

FRC & BC Schedules

Note: FRC & BC proceed in parallel

Task	No. Days	Start	Finish
Conceptual Design	206	~done	
Prototype	214	08/01/00	05/25/01
FPGA coding	66	08/01/00	10/31/00
Order components	44	09/15/00	11/15/01
Layout	45	11/01/00	01/02/01
Fabrication	28	01/03/01	02/09/01
Evaluation	75	02/12/01	05/25/01
Preproduction	141	02/12/01	09/05/01
FPGA coding	75	02/12/01	05/25/01
Order components (final)	44	03/05/01	05/03/01
Layout	30	04/16/01	05/25/01
Fabrication	28	05/28/01	07/04/01
Evaluation	45	07/05/01	09/05/01
Production	73	09/06/01	12/17/01
Fabrication	28	09/06/01	10/15/01
Evaluation	45	10/16/01	12/17/01
Mechanics (stiffening)	74	11/01/00	02/12/01

Testing & Integration

Task	No. Days	Start	Finish
Get CPU + License	35	10/09/00	11/24/00
Test Code Development	180	11/27/00	08/03/01
Basic utilities	60	11/27/00	02/16/01
Prototype code	90	11/27/00	03/30/01
Final accept test code	90	04/02/01	08/03/01

- **Integration Required**

- FRC – MB Nevis
- FRC – MB – BC Nevis
- STC / TFC – BC BU / Stony Brook
- FRC – L1CTT Fermilab
- FRC – STC – TFC Fermilab

Cost Summary

Item	Unit Cost	No.	Prod Costs	Other Costs		Total Cost	Spent
FRC DB	\$ 1,783	10	\$ 17,830	\$ 7,810	[1]	\$ 25,640	\$ 1,150
BC DB	\$ 731	80	\$ 58,474	\$ 5,505	[2]	\$ 63,979	\$ -
Motherboard		10	\$ -		[3]	\$ -	
SCL Mezz.		10	\$ -		[4]	\$ -	
Link Tx		50	\$ -		[5]	\$ -	
VTM		10	\$ -		[6]	\$ -	
Crate	\$ 4,690	8	\$ 37,520	\$ 841	[7]	\$ 38,361	\$ 38,361
Backplane		8	\$ -		[8]	\$ -	
Power/Cooling		8	\$ -		[9]	\$ -	
CPU	\$ 2,450	8	\$ 19,600	\$ 400	[10]	\$ 20,000	
Total			\$ 133,424	\$ 14,555		\$ 147,980	\$ 39,511

- **Total Cost** **\$148.0K**
 - Includes
 - * 10 FRC DBs + proto's \$25.6K
 - * 80 BC DBs + proto's \$64.0K
 - * 8 Crates \$38.4K
 - * 8 CPUs \$20.0K
 - Not (yet) included
 - * 10 Motherboards
 - * 10 SCL Mezzanines
 - * 50 Link Transmitters
 - * 10 VTMs
 - * 8 Power/Cooling for Crates
- **MRI Equipment Budget (FRC)** **\$172.6K**
 - Money to Nevis **\$60.0K**
 - * What's left now ~\$20K

Cost Details: FRC & BC

FRC

Item	Supplier/Chip	Unit Cost	#/Brd	Cost/Brd	All Cost	Prototype	Conting	Total Cost
FPGA	ALTERA - 10K30	\$ 80	0	\$ -	\$ -	\$ -	\$ -	\$ -
FPGA	ALTERA - 10K50	\$ 180	6	\$ 1,080	\$ 10,800	\$ 3,024	\$ -	\$ 13,824
CONNECTOR	AMP-120527-1	\$ 4	9	\$ 38	\$ 383	\$ 77	\$ -	\$ 459
CONNECTOR	AMP-120527-2	\$ 5	1	\$ 5	\$ 48	\$ 10	\$ -	\$ 57
OTHERCHIPS				\$ 100	\$ 1,000	\$ 200	\$ 300	\$ 1,500
PCB	WESTAK	\$ 300	1	\$ 300	\$ 3,000	\$ 600	\$ 900	\$ 4,500
ASSEMBLY	OSDA	\$ 210	1	\$ 210	\$ 2,100	\$ 420	\$ 630	\$ 3,150
MECHANICS	NEVIS			\$ 50	\$ 500	\$ 1,500	\$ 150	\$ 2,150
Totals				\$ 1,783	\$ 17,830	\$ 5,830	\$ 1,980	\$ 25,640

BC

Item	Supplier/Chip	Unit Cost	#/Brd	Cost/Brd	All Cost	Prototype	Conting	Total Cost
FPGA	ALTERA - 10K30	\$ 80	1	\$ 80	\$ 6,400	\$ 336	\$ -	\$ 6,736
FPGA	ALTERA - 10K50	\$ 180	1	\$ 180	\$ 14,400	\$ 756	\$ -	\$ 15,156
FIFO	IDT72V36100	\$ 109	1	\$ 109	\$ 8,755	\$ 328	\$ -	\$ 9,084
DPRAM	IDT70V9099	\$ 56	4	\$ 223	\$ 17,859	\$ 670	\$ -	\$ 18,529
CONNECTOR	AMP-120527-1	\$ 4	2	\$ 9	\$ 680	\$ 26	\$ -	\$ 706
CONNECTOR	AMP-120527-2	\$ 5	1	\$ 5	\$ 380	\$ 14	\$ -	\$ 394
OTHERCHIPS				\$ 50	\$ 4,000	\$ 150	\$ 1,200	\$ 5,350
PCB	WESTAK	\$ 30	1	\$ 30	\$ 2,400	\$ 90	\$ 720	\$ 3,210
ASSEMBLY	OSDA	\$ 45	1	\$ 45	\$ 3,600	\$ 135	\$ 1,080	\$ 4,815
Totals				\$ 731	\$ 58,474	\$ 2,505	\$ 3,000	\$ 63,979