

HP Host Installation Notes

The following HP restrictions on the Thunder 9200 had been established by a JTA (Joint Technology Agreement) between Hitachi and HP:

- maximum of 8 LUs recognized per FC port on an HP host
- LUN security was strictly prohibited
- maximum queue depth: 8 commands per LU and 256 per FC port by HP-UX

As of September 21st, these restrictions were waived legally, so that:

- more than 8 LUs are possible
 - a maximum of 64 are allowed currently by the 9200
 - a maximum of 256 are allowed by the HPUX operating system per FC port
- LUN security can be used now with the HPUX operating system
- maximum queue depth
 - a maximum of 256 commands can be queued per LUN and 1,024 per FC port by HP-UX
(a maximum of 128 commands can be queued per Thunder 9200 port)

The minimum required Thunder 9200 **microcode** is **055B** and the minimum required Resource Manager 9200 (**RM9200**) level is **5.50**. The following setting must be set via RM9200 to enable these new features:

check **HP connection mode 2** to enable

The screenshot shows the 'Parameter' window in the HP RM9200 management software. The 'Array Unit' is set to 'kevin'. The window is divided into sections for 'Controller 0' and 'Controller 1'. Under 'Controller 0', 'Port 0A' and 'Port 0B' are visible. Under 'Controller 1', 'Port 1A' and 'Port 1B' are visible. The 'Host Connection Mode 1' is set to 'Standard Mode'. The 'Host Connection Mode 2' section has several checkboxes: 'CCHS Mode' (unchecked), 'Standard INQUIRY data expand Mode' (unchecked), 'HP Connection Mode 2' (checked), and 'Product ID DF400 Mode' (unchecked). The 'Port Option' section has four checkboxes: 'Reset/LIP Mode (Signal)' (unchecked), 'Reset/LIP Mode (Process)' (unchecked), 'Reset ALL LIP Port Mode' (unchecked), and 'Reset Target (Reset Bus Device) Mode' (unchecked). At the bottom right, there is a checked 'FD Backup' checkbox and 'Apply' and 'Reset' buttons. A 'Close' button is at the bottom center.

IMPLEMENTATION NOTES

When planning to implement the setting above, the following must be kept in mind:

- 1) The Thunder 9200 port cannot be shared with non-HPUX hosts. However, more than 1 HPUX host can be connected to the same Thunder 9200 port.
- 2) If this setting is toggled from “disabled” to “enabled” or vice versa on the Thunder 9200, the host will not be able to recognize any LUs at all. The hardware paths for the LUs, as recognized by HPUX, are changed by this action. **To avoid this, please follow the procedures as outlined in the supplemental document entitled [Thunder 9200 & HP-UX: Enabling Their Full Potential!](#)** Although not required, a data backup is always recommended as a precautionary step.
- 3) Enabling or disabling this setting will **require a reboot** of the Thunder 9200, needs to be done with **scheduled downtime**.
- 4) If LUN Security function will be used with more than 8 LUs, the operating system must be **HPUX 11.0** at a minimum.