

**WBS53** DAQ I/O Cost Estimate - All Machine Phases

Rev 0: 16JAN01 PS  
 REV1: 26FEB02 PS  
 Rev 3: 01MAY02 PS  
 Rev 4: 04APR2003 PS

WBS	Diagnostic Phase	Diagnostic	Operator Station (PC)	Rack	Chassis & CPU & PwrSup	Fiber Optic Network I/F	'SNS' FacClk Event Decoder	8 chan Timer/Counter	4 chan 5 MHz Dig.	16 chan 100 KHz Dig.	16 chan 10 KHz Dig.	8 bits Din	8 bits Dout	8 chan Ain	4 chan Aout	Misc. Cost	Misc. Items
31	1	Magnetics I (Rog.flux,saddle,b-dot,diamag)	2	4	3	3	1	1	0	15	0	1	1	1	0		
350	1	1 mm Interferometer	1	1	1	1	1	1	1	0	0	1	1	1	0		
361	1	VisCam I (std. Vid, fast vis)	3	2	3	3	3	3	0	0	0	0	0	0	0	15	3xFrameGrabber=\$15K
38	2	ECE Rad (e-beam,fluor-scrn,CCD)	1	2	1	1	1	1	0	0	2	1	1	1	1	5	FrameGrabber=\$5K
331	3	Visible Spectrometer	1	1	1	1	1	1	0	0	0	0	0	0	0	0	FrameGrabber=\$5K
332	3	abs. UV Spectroscopy	1	1	1	1	1	1	0	0	0	0	0	0	0	0	FrameGrabber=\$5K
333	3	filtered 1D CCD camera	1	1	1	1	1	1	0	0	1	1	1	0	0		
334	3	core Foil Bolometer Array	1	0	0	0	0	0	0	0	1	1	1	1	0		
335	3	divertor foil bol. arrays	0	0	0	0	0	0	0	0	1			0	0		
341	3	SXR Arrays I	1	1	1	1	1	1	0	3	0	1	1	1	2		
351	3	Thomson Scattering development	2	3	1	1	1	1	0	0	0	1	1	1	1		50 superfast channels in WBS35
356	3	multich. FIR interf./ polarim.	1	1	1	1	1	1	0	2	0	1	1	0	0		
31	4	Magnetics I (Rog.flux,saddle,b-dot,diamag)	0	0	1	1	0	0	0	4	0	0	0	0	0		
321	4	neutral particle analyser	1	1	1	1	1	1	0	3	0	1	1	1	0		
322	4	fast ion loss probe	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1 frame grbr by Diag.
323	4	epithermal neutron detector	0	0	0	0	0	0	0	0	1	1	1	1	0		
341	4	enhanced x-ray tomography	0	0	0	0	0	0	0	8	0			1	0		
342	4	high frequency Mirnov coils	0	1	1	1	1	1	2	0	0			0	0		
343	4	fast tang. x-ray camera	1	0	0	0	0	0	0	3	0	0	0	0	0	0	1 frame grbr by Diag.
352	4	diagnostic neutral beam	1	1	1	1	1	1	0	0	1	1	1	1	1		
353	4	MSE polarimeter	1	1	1	1	1	1	0	0	2	1	1	1	0		
354	4	toroidal CHERS	2	1	1	1	1	1	0	0	0	1	0	0	0	0	2 frame grbr by Diag.
355	4	poloidal CHERS	2	0	0	0	0	0	0	0	0	1	0	0	0	0	2 frame grbr by Diag.
362	4	moveable Langmuir probe	1	1	1	1	1	1	0	2	0	1	1	1	1		
363	4	neutral pressure gauges	1	1	1	1	1	1	0	0	1	1	1	1	0		
363	4	neutral pressure gauges	1	1	1	1	1	1	0	0	1	1	1	0	0		
364	4	compact IR camera	1	1	1	1	1	1	0	0	0	0	0	0	0	5	FrameGrabber=\$5K
366	4	plate Langmuir probes	1	1	1	1	1	1	0	0	1	1	1	0	0		
335	5	Visible Filterscopes	1	1	1	1	1	1	0	0	1	2	2	1	0		
336	5	divertor UV spectroscopy	1	0	1	1	1	1	0	0	0	0	0	0	0	0	1 frame grbr by Diag.
338	5	divertor filtered CCD camera	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1 frame grbr by Diag.
357	5	He CHERS system	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1 frame grbr by Diag.
365	5	fast IR camera	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1 frame grbr by Diag.
367	5	fast scanning edge probe	0	0	0	0	0	0	0	1	0	1	1	1	1		
368	5	divertor thermocouples	0	0	0	0	0	0	0	0	2	1	0	4	0		
371	5	fluctuation diagnostic	1	1	1	1	1	1	1	0	0	1	1	1	0		
369	6	divertor Thomson scattering	1	1	1	1	1	1	0	0	0	1	1	0	0		30 superfast chans by Diag.
372?	6	divertor diagnostics	0	0	0	0	0	0	0	0	0	1	1	1	0		24 superfast chans by Diag.
<b>Subsystem Totals \$K</b>																	
<b>Total Units</b>			<b>34</b>	<b>31</b>	<b>30</b>	<b>30</b>	<b>27</b>	<b>27</b>	<b>4</b>	<b>41</b>	<b>16</b>	<b>27</b>	<b>22</b>	<b>20</b>	<b>7</b>	<b>25</b>	
<b>Cost/Unit(\$K)</b>			2.5	0	2.5	1	1	1	3	3.5	3	0.6	0.3	0.5	0.9	1	
<b>M&amp;S (\$K)</b>			85	0	75	30	27	27	12	143.5	48	16.2	6.6	10	6.3	25	
<b>Total \$K</b>			<b>512</b>														
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