro may reboot once every hour when it is getting the database from the host.
- On occasion, the micro does not go into the normal mode when coming out of holiday mode.
- Broadcast state changes do not take effect until the micro is reset.
- When the Picture Perfect host is shut down with the micro online, the micro does not detect that it is offline with the host.
- On occasion, time synchronization of the micro with the Picture Perfect host was off by about a minute.

Verify your PXNplus firmware build

1. In the browser Address field, enter the IP address of the micro.

2. At the Integrated Configuration Tool password screen, log on.

3. Select **Micro Info**. Use the following table:

If this build is installed...	The following displays...
R110	Build version: PXNP_DIST_R110
	PP version: PP_VER_118
	SP version: SP_VER_6118
R106	Build version: PXNP_DIST_R106
	PP version: PP_VER_114
	SP version: SP_VER_6114
R105	Build version: PXNP_DIST_R105
	PP version: PP_VER_113
	SP version: SP_VER_6113

Micro configuration notes

- For builds **R106** and **R105**, micros configured for the first time require a manual reset after clicking **Apply** within the Integrated Configuration Tool. After clicking **Apply**, wait a minimum of 30 seconds before resetting the micro (shorting JP6 on the PXNplus CPU board).
  For build **R110**, the micro resets automatically.
- To restore the factory defaults, short JP4 on the PXNplus CPU board for a minimum of five seconds.

For DHCP/DDNS users:

- When using DHCP or DDNS, a fully qualified domain name has to be used instead of just a unique name. For example: micro.getest.ge.com
- Due to the limitation on the Picture Perfect host, the DNS/DDNS server needs to be manually updated with the Picture Perfect host name and IP address.

Minimum supported micro board levels

If the micro board contains a 4-digit numeric date code, it can be used with the PXNplus CPU board. If the micro board shows a 2-digit alpha date code, refer to the table below for the minimum level required.

Table 1.   Minimum board level required for use with the PXNplus CPU board

Board	Part number	Date code[1]	
Power/Communications	110064001	IZ	September 1999
2RP	110063001	DY	April 1998
2SRP	110101501	No minimum level required	
8RP	110100501	FY	June 1998
20DI	110072003	IX	September 1997
16DO	110071001	GZ	July 1999
16DOR	110078001	No minimum level required	
Backplane	110061001	No minimum level required	

1.   The first letter identifies the month where A=January, B=February, and so on. The second letter identifies the year where Z=1999, Y=1998, and the sequence continues with each previous letter representing the previous year.

LED indications

Manual correction

The following statement can be found in the section *Removing the PXNplus board* in the *Micro/5 Installation Guide* and the *M3000 Installation Guide*:

1.   To safely shut down the micro operating system, short JP3 for approximately 5 seconds until DS8 turns On. DS2 and DS3 then alternate On.

The statement should read:

1.   To safely shut down the micro operating system, short JP3 for approximately 5 seconds until *DS7* turns On. DS2 and DS3 then alternate On.

Additional LED indications

Four additional LED indications have been included:

- **eFlash image save:** indicates that the newly loaded image from the eFlash transfer is being saved into the FLASH. This is an activity indicator only.
- **Persistence:** indicates that the micro is operating without a host. In this mode, the micro is operating standalone until communication is re-established with the host.
- **Flash write:** indicates that the micro is storing database records into the Flash file system. This is an activity indicator only.
- **Watchdog failure mode:** indicates that an internal thread has failed.

See *Table 2* and *Table 3* for the LED states.

Table 2.   PXNplus CPU board LED state transitions

	DS1	DS2	DS3	DS4	DS5	DS6	DS7	DS8
eFlash image save							Alternates ON with DS8	Alternates ON with DS7
Persistence								ON
Flash Write						Flashing		

Table 3.   PXNplus CPU board LED fault conditions

	DS1	DS2	DS3	DS4	DS5	DS6	DS7	DS8	Resolution or definition
Operation state									
Watchdog failure mode					ON		ON		This failure is logged according to the log settings. The micro performs a complete reboot after this failure.

