

Cable Wire Lists (GigaRing I/O Systems)

HMM-368-B
CRAY T90 Series Systems
Last Modified: August 1997

Record of Revision	3
Overview	3
Cable Wire Lists	4
I/O Harness Assembly	4
MC01 Harness Assembly	22
MC02 Harness Assembly	39
MC03 Harness Assembly	56
MCY Voltage Sense Harness Assembly	58
Voltage Sense Panels	61
Voltage Sense Wire List	63
Supervisory Cable Assembly	73
GigaRing I/O Cable Assembly	75

Figures

Figure 1.	I/O Harness Assembly	5
Figure 2.	MC01 Harness Assembly	24
Figure 3.	MC02 Harness Assembly	40
Figure 4.	MC03 Harness Assembly	56
Figure 5.	MCY Harness Assembly	58
Figure 6.	Voltage Sense Connections, CRAY T94 I/O Bulkhead	61
Figure 7.	Voltage Sense Panel, CRAY T916 and CRAY T932 Mainframes, Side A	62
Figure 8.	Voltage Sense Panel, CRAY T932 Mainframe, Side B	62
Figure 9.	Supervisory Cable Assembly	73
Figure 10.	GigaRing I/O Cable Assembly	75
Figure 11.	80-contact GigaRing I/O Cable Connectors	75

Tables

Table 1.	I/O Harness Assembly Wire List	6
Table 2.	Bulkhead Connector Layout, I/O Harness Assemblies	19
Table 3.	MC01 Harness Assembly Connections	23
Table 4.	MC01 Harness Assembly Wire List	25
Table 5.	MC02 Harness Assembly Wire List	41
Table 6.	MC03 Harness Assembly Wire List	57
Table 7.	MCY Harness Assembly Wire List	59
Table 8.	CRAY T94 Voltage Sense Wire List	63
Table 9.	Voltage Sense Wire List, CRAY T916 and CRAY T932 Mainframes	65
Table 10.	Supervisory Cable Assembly Wire List	73
Table 11.	GigaRing I/O Cable Assembly Wire List	76

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Revision A: February 1997

This revision incorporates changes to the connector destinations of the MC01 harness assembly in Table 3, changes to the MC01 and MC02 wire tabs in Table 4 and Table 5, and changes to Figure 10. All other versions of this document are obsolete.

Revision B: August 1997

This revision incorporates changes to the YU pin pairs in Table 1 and adds inverted module information to Table 2.

Overview

Each CRAY T90™ series system with GigaRing™ I/O contains various maintenance channel (MC) and I/O harness assemblies as well as supervisory and GigaRing cables. The *System Cabling (CRAY T90 Series with GigaRing I/O)* document, Cray Research publication number HMM-367-B, provides illustrations and descriptions of the cables and bulkheads in CRAY T90 series systems. This document supplements the *System Cabling* document; it provides the cable wire lists and other detailed technical information about the cables that the *System Cabling* document describes.

This document does not provide information about the cables in CRAY T90 series systems that do not contain GigaRing I/O connections. For cabling information about those systems, refer to the *System Cabling (CRAY T90 Series)* document, Cray Research publication number HMM-078-A.

Cable Wire Lists

The complete engineering documentation set for CRAY T90 series systems includes the wire lists, channel descriptions, signal names, and data bit information for all cables and connectors in the computer system. The tables in this document provide technical information selected from the engineering documentation that you can use to analyze computer cabling operations in CRAY T90 series systems. The illustrations that accompany each table include generic cable labeling; the tables provide the detailed information.

I/O Harness Assembly

Each I/O harness assembly contains a 514-position (YT) connector on the module end and six 80-pin (YU) connectors on the bulkhead end. Figure 1 illustrates the I/O harness assembly. Table 1 provides the wire list and channel information for the I/O harness assembly for Node 0. Because all I/O harness assemblies for the GigaRing I/O contain the same internal wiring, you can use the connector information in conjunction with the wiring information in Table 1 to determine the cable wire list for any I/O harness assembly in your system. Table 1 is sorted by pin pairs of the 514-pin (YT-0) cable connector.

