

(860506)

CSIRO Division of Radiophysics
The Australia Telescope

To: Distribution
From: Martin Ewing
Subject: Austek quote for XCELL ICs

23 April 1986

I have enquired of Austek what our options might be for obtaining XCELL correlator chips for the OVRO mm interferometer and/or the VLBA. This memo summarizes the data I have received thus far.

1. Vanilla XCELLs. If we merely want to reorder the same chip now being used by the Australia Telescope, the following schedule applies:

<u>Quantity</u>	<u>Price (\$US)</u>
1-10	200
10-50	150
50-500	120
500-1000	102
1000-5000	95
5000+	85

2. Upgraded 16 MHz, 2-bit parallel XCELL. For a "reasonably trivial" effort, the XCELL could be produced in a version that would accept 2-bit samples in parallel instead of the time-multiplexed input of the normal XCELL. This upgrade gains a factor of 2 in performance for the 2-bit application. For a quantity of up to 250 chips (or so), the same price schedule as above holds, except that we must add \$6 US for a larger package. The chip would use a 68-pin pin grid array package instead of the current 40-pin DIP. The electrical and mechanical changes would require a redesign of the correlator module, which should be straightforward.

3. New 32 MHz CMOS Chip. With some further design effort and cost on Austek's part, they feel they could re-implement the XCELL on their 1.5 μ m CMOS process. This part could run at 32 MHz, gaining a factor of 4 on the standard chip. They are looking into the problem and should come back with some cost estimates soon.

As an extra concession, Austek will let us order, say, 250 chips now, and, if we can order another 750 within 12 months, we get the lot at the 1000+ price. Similarly, if we order 4000 in 12 months, we get the 5000+ price. Think big.

Apparently there is no need to correlate a new order with CSIRO's existing order. If you have further questions for Austek, I will be happy to pass them on.

Distribution:

A. Moffet
N. Scoville
S. Padin
VLBA Correlator Memo List
W. Wilson

Caltech 102-24
Caltech 102-24
Owens Valley Radio Observatory
c/o Carolyn Williams, NRAO, Charlottesville
CSIRO