Persistent mode of operation

When the PXNplus is in persistent mode of operation:

- Anti-passback, Time and Attendance tracking, and Temporary Categories functions are localized to the individual controllers. Upon restoration of communications with the host, the host automatically sets badge status for Anti-passback and Time and Attendance to neutral for all badges on the controller.
- Unknown badges cannot be learned because the controller is not online with the host. The Unknown badge transactions are mislabeled in the history upload as transaction type *Learn Timeout* instead of *Unknown Badge*.

eFlash instructions

For Picture Perfect users

- When selecting the firmware `.efl` file to update a PXNplus-based micro, select both **Direct Micro File** and **Network Micro File** regardless of the actual physical communications being used. To clarify, select both **Direct Micro File** and **Network Micro File** whether you have a direct-connect, dial-up or network-based PXNplus micro.
- Because of the existing filter on the file name, the file name `PXNP6xxx.efl` does not display on the selection list. Manually enter the path to the file on Picture Perfect 2.0 and later versions.

- In order to prevent a Flash Timeout Failure (indicated by a red icon), the system administrator needs to edit the `/cas/log/.eflashrc` file and enter a minimum of these values:

  `timeout = 60`

  `flashwait = 1440`

  Some networks may require a higher parameter value.

- When the line of micros has a combination of PXNplus and PX CPU boards, the whole line cannot be flashed at one time. When flashing PXNplus boards, select `PXNP6xxx.efl` as the **Direct Micro File**. When flashing PX boards, select `m5nxxx.hex` as the **Direct Micro File**.
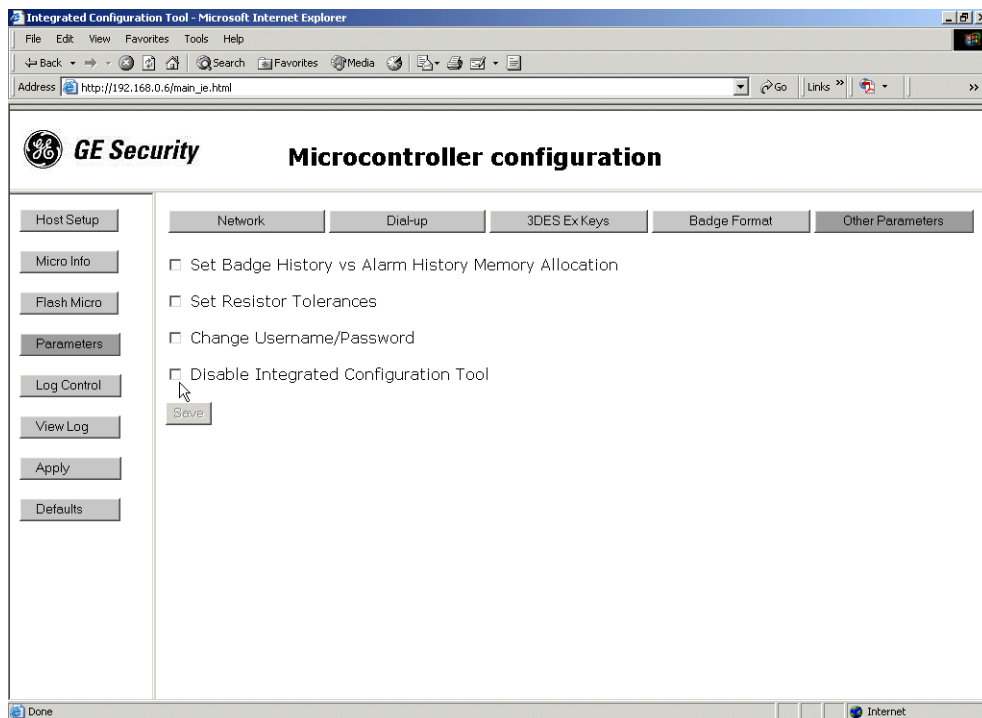
For Secure Perfect users

When flashing a line of micros with a PXNplus micro as the head-of-the-line micro, only two downstream micros can be selected at a time.