Figure 1. I/O Harness Assembly

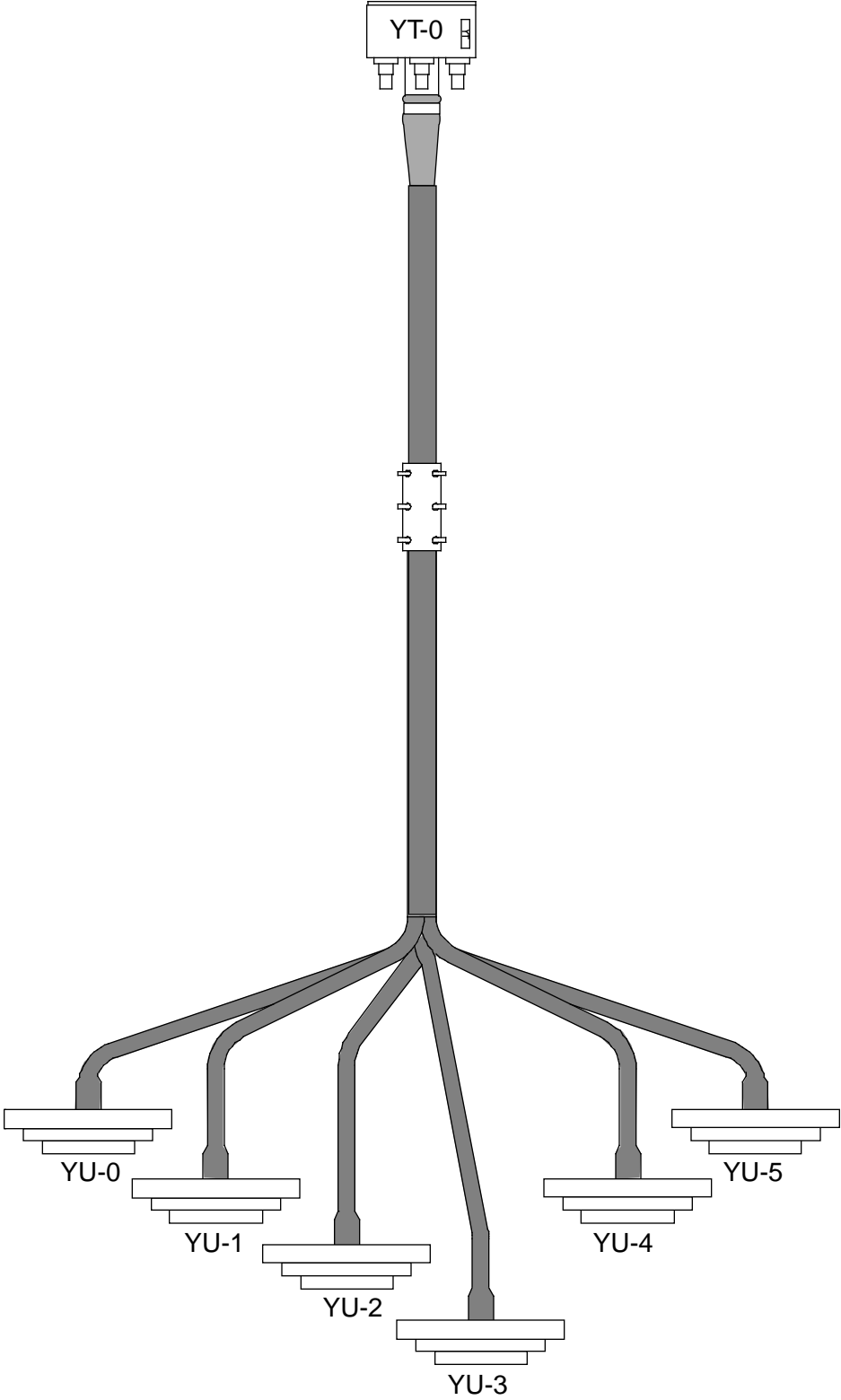


Table 1. I/O Harness Assembly Wire List

YT Pin Pair †	YT Data	YU Pin Pair	YU Data	YU Connector	Data Bit	Node Number	Node Channel	Wire Pair
001	IAA	039	OAA	YU-1	00	Node 0	Pos. in	112
025	iaa	040	oaa					
003	IAB	078	OAB	YU-1	01	Node 0	Pos. in	113
027	iab	079	oab					
005	IAC	037	OAC	YU-1	02	Node 0	Pos. in	114
029	iac	038	oac					
007	IAD	076	OAD	YU-1	03	Node 0	Pos. in	115
031	iad	077	oad					
009	IAE	035	OAE	YU-1	04	Node 0	Pos. in	116
033	iae	036	oae					
011	IAF	074	OAF	YU-1	05	Node 0	Pos. in	117
035	iaf	075	oaf					
013	IAG	033	OAG	YU-1	06	Node 0	Pos. in	118
037	iag	034	oag					
015	IAH	072	OAH	YU-1	07	Node 0	Pos. in	119
039	iah	073	oah					
017	IAI	030	OAI	YU-1	08	Node 0	Pos. in	120
041	iai	031	oai					
019	IAJ	070	OAJ	YU-1	09	Node 0	Pos. in	121
043	iaj	071	oaj					
021	IAK	028	OAK	YU-1	10	Node 0	Pos. in	122
045	iak	029	oak					
026	IAL	068	OAL	YU-1	11	Node 0	Pos. in	123
048	ial	069	oal					
028	IAM	026	OAM	YU-1	12	Node 0	Pos. in	124
050	iam	027	oam					
030	IAN	066	OAN	YU-1	13	Node 0	Pos. in	125
052	ian	067	oan					
032	IAO	024	OAO	YU-1	14	Node 0	Pos. in	126
054	iao	025	oao					
034	IAP	063	OAP	YU-1	15	Node 0	Pos. in	127
056	iap	064	oap					
036	IBA	057	OBA	YU-1	16	Node 0	Pos. in	128
058	iba	058	oba					

† 500 I/O pins are available, and 444 I/O pins are used.

YT Pin Pair †	YT Data	YU Pin Pair	YU Data	YU Connector	Data Bit	Node Number	Node Channel	Wire Pair
038	IBB	016	OBB	YU-1	17	Node 0	Pos. in	129
060	ibb	017	obb					
040	IBC	014	OBC	YU-1	18	Node 0	Pos. in	130
062	ibc	015	obc					
042	IBD	054	OBD	YU-1	19	Node 0	Pos. in	131
064	ibd	055	obd					
044	IBE	012	OBE	YU-1	20	Node 0	Pos. in	132
066	ibe	013	obe					
046	IBF	052	OBF	YU-1	21	Node 0	Pos. in	133
068	ibf	053	obf					
047	IBG	010	OBG	YU-1	22	Node 0	Pos. in	134
071	ibg	011	obg					
049	IBH	050	OBH	YU-1	23	Node 0	Pos. in	135
073	ibh	051	obh					
051	IBI	048	OBI	YU-1	24	Node 0	Pos. in	136
075	ibi	049	obi					
053	IBJ	007	OBJ	YU-1	25	Node 0	Pos. in	137
077	ibj	008	obj					
055	IBK	046	OBK	YU-1	26	Node 0	Pos. in	138
079	ibk	047	obk					
057	IBL	005	OBL	YU-1	27	Node 0	Pos. in	139
081	ibl	006	obl					
059	IBM	044	OBM	YU-1	28	Node 0	Pos. in	140
083	ibm	045	obm					
061	IBN	003	OBN	YU-1	29	Node 0	Pos. in	141
085	ibn	004	obn					
063	IBO	042	OBO	YU-1	30	Node 0	Pos. in	142
087	ibo	043	obo					
065	IBP	001	OBP	YU-1	31	Node 0	Pos. in	143
089	ibp	002	obp					
067	ICA	061	OCA	YU-1	Input flag	Node 0	Pos. in	144
091	ica	062	oca					
069	ICB	022	OCB	YU-1	Input parity	Node 0	Pos. in	145
093	icb	023	ocb					
072	ICC	018	OCC	YU-1	Input frame	Node 0	Pos. in	146
095	icc	019	occ					

YT Pin Pair †	YT Data	YU Pin Pair	YU Data	YU Connector	Data Bit	Node Number	Node Channel	Wire Pair
074	ICD	059	OCD	YU-1	Input spare	Node 0	Pos. in	147
097	icd	060	ocd					
080	ICE	020	OCE	YU-1	Input clock	Node 0	Pos. in	148
099	ice	021	oce					
082	OAA	039	IAA	YU-0	00	Node 0	Neg. out	1
101	oaa	040	iaa					
084	OAB	078	IAB	YU-0	01	Node 0	Neg. out	2
103	oab	079	iab					
086	OAC	037	IAC	YU-0	02	Node 0	Neg. out	3
105	oac	038	iac					
092	OAD	076	IAD	YU-0	03	Node 0	Neg. out	4
107	oad	077	iad					
094	OAE	035	IAE	YU-0	04	Node 0	Neg. out	5
111	oae	036	iae					
098	OAF	074	IAF	YU-0	05	Node 0	Neg. out	6
115	oaf	075	iaf					
100	OAG	033	IAG	YU-0	06	Node 0	Neg. out	7
117	oag	034	iag					
102	OAH	072	IAH	YU-0	07	Node 0	Neg. out	87
119	oah	073	iah					
104	OAI	030	IAI	YU-0	08	Node 0	Neg. out	9
121	oai	031	iai					
106	OAJ	070	IAJ	YU-0	09	Node 0	Neg. out	10
123	oaj	071	iaj					
108	OAK	028	IAK	YU-0	10	Node 0	Neg. out	11
125	oak	029	iak					
112	OAL	068	IAL	YU-0	11	Node 0	Neg. out	12
127	oal	069	ial					
116	OAM	026	IAM	YU-0	12	Node 0	Neg. out	13
131	oam	027	iam					
118	OAN	066	IAN	YU-0	13	Node 0	Neg. out	14
133	oan	067	ian					
120	OAO	024	IAO	YU-0	14	Node 0	Neg. out	15
135	oao	025	iao					
122	OAP	063	IAP	YU-0	15	Node 0	Neg. out	16
137	oap	064	iap					

YT Pin Pair †	YT Data	YU Pin Pair	YU Data	YU Connector	Data Bit	Node Number	Node Channel	Wire Pair
124	OBA	057	IBA	YU-0	16	Node 0	Neg. out	17
139	oba	058	iba					
126	OBB	016	IBB	YU-0	17	Node 0	Neg. out	18
143	obb	017	ibb					
128	OBC	014	IBC	YU-0	18	Node 0	Neg. out	19
145	obc	015	ibc					
130	OBD	054	IBD	YU-0	19	Node 0	Neg. out	20
151	obd	055	ibd					
132	OBE	012	IBE	YU-0	20	Node 0	Neg. out	21
153	obe	013	ibe					
134	OBF	052	IBF	YU-0	21	Node 0	Neg. out	22
155	obf	053	ibf					
136	OBG	010	IBG	YU-0	22	Node 0	Neg. out	23
157	obg	011	ibg					
138	OBH	050	IBH	YU-0	23	Node 0	Neg. out	24
163	obh	051	ibh					
140	OBI	048	IBI	YU-0	24	Node 0	Neg. out	25
165	obi	049	ibi					
144	OBJ	007	IBJ	YU-0	25	Node 0	Neg. out	26
167	obj	008	ibj					
146	OBK	046	IBK	YU-0	26	Node 0	Neg. out	27
169	obk	047	ibk					
148	OBL	005	IBL	YU-0	27	Node 0	Neg. out	28
171	obl	006	ibl					
150	OBM	044	IBM	YU-0	28	Node 0	Neg. out	29
173	obm	045	ibm					
152	OBN	003	IBN	YU-0	29	Node 0	Neg. out	30
175	obn	004	ibn					
154	OBO	042	IBO	YU-0	30	Node 0	Neg. out	31
177	obo	043	ibo					
156	OBP	001	IBP	YU-0	31	Node 0	Neg. out	32
179	obp	002	ibp					
158	OCA	061	ICA	YU-0	Output flag	Node 0	Neg. out	33
181	oca	062	ica					
160	OCB	022	ICB	YU-0	Output parity	Node 0	Neg. out	34
183	ocb	023	icb					

