VXI Configurator Help Index

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Devices

Under the Devices menu, users are able to display and manipulate (Add/Change/Delete) information from the 'devices' file that defines naming relationships examined by the Start-Up Resource Manager (SURM).   After the resource manager configures the system, it uses the information in the 'devices' file to attempt to find a symbolic name for each of different type of devices listed below, to establish Commander/Hierarchies, and to assign interrupt lines.

VXI Device
VME Device
GPIB Device

VXI Control

Under the VXI Control menu, users are able to define the hierarchy of commanders and servants with VXI device symbolic names under submenu Commander Hierarchy. Users can also define the interrupters and interrupt handlers by setting the IRQ numbers under the Interrupt Mapping submenu.

[Commander Hierachy](#)

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Database

Under the Database menu, users are able to Add, Changes, or Delete entries from the database of VXIbus manufacturer names and numbers, and VXIbus model names and numbers.   A submenu selects between manufacturers and models.

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VXI Device

VXI name relationships are the most flexible as defined in the 'devices' file. The names that are actually defined by the SURM depends on which devices are installed in the system at startup.

Multiple VXI devices can be configured with conflicting resources since the devices not present at startup are ignored. This is intended to ease changing configurations. It is not necessary to rerun the configurator in order to use a different VXI setup.

To add in a new VXI device name, type the device's name (1-12 characters, 488.2 naming convention), and define the desired relationship by:

1) Selecting a Manufacturer/Model (optional)

2) Checking the Location check box (optional)

       a) Entering a slot number (0-12) (optional)

       b) Entering a device number (0-255) (optional)

       c) Entering a mainframe number (0-255) (optional)

3) Checking the Logical address check box (optional)

       a) Entering the ULA number (optional)

   and clicking the Add button.

To display a device name's parameters, click the drop-down list and select the desired name.

To change a device name or its parameters, select the name, change its displayed value and/or relationships, then click the Change button.

To delete a device name, simply select the name and click on the Delete button.

NOTE
Add/Change/Delete operations will not change the content of the 'devices' file until the OK button is selected.

VME Device

VME devices cannot be detected by the SURM. Therefore, the SURM always assumes that all defined VME devices are always in the system. The bus resources specified for the VME device will not be used by VXI devices.

To add in a new VME device name, type the device's name (1-12 characters, 488.2 naming convention), and define the desired relationship by:

1) Entering Manufacturer and Model names

2) Entering an ULA number or checking the 'Assign ULA at runtime' checkbox

3) Checking the desired Address Space (A32, A24, or A16) then setting the base/size value by checking on value in the list box

4) Selecting the Data Width

5) Selecting the Byte Ordering

and clicking on the Add button.

To display a device name's parameters, click the desired name in the list box at top left.

To change a device name or its parameters, select the name, change its displayed value and/or relationships, then click the Change button.

To delete a device name, simply select the name from the list box and click on the Delete button.

NOTE

Add/Change/Delete operations will not change the content of the devices file until the OK button is selected.

GPIB Device

GPIB devices that are defined in the 'devices' file will be processed by SURM at startup time.

To add a new GPIB device name, type the device's name (1-12 characters, 488.2 naming convention), and define the desired relationship by:

   1) Entering the Primary address

   2) Checking the Secondary check box and setting its address (optional)

   and clicking the Add button.

To display a device name's parameters, click the desired name in the list box at top left.

To change a device name or its parameters, select the name, change its displayed value and/or relationships, then click the Change button.

To delete a device name, select the name from the list box and then click the Delete button.

NOTE

Add/Change/Delete operations will not change the content of the devices file until the OK button is selected.

Commander Hierarchy

To define a commander and its servants, first select the commander's name from the bottom list box and then select the 'Add commander' button. Second select the commander name in the top list box and, for each servant, select the name of the servant from the bottom list box and select the 'Add servant' button. If a commander is defined, but no servant is assigned to it, the commander will not appear as a commander the next time that this dialog box is invoked.

To delete a commander, select it from the top list box and select the 'Delete' button to the right. To delete a servant of a commander, first select the commander in the top box to display its servants, then select the servant from the middle list box, and then select the 'Delete' button to the right of the middle list box. To see an arbitrary device's commander, select the device's name from the bottom list box and select the 'Show commander' button. Its commander (if any) will be highlighted in the top list box.

These relationships are used by the Start-Up Resource Manager (SURM).   If the SURM discovers unnamed devices, or devices not defined in the hierarchy, it automatically assigns them as servants of the resource manager.   For names (of devices) defined in the hierarchy that are not found by the resource manager in the physical system, the resource manager simply ignores the name.

Interrupt Mapping

A VXI device can have up to seven interrupters and seven interrupt handlers. The interrupts can be hard-wired (e.g., by jumpers or switches) or programmable (by the Start-Up Resource Manager). Users define the hard-wired and programmable relationships in the same way - by indicating which interrupt lines each device uses. Users can also leave programmable devices unassigned, in which case the Start-Up Resource Manager will dynamically select and assign interrupt lines.

Interrupters and handlers can be associated with the VXI interrupt lines IRQ1-IRQ7 (1-7) or unassigned (0).   The scrollable list boxes to the right show the current assignments of interrupters and handlers.

To display the current assignments of any device, select it from the upper left list box.   If the "Assign IRQs at runtime" checkbox (at bottom left of dialog box) is not checked, the interrupt assignments of its seven interrupters and seven handlers are shown in the edit boxes. For instance, the value 0000032 in the first box indicates that the device will generate IRQ2 and IRQ3 from interrupters 1 and 2, respectively, and that other interrupters are nonexistent or unassigned. To change the assignments, edit the values in the boxes and select the 'Change' button.

To exit, select the 'OK'   (exit and save changes to the 'devices' file) or 'Cancel' button (exit and not save).

Manufacturers

To add a manufacturer, enter its manufacturer name and number and click the 'Add' button.

To display a manufacturer, find it in the alphabetized list box and click on the name.

To change an entry, display it, modify the displayed information, and click the 'Change' button.

To delete an entry, display it and click the 'Delete' button.

Models

Models are defined by the manufacturer name, model name, and model number. The list box shows all models currently defined in the model file (e.g., vximodel) and shows all manufacturers in the distributed manufacturer file (e.g., vximanuf).

To add a model, select the model's manufacturer name by clicking the top drop-down list arrow and selecting the desired name. Then, enter the model name and model number and click the 'Add' button.

To display a model, locate the model name in the alphabetized list box and click it.

To change an entry, display it, modify the displayed information and click the 'Change' button.

To delete an entry, display the entry and then click the 'Delete' button.