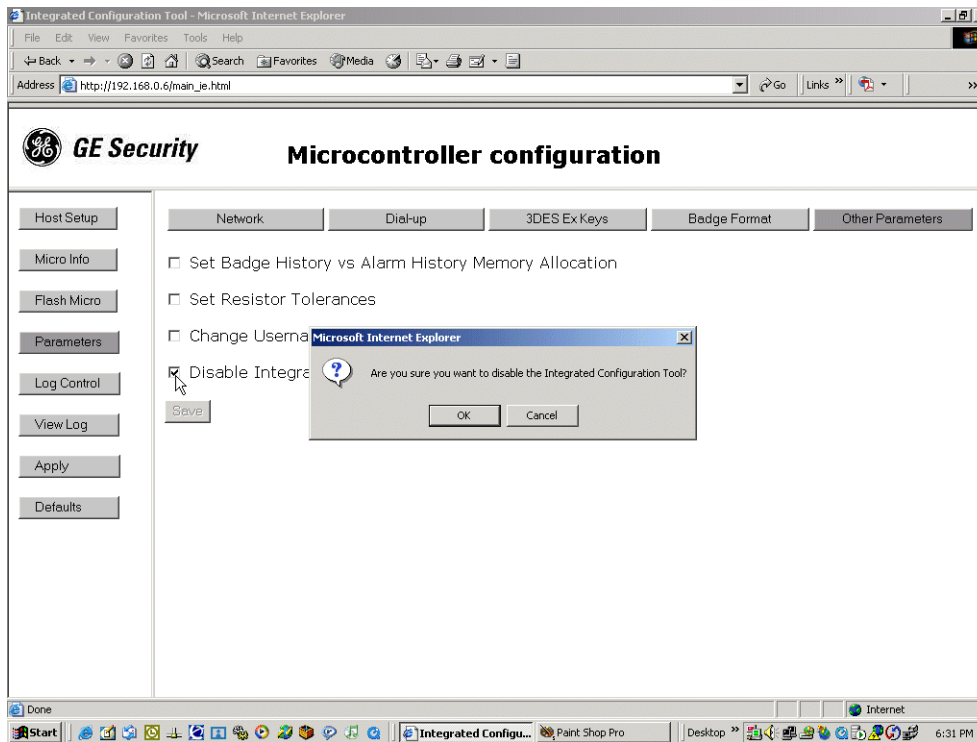# Disabling and enabling the Integrated Configuration Tool

Build R110 provides the ability to disable and enable the Integrated Configuration Tool for added security.

Disabling the Tool

1. Successfully log on to the Integrated Configuration Tool.
2. Select **Parameters**, then **Other Parameters**.
3. On the Other Parameters tab, select the option *Disable Integrated Configuration Tool*.

4. Selecting this option generates a dialog prompt verifying your selection. You must select **OK** on the prompt to disable the Integrated Configuration Tool.