YT Pin Pair †	YT Data	YU Pin Pair	YU Data	YU Connector	Data Bit	Node Number	Node Channel	Wire Pair
162	OCC	018	ICC	YU-0	Output frame	Node 0	Neg. out	35
185	occ	019	icc					
164	OCD	059	ICD	YU-0	Output Spare	Node 0	Neg. out	36
187	ocd	060	icd					
166	OCE	020	ICE	YU-0	Output clock	Node 0	Neg. out	37
191	oce	021	ice					
168	IFA	039	OAA	YU-3	00	Node 0	Neg. in	149
193	ifa	040	oaa					
170	IFB	078	OAB	YU-3	01	Node 0	Neg. in	150
195	ifb	079	oab					
172	IFC	037	OAC	YU-3	02	Node 0	Neg. in	151
197	ifc	038	oac					
174	IFD	076	OAD	YU-3	03	Node 0	Neg. in	152
199	ifd	077	oad					
176	IFE	035	OAE	YU-3	04	Node 0	Neg. in	153
201	ife	036	oae					
178	IFF	074	OAF	YU-3	05	Node 0	Neg. in	154
203	iff	075	oaf					
180	IFG	033	OAG	YU-3	06	Node 0	Neg. in	155
205	ifg	034	oag					
182	IFH	072	OAH	YU-3	07	Node 0	Neg. in	156
207	ifh	073	oah					
184	IFI	030	OAI	YU-3	08	Node 0	Neg. in	157
209	ifi	031	oai					
186	IFJ	070	OAJ	YU-3	09	Node 0	Neg. in	158
211	ifj	071	oaj					
188	IFK	028	OAK	YU-3	10	Node 0	Neg. in	159
213	ifk	029	oak					
192	IFL	068	OAL	YU-3	11	Node 0	Neg. in	160
215	ifl	069	oal					
194	IFM	026	OAM	YU-3	12	Node 0	Neg. in	161
217	ifm	027	oam					
196	IFN	066	OAN	YU-3	13	Node 0	Neg. in	162
219	ifn	067	oan					
198	IFO	024	OAO	YU-3	14	Node 0	Neg. in	163
221	ifo	025	oao					

YT Pin Pair †	YT Data	YU Pin Pair	YU Data	YU Connector	Data Bit	Node Number	Node Channel	Wire Pair
200	IFP	063	OAP	YU-3	15	Node 0	Neg. in	164
223	ifp	064	oap					
202	IGA	057	OBA	YU-3	16	Node 0	Neg. in	165
225	iga	058	oba					
204	IGB	016	OBB	YU-3	17	Node 0	Neg. in	166
227	igb	017	obb					
206	IGC	014	OBC	YU-3	18	Node 0	Neg. in	167
229	igc	015	obc					
208	IGD	054	OBD	YU-3	19	Node 0	Neg. in	168
231	igd	055	obd					
210	IGE	012	OBE	YU-3	20	Node 0	Neg. in	169
233	ige	013	obe					
212	IGF	052	OBF	YU-3	21	Node 0	Neg. in	170
235	igf	053	obf					
214	IGG	010	OBG	YU-3	22	Node 0	Neg. in	171
238	igg	011	obg					
216	IGH	050	OBH	YU-3	23	Node 0	Neg. in	172
240	igh	051	obh					
218	IGI	048	OBI	YU-3	24	Node 0	Neg. in	173
242	igi	049	obi					
220	IGJ	007	OBJ	YU-3	25	Node 0	Neg. in	174
244	igj	008	obj					
222	IGK	046	OBK	YU-3	26	Node 0	Neg. in	175
246	igk	047	obk					
224	IGL	005	OBL	YU-3	27	Node 0	Neg. in	176
248	igl	006	obl					
226	IGM	044	OBM	YU-3	28	Node 0	Neg. in	177
250	igm	045	obm					
228	IGN	003	OBN	YU-3	29	Node 0	Neg. in	178
252	ign	004	obn					
230	IGO	042	OBO	YU-3	30	Node 0	Neg. in	179
254	igo	043	obo					
232	IGP	001	OBP	YU-3	31	Node 0	Neg. in	180
256	igp	002	obp					
234	IHA	061	OCA	YU-3	Input parity	Node 0	Neg. in	181
258	iha	062	oca					

YT Pin Pair †	YT Data	YU Pin Pair	YU Data	YU Connector	Data Bit	Node Number	Node Channel	Wire Pair
241	IHB	022	OCB	YU-3	Input flag	Node 0	Neg. in	182
261	ihb	023	ocb					
243	IHC	018	OCC	YU-3	Input frame	Node 0	Neg. in	183
263	ihc	019	occ					
245	IHD	059	OCD	YU-3	Input spare	Node 0	Neg. in	184
265	ihd	060	ocd					
247	IHE	020	OCE	YU-3	Input clock	Node 0	Neg. in	185
267	ihe	021	oce					
249	OFA	039	IAA	YU-2	00	Node 0	Pos. out	38
269	ofa	040	iaa					
251	OFB	078	IAB	YU-2	01	Node 0	Pos. out	39
271	ofb	079	iab					
253	OFC	037	IAC	YU-2	02	Node 0	Pos. out	40
273	ofc	038	iac					
255	OFD	076	IAD	YU-2	03	Node 0	Pos. out	41
275	ofd	077	iad					
257	OFE	035	IAE	YU-2	04	Node 0	Pos. out	42
277	ofe	036	iae					
259	OFF	074	IAF	YU-2	05	Node 0	Pos. out	43
279	off	075	iaf					
260	OFG	033	IAG	YU-2	06	Node 0	Pos. out	44
282	ofg	034	iag					
262	OFH	072	IAH	YU-2	07	Node 0	Pos. out	45
284	ofh	073	iah					
264	OFI	030	IAI	YU-2	08	Node 0	Pos. out	46
286	ofi	031	iai					
266	OFJ	070	IAJ	YU-2	09	Node 0	Pos. out	47
288	ofj	071	iaj					
268	OFK	028	IAK	YU-2	10	Node 0	Pos. out	48
290	ofk	029	iak					
270	OFL	068	IAL	YU-2	11	Node 0	Pos. out	49
292	ofl	069	ial					
272	OFM	026	IAM	YU-2	12	Node 0	Pos. out	50
294	ofm	027	iam					
274	OFN	066	IAN	YU-2	13	Node 0	Pos. out	51
296	ofn	067	ian					

YT Pin Pair †	YT Data	YU Pin Pair	YU Data	YU Connector	Data Bit	Node Number	Node Channel	Wire Pair
276	OFO	024	IAO	YU-2	14	Node 0	Pos. out	52
298	of0	025	iao					
278	OFP	063	IAP	YU-2	15	Node 0	Pos. out	53
300	ofp	064	iap					
281	OGA	057	IBA	YU-2	16	Node 0	Pos. out	54
303	oga	058	iba					
283	OGB	016	IBB	YU-2	17	Node 0	Pos. out	55
305	ogb	017	ibb					
285	OGC	014	IBC	YU-2	18	Node 0	Pos. out	56
307	ogc	015	ibc					
287	OGD	054	IBD	YU-2	19	Node 0	Pos. out	57
309	ogd	055	ibd					
289	OGE	012	IBE	YU-2	20	Node 0	Pos. out	58
311	oge	013	ibe					
291	OGF	052	IBF	YU-2	21	Node 0	Pos. out	59
313	ogf	053	ibf					
293	OGG	010	IBG	YU-2	22	Node 0	Pos. out	60
315	ogg	011	ibg					
295	OGH	050	IBH	YU-2	23	Node 0	Pos. out	61
317	ogh	051	ibh					
297	OGI	048	IBI	YU-2	24	Node 0	Pos. out	62
319	ogi	049	ibi					
299	OGJ	007	IBJ	YU-2	25	Node 0	Pos. out	63
321	ogj	008	ibj					
301	OGK	046	IBK	YU-2	26	Node 0	Pos. out	64
323	ogk	047	ibk					
302	OGL	005	IBL	YU-2	27	Node 0	Pos. out	65
327	ogl	006	ibl					
304	OGM	044	IBM	YU-2	28	Node 0	Pos. out	66
329	ogm	045	ibm					
306	OGN	003	IBN	YU-2	29	Node 0	Pos. out	67
331	ogn	004	ibn					
308	OGO	042	IBO	YU-2	30	Node 0	Pos. out	68
333	ogo	043	ibo					
310	OGP	001	IBP	YU-2	31	Node 0	Pos. out	69
335	ogp	002	ibp					

