

Tundra Universe Image Mapping on the MVME2600 Power PC Processor.

MROD_Out Module in slot 9 -> BAR = x48

Tundra Universe registers:

	LSI#_CTL	LSI#_BS	LSI#_BD	LSI#_TO	
Image 0:	x80820000	x00000000	x00800000	x04800000	A32D32 SHARC A, B
Image 1:	x80050000	x00800000	x00880000	xffc80000	A24D08 CR/CSR
Image 2:	x80420000	x00900000	x00910000	x0D600000	A32D16 TIM
Image 3:	x00000000	x00000000	x00000000	x00000000	

Image 0 Maps to VME address x04800000 - x04ffffff
(BS + TO = x00000000 + x04800000 = x04800000)

Image 1 Maps to VME Address x00480000 - x004ffffff
(BS + TO = x00800000 + xffc80000 = x00480000)

Image 2 Maps to VME Address x0df00000 - x0df0ffff
(BS + TO = x00900000 + x0d600000 = x0df00000)

Long Access (D32) 0x00000000 - 0x000fffff -> SHARC A Via Image 0

Long Access (D32) 0x00100000 - 0x001fffff -> SHARC B Via Image 0

Note Long access:

Translate to offset on the
Universe PCI bus
(and thus on VMEbus):
Note: this is Image 0 range.

0x00000000 - 0x000fffff -> 0x00000000 - 0x003ffffc
0x00100000 - 0x001fffff -> 0x00400000 - 0x007ffffc

Byte Access (D08) 0x00800000 - 0x00800fff -> CR Via Image 1

Byte Access (D08) 0x00801000 - 0x0087fbff -> Not Used Via Image 1

Byte Access (D08) 0x0087fc00 - 0x0087ffff -> CSR Via Image 1

Short Access (D16) 0x00480000 - 0x00488000 -> TIM module Via Image 2

Note Short address 0x00480000 is byte address 0x00900000

This is the address, which is generated on the PCI side
of the Universe Chip (and falls in Image 2).

When jumper PL84 on the TIM is out then the base address of the module is
0x0d000000. In this case the LSI#_TO register of image2 should set to 0x0c700000.

Image 2 Maps to VME Address x0d000000 - x0d00ffff
(BS + TO = x00900000 + x0c700000 = x0d000000)

To perform a Hard Reset on the MROD-Out switch for example image 1 to User1 AM (by
default 0x10, see USER_AM register) instead of using the CR/CSR AM (0x2F), so:
Tundra Universe registers (Module in slot 9 -> BAR = x48):

	LSI#_CTL	LSI#_BS	LSI#_BD	LSI#_TO	
Image 1:	x80060000	x00800000	x00880000	xffc80000	A24D08 AM10

Now, to really perform the Hard Reset, access image 1 for example read 0x87ffff.