5. To make this selection permanent, click **Save** and then click **Apply**.

6. The PXNplus micro performs a system reboot automatically.

7. After the PXNplus performs a successful reboot, the Integrated Configuration Tool is permanently disabled.

Enabling the Tool

There are two options to enable the Integrated Configuration Tool: temporary and permanent. Temporary allows access to the Tool until the micro resets. Permanent allows access until you manually disable the Tool again.
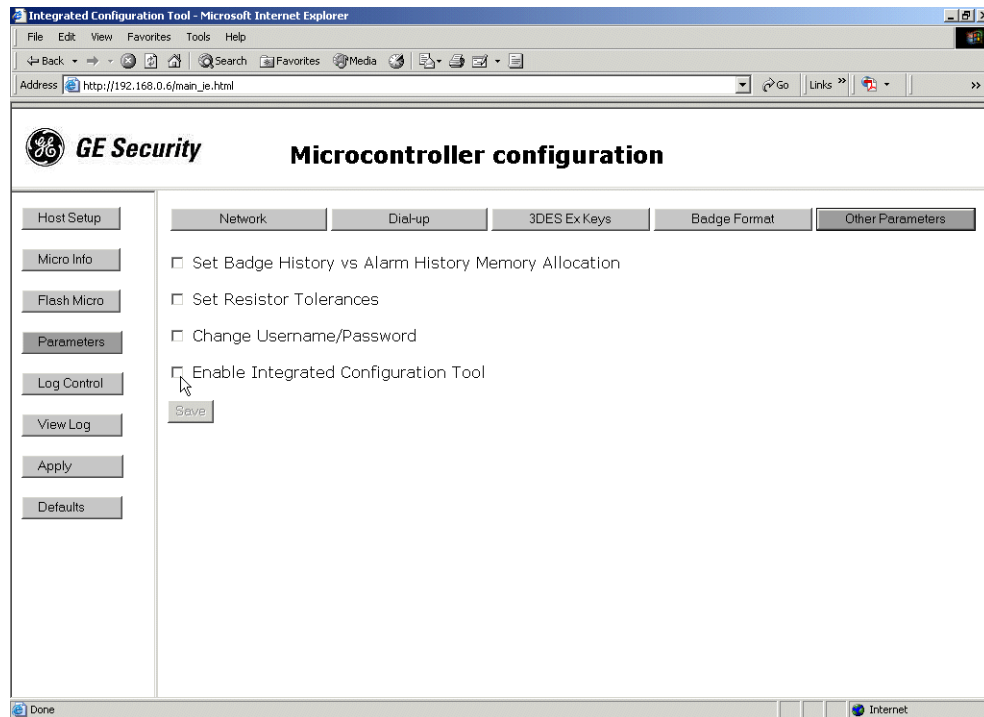
Before you begin, you MUST have physical access to the PXNplus micro.
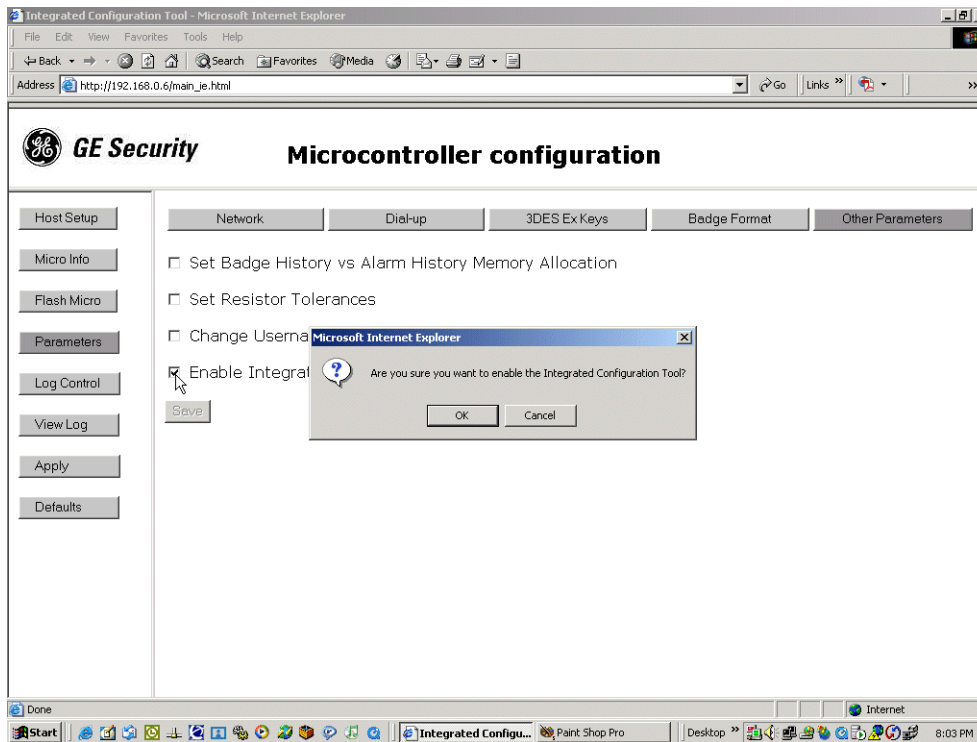
Temporary enabling

1. Verify that the PXNplus has completed the power-up boot cycle by checking that DS7 is no longer in the constant ON state.

2. Jumper JP2. Verify that DS6 turns ON. Allow up to five seconds for DS6 to be turned ON. Once DS6 is ON, remove the jumper and DS6 turns OFF.

3. The Integrated Configuration Tool is now enabled until the PXNplus reboots.

Permanent enabling

1. Complete the steps in the section *Temporary enabling* above then return to this section.

2. Successfully log on to the Integrated Configuration Tool.

3. Select **Parameters**, then **Other Parameters**.

4. On the Other Parameters tab, select the option *Enable Integrated Configuration Tool*.

5. Selecting this option generates a dialog prompt verifying your selection. You must select **OK** on the prompt to enable the Integrated Configuration Tool.

6. To make this selection permanent, click **Save** and then click **Apply**.

7. The PXNplus micro performs a system reboot automatically.

8. After the PXNplus performs a successful reboot, the Integrated Configuration Tool is permanently enabled.