YT Pin Pair †	YT Data	YU Pin Pair	YU Data	YU Connector	Data Bit	Node Number	Node Channel	Wire Pair
312	OHA	061	ICA	YU-2	Output parity	Node 0	Pos. out	70
337	oha	062	ica					
314	OHB	022	ICB	YU-2	Output flag	Node 0	Pos. out	71
339	ohb	023	icb					
316	OHC	018	ICC	YU-2	Output frame	Node 0	Pos. out	72
341	ohc	019	icc					
318	OHD	059	ICD	YU-2	Output spare	Node 0	Pos. out	73
343	ohd	060	icd					
320	OHE	020	ICE	YU-2	Output clock	Node 0	Pos. out	74
345	ohe	021	ice					
322	IKA	039	OAA	YU-5	00	Node 0	Not used	186
347	ika	040	oaa					
324	IKB	078	OAB	YU-5	01	Node 0	Not used	187
349	ikb	079	oab					
328	IKC	037	OAC	YU-5	02	Node 0	Not used	188
351	ikc	038	oac					
330	IKD	076	OAD	YU-5	03	Node 0	Not used	189
353	ikd	077	oad					
332	IKE	035	OAE	YU-5	04	Node 0	Not used	190
355	ike	036	oae					
334	IKF	074	OAF	YU-5	05	Node 0	Not used	191
357	ikf	075	oaf					
336	IKG	033	OAG	YU-5	06	Node 0	Not used	192
359	ikg	034	oag					
338	IKH	072	OAH	YU-5	07	Node 0	Not used	193
361	ikh	073	oah					
340	IKI	030	OAI	YU-5	08	Node 0	Not used	194
363	iki	031	oai					
342	IKJ	070	OAJ	YU-5	09	Node 0	Not used	195
365	ikj	071	oaj					
344	IKK	028	OAK	YU-5	10	Node 0	Not used	196
367	ikk	029	oak					
346	IKL	068	OAL	YU-5	11	Node 0	Not used	197
369	ikl	069	oal					
348	IKM	026	OAM	YU-5	12	Node 0	Not used	198
371	ikm	027	oam					

YT Pin Pair †	YT Data	YU Pin Pair	YU Data	YU Connector	Data Bit	Node Number	Node Channel	Wire Pair
350	IKN	066	OAN	YU-5	13	Node 0	Not used	199
375	ikn	067	oan					
356	IKO	024	OAO	YU-5	14	Node 0	Not used	200
377	iko	025	oao					
358	IKP	063	OAP	YU-5	15	Node 0	Not used	201
379	ikp	064	oap					
360	ILA	057	OBA	YU-5	16	Node 0	Not used	202
381	ila	058	oba					
362	ILB	016	OBB	YU-5	17	Node 0	Not used	203
383	ilb	017	obb					
364	ILC	014	OBC	YU-5	18	Node 0	Not used	204
385	ilc	015	obc					
370	ILD	054	OBD	YU-5	19	Node 0	Not used	205
387	ild	055	obd					
372	ILE	012	OBE	YU-5	20	Node 0	Not used	206
389	ile	013	obe					
376	ILF	052	OBF	YU-5	21	Node 0	Not used	207
391	ilf	053	obf					
380	ILG	010	OBG	YU-5	22	Node 0	Not used	208
395	ilg	011	obg					
382	ILH	050	OBH	YU-5	23	Node 0	Not used	209
397	ilh	051	obh					
384	ILI	048	OBI	YU-5	24	Node 0	Not used	210
399	ili	049	obi					
386	ILJ	007	OBJ	YU-5	25	Node 0	Not used	211
401	ilj	008	obj					
388	ILK	046	OBK	YU-5	26	Node 0	Not used	212
403	ilk	047	obk					
390	ILL	005	OBL	YU-5	27	Node 0	Not used	213
407	ill	006	obl					
394	ILM	044	OBM	YU-5	28	Node 0	Not used	214
411	ilm	045	obm					
396	ILN	003	OBN	YU-5	29	Node 0	Not used	215
413	iln	004	obn					
398	ILO	042	OBO	YU-5	30	Node 0	Not used	216
415	ilo	043	obo					

YT Pin Pair †	YT Data	YU Pin Pair	YU Data	YU Connector	Data Bit	Node Number	Node Channel	Wire Pair
400	ILP	001	OBP	YU-5	31	Node 0	Not used	217
417	ilp	002	obp					
402	IMA	061	OCA	YU-5	Input parity	Node 0	Not used	218
419	ima	062	oca					
404	IMB	022	OCB	YU-5	Input flag	Node 0	Not used	219
421	imb	023	ocb					
408	IMC	018	OCC	YU-5	Input frame	Node 0	Not used	220
423	imc	019	occ					
410	IMD	059	OCD	YU-5	Input spare	Node 0	Not used	221
429	imd	060	ocd					
412	IME	020	OCE	YU-5	Input clock	Node 0	Not used	222
431	ime	021	oce					
414	OKA	039	IAA	YU-4	00	Node 0	Not used	75
433	oka	040	iaa					
416	OKB	078	IAB	YU-4	01	Node 0	Not used	76
435	okb	079	iab					
418	OKC	037	IAC	YU-4	02	Node 0	Not used	77
437	okc	038	iac					
420	OKD	076	IAD	YU-4	03	Node 0	Not used	78
443	okd	077	iad					
422	OKE	035	IAE	YU-4	04	Node 0	Not used	79
447	oke	036	iae					
424	OKF	074	IAF	YU-4	05	Node 0	Not used	80
449	okf	075	iaf					
426	OKG	033	IAG	YU-4	06	Node 0	Not used	81
451	okg	034	iag					
428	OKH	072	IAH	YU-4	07	Node 0	Not used	82
453	okh	073	iah					
430	OKI	030	IAI	YU-4	08	Node 0	Not used	83
455	oki	031	iai					
432	OKJ	070	IAJ	YU-4	09	Node 0	Not used	84
457	okj	071	iaj					
434	OKK	028	IAK	YU-4	10	Node 0	Not used	85
459	okk	029	iak					
436	OKL	068	IAL	YU-4	11	Node 0	Not used	86
461	okl	069	ial					

YT Pin Pair †	YT Data	YU Pin Pair	YU Data	YU Connector	Data Bit	Node Number	Node Channel	Wire Pair
438	OKM	026	IAM	YU-4	12	Node 0	Not used	87
463	okm	027	iam					
440	OKN	066	IAN	YU-4	13	Node 0	Not used	88
465	okn	067	ian					
442	OKO	024	IAO	YU-4	14	Node 0	Not used	89
467	oko	025	iao					
448	OKP	063	IAP	YU-4	15	Node 0	Not used	90
470	okp	064	iap					
450	OLA	057	IBA	YU-4	16	Node 0	Not used	91
472	ola	058	iba					
452	OLB	016	IBB	YU-4	17	Node 0	Not used	92
474	olb	017	ibb					
454	OLC	014	IBC	YU-4	18	Node 0	Not used	93
476	olc	015	ibc					
456	OLD	054	IBD	YU-4	19	Node 0	Not used	94
478	old	055	ibd					
458	OLE	012	IBE	YU-4	20	Node 0	Not used	95
480	ole	013	ibe					
460	OLF	052	IBF	YU-4	21	Node 0	Not used	96
482	olf	053	ibf					
462	OLG	010	IBG	YU-4	22	Node 0	Not used	97
484	olg	011	ibg					
464	OLH	050	IBH	YU-4	23	Node 0	Not used	98
486	olh	051	ibh					
466	OLI	048	IBI	YU-4	24	Node 0	Not used	99
488	oli	049	ibi					
468	OLJ	007	IBJ	YU-4	25	Node 0	Not used	100
490	olj	008	ibj					
469	OLK	046	IBK	YU-4	26	Node 0	Not used	101
493	olk	047	ibk					
471	OLL	005	IBL	YU-4	27	Node 0	Not used	102
495	oll	006	ibl					
473	OLM	044	IBM	YU-4	28	Node 0	Not used	103
497	olm	045	ibm					
475	OLN	003	IBN	YU-4	29	Node 0	Not used	104
499	oln	004	ibn					

