2 x 64 MHz bandwidth (512 Mbps) from a single DAS

The correlator output ports on the DAS can be configured to output 2 bit 64 MHz data directly (with no digital filtering). This allows data rates of 512 Mbps from a single DAS (twice that from the S2 output port). As the signal format from the correlator ports are different from the S2 port a patch cable is needed to produce a pin assignment in the S2 specs. The BG3a cable does this. This cable has 3 inputs and one output. Two of the inputs are 20 way twist and flat cables which connect into the two correlator output ports on the back of the DAS (this supplies the sampled 64 MHz data from the two IFPs and the 32 MHz reference clock from the first correlator output). The third input plugs into the S2 output of the DAS to supply the 1 PPS tick. The 50 way twist-and-flat output from the BG3a then plugs directly into the VSIC board, bypassing the external connector. For this recording mode, vsib_record needs to be run in mode “2” (16 bits per sample).