

## **1. Software Issues resulting from the SBRC-206 Multiplexers.**

The Aladdin 2 (SBRC-152) 1024x1024 arrays are composed of four 512x512 Array. Each 512x512 are referred to as quadrant on the 1024x1024 device. The improved Aladdin 3 (SBRC-206) multiplexers are not completely compatible with the 152-multiplexers.

The 206-mux modification essentially cuts the last row-pair from the lower quad (Q3/Q4) and attaches it to the upper quadrant. An additional row-pair shift register was added to address these 'new' rows. So the 206 device 'looks' like four 512x514 device (1024x1028).

The data from the new rows on Q1/Q2 (rows 512/513) are actually obtained from rows 510/511 from the Q3/Q4. The data from rows 510/511/512/513 on Q2/Q3 are garbage. These 4 dummy rows should be removed from the final image to maintain the spacial relationship between pixels.

GuideDog uses the BBMODE\_S8 (single channel, 8 pixels, 1 buffer DSP) buffer mode. Its Array is based on the 152 device.

BigDog uses the BBMODE\_D16 (double channel, 16 pixels, 2 buffer DSPs) buffer mode. Its Array is based on the 206 device.

The BBMODE\_S32 (single channel, 32 pixel, 1 buffer DSP) buffer mode exist. It cannot support more than 1024x1024 pixels due to the limitations of the SRAM size (1 Mega-word). This mode supports the 1024x1024 devices using a single buffer DSP.