YT Pin Pair †	YT Data	YU Pin Pair	YU Data	YU Connector	Data Bit	Node Number	Node Channel	Wire Pair
477	OLO	042	IBO	YU-4	30	Node 0	Not used	105
501	olo	043	ibo					
479	OLP	001	IBP	YU-4	31	Node 0	Not used	106
503	olp	002	ibp					
481	OMA	061	ICA	YU-4	Output parity	Node 0	Not used	107
505	oma	062	ica					
483	OMB	022	ICB	YU-4	Output flag	Node 0	Not used	108
507	omb	023	icb					
485	OMC	018	ICC	YU-4	Output frame	Node 0	Not used	109
509	omc	019	icc					
487	OMD	059	ICD	YU-4	Output spare	Node 0	Not used	110
511	omd	060	icd					
489	OME	020	ICE	YU-4	Output clock	Node 0	Not used	111
513	ome	021	ice					

The location of each YU connection of the I/O harness assembly at the I/O bulkhead depends on the location of the corresponding YT cable connection on the IO module. Table 2 provides the bulkhead connector layout for the I/O harness assemblies.

Table 2. Bulkhead Connector Layout, I/O Harness Assemblies

YT Location	YT Logical Name	YU Logical Name	YU Bulkhead Location
EA (Board 1)	yt020	yu000	Node 0 – negative ring out
		yu001	Node 0 – positive ring in
		yu002	Node 0 – positive ring out
		yu003	Node 0 – negative ring in
		yu004	Not used
		yu005	Not used
EB (Board 1)	yt021	yu000	Node 2 – negative ring out
		yu001	Node 2 – positive ring in
		yu002	Node 2 – positive ring out
		yu003	Node 2 – negative ring in
		yu004	Node 4 – negative ring out
		yu005	Node 4 – positive ring in
ED (Board 1)	yt023	yu000	Node 4 – positive ring out
		yu001	Node 4 – negative ring in
		yu002	Node 6 – negative ring out
		yu003	Node 6 – positive ring in
		yu004	Node 6 – positive ring out
		yu005	Node 6 – negative ring in
EA (Board 2)	yt024	yu000	Node 1 – negative ring out
		yu001	Node 1 – positive ring in
		yu002	Node 1 – positive ring out
		yu003	Node 1 – negative ring in
		yu004	Not used
		yu005	Not used
EB (Board 2)	yt025	yu000	Node 3 – negative ring out
		yu001	Node 3 – positive ring in
		yu002	Node 3 – positive ring out
		yu003	Node 3 – negative ring in
		yu004	Node 5 – negative ring out
		yu005	Node 5 – positive ring in

YT Location	YT Logical Name	YU Logical Name	YU Bulkhead Location
ED (Board 2)	yt027	yu000	Node 5 – positive ring out
		yu001	Node 5 – negative ring in
		yu002	Node 7 – negative ring out
		yu003	Node 7 – positive ring in
		yu004	Node 7 – positive ring out
		yu005	Node 7 – negative ring in
Inverted Module			
YT Location	YT Logical Name	YU Logical Name	YU Bulkhead Location
EA (Board 1)	yt020	yu000	Node 6 – negative ring out
		yu001	Node 6 – positive ring in
		yu002	Node 6 – positive ring out
		yu003	Node 6 – negative ring in
		yu004	Not used
		yu005	Not used
EB (Board 1)	yt021	yu000	Node 4 – negative ring out
		yu001	Node 4 – positive ring in
		yu002	Node 4 – positive ring out
		yu003	Node 4 – negative ring in
		yu004	Node 2 – negative ring out
		yu005	Node 2 – positive ring in
ED (Board 1)	yt023	yu000	Node 2 – positive ring out
		yu001	Node 2 – negative ring in
		yu002	Node 0 – negative ring out
		yu003	Node 0 – positive ring in
		yu004	Node 0 – positive ring out
		yu005	Node 0 – negative ring in
EA (Board 2)	yt024	yu000	Node 7 – positive ring out
		yu001	Node 7 – negative ring in
		yu002	Node 7 – negative ring out
		yu003	Node 7 – positive ring in
		yu004	Not used
		yu005	Not used
EB (Board 2)	yt025	yu000	Node 5 – negative ring out
		yu001	Node 5 – positive ring in
		yu002	Node 5 – positive ring out
		yu003	Node 5 – negative ring in
		yu004	Node 3 – negative ring out
		yu005	Node 3 – positive ring in

YT Location	YT Logical Name	YU Logical Name	YU Bulkhead Location
ED (Board 2)	yt027	yu000	Node 3 – negative ring out
		yu001	Node 3 – positive ring in
		yu002	Node 1 – positive ring out
		yu003	Node 1 – negative ring in
		yu004	Node 1 – negative ring out
		yu005	Node 1 – positive ring in

MC01 Harness Assembly

Each CRAY T94™ mainframe with GigaRing I/O capability and each primary IO module in the CRAY T916™ or CRAY T932™ mainframe requires an MC01 harness assembly. Each MC01 harness assembly contains twenty-eight connectors: one 514-pin (YT) module connector, twenty 60-pin (YL) maintenance connectors, one 8-pin (YN) continuity connector, one 51-pin (YD) supervisory connector, and five 24-pin (YM) voltage sense connectors. Table 3 provides information about the MC01 harness assembly connections. Figure 2 illustrates the MC01 harness assembly. Table 4, which begins on page 25, provides the MC01 harness assembly wire list, which is sorted by cable wire pairs.

Table 3. MC01 Harness Assembly Connections

Connector	Destination – CRAY T94 System	Destination – Quads 01 and 02	Destination – Quads 03 and 00	Function
YL000	B001	H001	P001	Mem H/P001 boundary scan
YL001	B002	H002	P002	Mem H/P002 boundary scan
YL002	B003	H003	P003	Mem H/P003 boundary scan
YL003	B004	H004	P004	Mem H/P004 boundary scan
YL004	C001	H005	P005	Mem H/P005 boundary scan
YL005	C002	H006	P006	Mem H/P006 boundary scan
YL006	C003	H007	P007	Mem H/P007 boundary scan
YL007	C004	H008	P008	Mem H/P008 boundary scan
YL008	C005	F001	N001	CPU F/N001 boundary scan
YL009	A001	F002	N002	A1 or F/N002 boundary scan
YL010	Spare	F003	N003	CPU F/N003 boundary scan
YL011	None	F004	N004	CPU F/N004 boundary scan
YL012	None	F005	N005	CPU F/N005 boundary scan
YL013	None	F006	N006	CPU F/N006 boundary scan
YL014	None	F007	N007	CPU F/N007 boundary scan
YL015	None	F008	N008	CPU F/N008 boundary scan
YL016	None	G001	O001	Net G/O001 boundary scan
YL017	None	G002	O002	Net G/O002 boundary scan
YL018	None	G003	O003	Net G/O003 boundary scan
YL019	None	G004	O004	Net G/O004 boundary scan
YM000	B001 – B004	H001 – H004	P001 – P004	Voltage sense
YM001	C001 – C004	H005 – H008	P005 – P008	Voltage sense
YM002	C005	F001 – F004	N001 – N004	Voltage sense
YM003	None	F005 – F008	N005 – N008	Voltage sense
YM004	None	G001 – G004	O001 – O004	Voltage sense
YN000	Interconnect Board	MUX Board, Side A	MUX Board, Side B	“Continuity,” to MUX or Interconnect Board
YD000	Bulkhead Panel, Supervisory	Bulkhead Side A, Supervisory	Bulkhead Side B, Supervisory	Supervisory connection between IO module and I/O bulkhead
YT002	IO Location A EC Board 1	IO Location E EC Board 1	IO Location M EC Board 1	MC01 YT002 to IO module connector YT22, Board 1

Figure 2. MC01 Harness Assembly

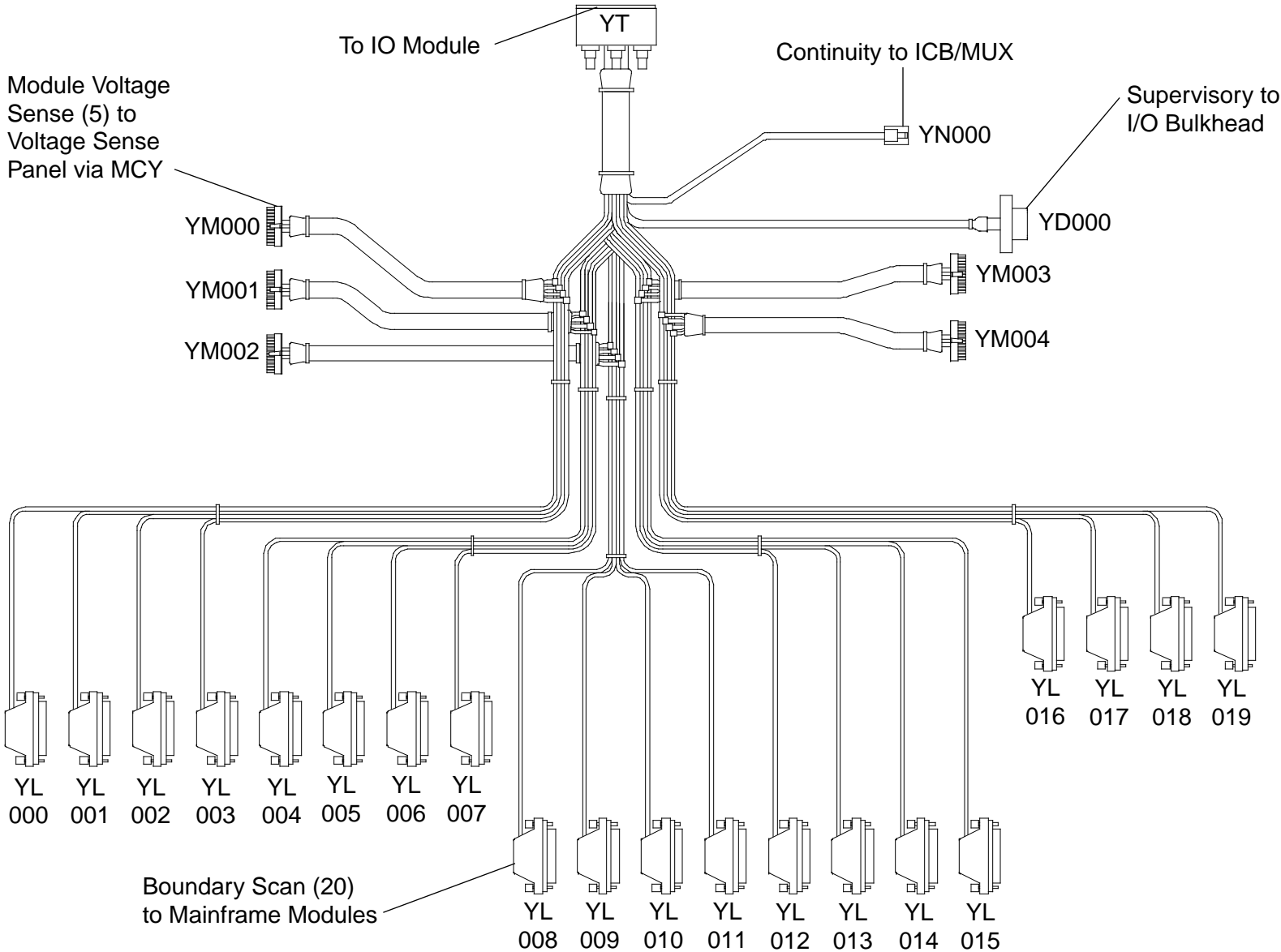


Table 4. MC01 Harness Assembly Wire List

Source		Destination		Channel Bit	Mainframe Connection			Wire Pair
Plug	Pin	Plug	Pin		CRAY T94 Mainframe	Quads 01 and 02	Quads 03 and 00	
YT	001	YD000	002	Supvsry In bit 00	Bulkhead Supervisory Connection			1
	025		001	Supvsry In bit 00'				
YT	003	YD000	004	Supvsry In bit 01	Bulkhead Supervisory Connection			2
	027		003	Supvsry In bit 01'				
YT	005	YD000	006	Supvsry In bit 02	Bulkhead Supervisory Connection			3
	029		005	Supvsry In bit 02'				
YT	007	YD000	008	Supvsry In bit 03	Bulkhead Supervisory Connection			4
	031		007	Supvsry In bit 03'				
YT	009	YD000	010	Supvsry In bit 04	Bulkhead Supervisory Connection			5
	033		009	Supvsry In bit 04'				
YT	011	YD000	012	Supvsry In bit 05	Bulkhead Supervisory Connection			6
	035		011	Supvsry In bit 05'				
YT	013	YD000	014	Supvsry In bit 06	Bulkhead Supervisory Connection			7
	037		013	Supvsry In bit 06'				
YT	015	YD000	016	Supvsry In bit 07	Bulkhead Supervisory Connection			8
	039		015	Supvsry In bit 07'				
YT	017	YD000	018	Supvsry In frame	Bulkhead Supervisory Connection			9
	041		017	Supvsry In frame'				
YT	019	YD000	020	Supvsry In clk	Bulkhead Supervisory Connection			10
	043		019	Supvsry In clk'				
YT	026	YD000	022	Supvsry Out bit 00	Bulkhead Supervisory Connection			11
	048		021	Supvsry Out bit 00'				
YT	028	YD000	024	Supvsry Out bit 01	Bulkhead Supervisory Connection			12
	050		023	Supvsry Out bit 01'				
YT	030	YD000	026	Supvsry Out bit 02	Bulkhead Supervisory Connection			13
	052		025	Supvsry Out bit 02'				
YT	032	YD000	028	Supvsry Out bit 03	Bulkhead Supervisory Connection			14
	054		027	Supvsry Out bit 03'				
YT	034	YD000	030	Supvsry Out bit 04	Bulkhead Supervisory Connection			15
	056		029	Supvsry Out bit 04'				
YT	036	YD000	032	Supvsry Out bit 05	Bulkhead Supervisory Connection			16
	058		031	Supvsry Out bit 05'				
YT	038	YD000	034	Supvsry Out bit 06	Bulkhead Supervisory Connection			17
	060		033	Supvsry Out bit 06'				

Source		Destination		Channel Bit	Mainframe Connection			Wire Pair
Plug	Pin	Plug	Pin		CRAY T94 Mainframe	Quads 01 and 02	Quads 03 and 00	
YT	040	YD000	037	Supvsry Out bit 07	Bulkhead Supervisory Connection			18
	062		036	Supvsry Out bit 07'				
YT	042	YD000	039	Supvsry Out frame	Bulkhead Supervisory Connection			19
	064		038	Supvsry Out frame'				
YT	044	YD000	041	Supvsry Out Clk	Bulkhead Supervisory Connection			20
	066		040	Supvsry Out Clk'				
YT	021	YN000	001	WACS bit 0	WACS Port – Continuity Line Errors			21
	045		002	WACS bit 0'				
YT	046	YN000	003	WACS bit 1	WACS Port – Continuity Line Errors			22
	068		004	WACS bit 1'				
YT	055	YL000	030	Port 0 – TCLK	B001	H001	P001	23
	079		031	Port 0 – TCLK'				
YT	057	YL000	029	Port 0 – TM	B001	H001	P001	24
	081		032	Port 0 – TM'				
YT	059	YL000	028	Port 0 – TDI	B001	H001	P001	25
	083		033	Port 0 – TDI'				
YT	061	YL000	025	Port 0 – CLI	B001	H001	P001	26
	085		036	Port 0 – CLI'				
YT	051	YL000	024	Port 0 – CLO	B001	H001	P001	27
	075		037	Port 0 – CLO'				
YT	047	YL000	027	Port 0 – TDO	B001	H001	P001	28
	071		034	Port 0 – TDO'				
YT	049	YL000	026	Port 0 – RCLK	B001	H001	P001	29
	073		035	Port 0 – RCLK'				
YM000	001	YL000	002	Voltage sense	B001	H001	P001	30
	002		059					
YM000	003	YL000	003	Voltage sense	B001	H001	P001	31
	004		058					
YM000	005	YL000	004	Voltage sense	B001	H001	P001	32
	006		057					
YT	082	YL001	030	Port 4 – TCLK	B002	H002	P002	33
	101		031	Port 4 – TCLK'				
YT	084	YL001	029	Port 4 – TM	B002	H002	P002	34
	103		032	Port 4 – TM'				
YT	086	YL001	028	Port 4 – TDI	B002	H002	P002	35
	105		033	Port 4 – TDI'				

Source		Destination		Channel Bit	Mainframe Connection			Wire Pair
Plug	Pin	Plug	Pin		CRAY T94 Mainframe	Quads 01 and 02	Quads 03 and 00	
YT	092	YL001	025	Port 4 – CLI	B002	H002	P002	36
	107		036	Port 4 – CLI'				
YT	067	YL001	024	Port 4 – CLO	B002	H002	P002	37
	091		037	Port 4 – CLO'				
YT	063	YL001	027	Port 4 – TDO	B002	H002	P002	38
	087		034	Port 4 – TDO'				
YT	065	YL001	026	Port 4 – RCLK	B002	H002	P002	39
	089		035	Port 4 – RCLK'				
YM000	007	YL001	002	Voltage sense	B00	H002	P002	40
	008		059					
YM000	009	YL001	003	Voltage sense	B00	H002	P002	41
	010		058					
YM000	011	YL001	004	Voltage sense	B00	H002	P002	42
	012		057					
YT	098	YL002	030	Port 10 – TCLK	B003	H003	P003	43
	115		031	Port 10 – TCLK'				
YT	100	YL002	029	Port 10 – TM	B003	H003	P003	44
	117		032	Port 10 – TM'				
YT	102	YL002	028	Port 10 – TDI	B003	H003	P003	45
	119		033	Port 10 – TDI'				
YT	104	YL002	025	Port 10 – CLI	B003	H003	P003	46
	121		036	Port 10 – CLI'				
YT	080	YL002	024	Port 10 – CLO	B003	H003	P003	47
	099		037	Port 10 – CLO'				
YT	072	YL002	027	Port 10 – TDO	B003	H003	P003	48
	095		034	Port 10 – TDO'				
YT	074	YL002	026	Port 10 – RCLK	B003	H003	P003	49
	097		035	Port 10 – RCLK'				
YM000	013	YL003	002	Voltage sense	B003	H003	P003	50
	014		059					
YM000	015	YL003	003	Voltage sense	B003	H003	P003	51
	016		058					
YM000	017	YL003	004	Voltage sense	B003	H003	P003	52
	018		057					
YT	118	YL003	030	Port 14 – TCLK	B004	H004	P004	53
	133		031	Port 14 – TCLK'				

Source		Destination		Channel Bit	Mainframe Connection			Wire Pair
Plug	Pin	Plug	Pin		CRAY T94 Mainframe	Quads 01 and 02	Quads 03 and 00	
YT	120	YL003	029	Port 14 – TM	B004	H004	P004	54
	135		032	Port 14 – TM'				
YT	122	YL003	028	Port 14 – TDI	B004	H004	P004	55
	137		033	Port 14 – TDI'				
YT	124	YL003	025	Port 14 – CLI	B004	H004	P004	56
	139		036	Port 14 – CLI'				
YT	112	YL003	024	Port 14 – CLO	B004	H004	P004	57
	127		037	Port 14 – CLO'				
YT	106	YL003	027	Port 14 – TDO	B004	H004	P004	58
	123		034	Port 14 – TDO'				
YT	108	YL003	026	Port 14 – RCLK	B004	H004	P004	59
	125		035	Port 14 – RCLK'				
YM000	019	YL003	002	Voltage sense	B004	H004	P004	60
	020		059					
YM000	021	YL003	003	Voltage sense	B004	H004	P004	61
	022		058					
YM000	023	YL003	004	Voltage sense	B004	H004	P004	62
	024		057					
YT	134	YL004	030	Port 20 – TCLK	C001	H005	P005	63
	155		031	Port 20 – TCLK'				
YT	136	YL004	029	Port 20 – TM	C001	H005	P005	64
	157		032	Port 20 – TM'				
YT	138	YL004	028	Port 20 – TDI	C001	H005	P005	65
	163		033	Port 20 – TDI'				
YT	140	YL004	025	Port 20 – CLI	C001	H005	P005	66
	165		036	Port 20 – CLI'				
YT	130	YL004	024	Port 20 – CLO	C001	H005	P005	67
	151		037	Port 20 – CLO'				
YT	126	YL004	027	Port 20 – TDO	C001	H005	P005	68
	143		034	Port 20 – TDO'				
YT	128	YL004	026	Port 20 – RCLK	C001	H005	P005	69
	145		035	Port 20 – RCLK'				
YM000	019	YL004	002	Voltage sense	C001	H005	P005	70
	020		059					
YM000	021	YL004	003	Voltage sense	C001	H005	P005	71
	022		058					

Source		Destination		Channel Bit	Mainframe Connection			Wire Pair
Plug	Pin	Plug	Pin		CRAY T94 Mainframe	Quads 01 and 02	Quads 03 and 00	
YM000	023	YL004	004	Voltage sense	C001	H005	P005	72
	024		057					
YT	158	YL005	030	Port 24 – TCLK	C002	H006	P006	73
	181		031	Port 24 – TCLK'				
YT	160	YL005	029	Port 24 – TM	C002	H006	P006	74
	183		032	Port 24 – TM'				
YT	162	YL005	028	Port 24 – TDI	C002	H006	P006	75
	185		033	Port 24 – TDI'				
YT	164	YL005	025	Port 24 – CLI	C002	H006	P006	76
	187		036	Port 24 – CLI'				
YT	154	YL005	024	Port 24 – CLO	C002	H006	P006	77
	177		037	Port 24 – CLO'				
YT	150	YL005	027	Port 24 – TDO	C002	H006	P006	78
	173		034	Port 24 – TDO'				
YT	152	YL005	026	Port 24 – RCLK	C002	H006	P006	79
	175		035	Port 24 – RCLK'				
YM001	007	YL005	002	Voltage sense	C002	H006	P006	80
	008		059					
YM001	009	YL005	003	Voltage sense	C002	H006	P006	81
	010		058					
YM001	011	YL005	004	Voltage sense	C002	H006	P006	82
	012		057					
YT	168	YL006	030	Port 30 – TCLK	C003	H007	P007	83
	193		031	Port 30 – TCLK'				
YT	170	YL006	029	Port 30 – TM	C003	H007	P007	84
	195		032	Port 30 – TM'				
YT	172	YL006	028	Port 30 – TDI	C003	H007	P007	85
	197		033	Port 30 – TDI'				
YT	174	YL006	025	Port 30 – CLI	C003	H007	P007	86
	199		036	Port 30 – CLI'				
YT	148	YL006	024	Port 30 – CLO	C003	H007	P007	87
	171		037	Port 30 – CLO'				
YT	144	YL006	027	Port 30 – TDO	C003	H007	P007	88
	167		034	Port 30 – TDO'				
YT	146	YL006	026	Port 30 – RCLK	C003	H007	P007	89
	169		035	Port 30 – RCLK'				

Source		Destination		Channel Bit	Mainframe Connection			Wire Pair
Plug	Pin	Plug	Pin		CRAY T94 Mainframe	Quads 01 and 02	Quads 03 and 00	
YM001	013	YL006	002	Voltage sense	C003	H007	P007	90
	014		059					
YM001	015	YL006	003	Voltage sense	C003	H007	P007	91
	016		058					
YM001	017	YL006	004	Voltage sense	C003	H007	P007	92
	018		057					
YT	184	YL007	030	Port 34 – TCLK	C004	H008	P008	93
	209		031	Port 34 – TCLK'				
YT	186	YL007	029	Port 34 – TM	C004	H008	P008	94
	211		032	Port 34 – TM'				
YT	188	YL007	028	Port 34 – TDI	C004	H008	P008	95
	213		033	Port 34 – TDI'				
YT	212	YL007	025	Port 34 – CLI	C004	H008	P008	96
	235		036	Port 34 – CLI'				
YT	180	YL007	024	Port 34 – CLO	C004	H008	P008	97
	205		037	Port 34 – CLO'				
YT	176	YL007	027	Port 34 – TDO	C004	H008	P008	98
	201		034	Port 34 – TDO'				
YT	178	YL007	026	Port 34 – RCLK	C004	H008	P008	99
	203		035	Port 34 – RCLK'				
YM001	019	YL007	002	Voltage sense	C004	H008	P008	100
	020		059					
YM001	021	YL007	003	Voltage sense	C004	H008	P008	101
	022		058					
YM001	023	YL007	004	Voltage sense	C004	H008	P008	102
	024		057					
YT	204	YL008	030	Port 40 – TCLK	C005	F001	N001	103
	227		031	Port 40 – TCLK'				
YT	206	YL008	029	Port 40 – TM	C005	F001	N001	104
	229		032	Port 40 – TM'				
YT	208	YL008	028	Port 40 – TDI	C005	F001	N001	105
	231		033	Port 40 – TDI'				
YT	210	YL008	025	Port 40 – CLI	C005	F001	N001	106
	233		036	Port 40 – CLI'				
YT	200	YL008	024	Port 40 – CLO'	C005	F001	N001	107
	223		037	Port 40 – CLO'				

Source		Destination		Channel Bit	Mainframe Connection			Wire Pair
Plug	Pin	Plug	Pin		CRAY T94 Mainframe	Quads 01 and 02	Quads 03 and 00	
YT	196	YL008	027	Port 40 – TDO	C005	F001	N001	108
	219		034	Port 40 – TDO'				
YT	198	YL008	026	Port 40 – RCLK	C005	F001	N001	109
	221		035	Port 40 – RCLK'				
YM002	001	YL008	002	Voltage sense	C005	F001	N001	110
	002		059					
YM002	003	YL008	003	Voltage sense	C005	F001	N001	111
	004		058					
YM002	005	YL008	004	Voltage sense	C005	F001	N001	112
	006		057					
YT	218	YL009	030	Port 44 – TCLK	A001	F002	N002	113
	242		031	Port 44 – TCLK'				
YT	220	YL009	029	Port 44 – TM	A001	F002	N002	114
	244		032	Port 44 – TM'				
YT	222	YL009	028	Port 44 – TDI	A001	F002	N002	115
	246		033	Port 44 – TDI'				
YT	224	YL009	025	Port 44 – CLI	A001	F002	N002	116
	248		036	Port 44 – CLI'				
YT	214	YL009	024	Port 44 – CLO	A001	F002	N002	117
	238		037	Port 44 – CLO'				
YT	192	YL009	027	Port 44 – TDO	A001	F002	N002	118
	215		034	Port 44 – TDO'				
YT	194	YL009	026	Port 44 – RCLK	A001	F002	N002	119
	217		035	Port 44 – RCLK'				
YM002	007	YL009	002	Voltage sense	A001	F002	N002	120
	008		059					
YM002	009	YL009	003	Voltage sense	A001	F002	N002	121
	010		058					
YM002	011	YL009	004	Voltage sense	A001	F002	N002	122
	012		057					
YT	234	YL010	030	Port 50 – TCLK	Spare	F003	N003	123
	258		031	Port 50 – TCLK'				
YT	255	YL010	029	Port 50 – TM	Spare	F003	N003	124
	275		032	Port 50 – TM'				
YT	257	YL010	028	Port 50 – TDI	Spare	F003	N003	125
	277		033	Port 50 – TDI'				

Source		Destination		Channel Bit	Mainframe Connection			Wire Pair
Plug	Pin	Plug	Pin		CRAY T94 Mainframe	Quads 01 and 02	Quads 03 and 00	
YT	259	YL010	025	Port 50 – CLI	Spare	F003	N003	126
	279		036	Port 50 – CLI'				
YT	230	YL010	024	Port 50 – CLO	Spare	F003	N003	127
	254		037	Port 50 – CLO'				
YT	226	YL010	027	Port 50 – TDO	Spare	F003	N003	128
	250		034	Port 50 – TDO'				
YT	228	YL010	026	Port 50 – RCLK	Spare	F003	N003	129
	252		035	Port 50 – RCLK'				
YM002	013	YL010	002	Voltage sense	Spare	F003	N003	130
	014		059					
YM002	015	YL010	003	Voltage sense	Spare	F003	N003	131
	016		058					
YM002	017	YL010	004	Voltage sense	Spare	F003	N003	132
	018		057					
YT	249	YL011	030	Port 54 – TCLK	Spare	F004	N004	133
	269		031	Port 54 – TCLK'				
YT	251	YL011	029	Port 54 – TM	Spare	F004	N004	134
	271		032	Port 54 – TM'				
YT	253	YL011	028	Port 54 – TDI	Spare	F004	N004	135
	273		033	Port 54 – TDI'				
YT	260	YL011	025	Port 54 – CLI	Spare	F004	N004	136
	282		036	Port 54 – CLI'				
YT	245	YL011	024	Port 54 – CLO	Spare	F004	N004	137
	265		037	Port 54 – CLO'				
YT	241	YL011	027	Port 54 – TDO	Spare	F004	N004	138
	261		034	Port 54 – TDO'				
YT	243	YL011	026	Port 54 – RCLK	Spare	F004	N004	139
	263		035	Port 54 – RCLK'				
YM002	019	YL011	002	Voltage sense	Spare	F004	N004	140
	020		059					
YM002	021	YL011	003	Voltage sense	Spare	F004	N004	141
	022		058					
YM002	023	YL011	004	Voltage sense	Spare	F004	N004	142
	024		057					
YT	270	YL012	030	Port 1 – TCLK	Spare	F005	N005	143
	292		031	Port 1 – TCLK'				

Source		Destination		Channel Bit	Mainframe Connection			Wire Pair
Plug	Pin	Plug	Pin		CRAY T94 Mainframe	Quads 01 and 02	Quads 03 and 00	
YT	272	YL012	029	Port 1 – TM	Spare	F005	N005	144
	294		032	Port 1 – TM'				
YT	274	YL012	028	Port 1 – TDI	Spare	F005	N005	145
	296		033	Port 1 – TDI'				
YT	276	YL012	025	Port 1 – CLI	Spare	F005	N005	146
	298		036	Port 1 – CLI'				
YT	266	YL012	024	Port 1 – CLO	Spare	F005	N005	147
	288		037	Port 1 – CLO'				
YT	262	YL012	027	Port 1 – TDO	Spare	F005	N005	148
	284		034	Port 1 – TDO'				
YT	264	YL012	026	Port 1 – RCLK	Spare	F005	N005	439
	286		035	Port 1 – RCLK'				
YM003	019	YL012	002	Voltage sense	Spare	F005	N005	150
	020		059					
YM003	021	YL012	003	Voltage sense	Spare	F005	N005	151
	022		058					
YM003	023	YL012	004	Voltage sense	Spare	F005	N005	152
	024		057					
YT	295	YL013	030	Port 5 – TCLK	Spare	F006	N006	153
	317		031	Port 5 – TCLK'				
YT	297	YL013	029	Port 5 – TM	Spare	F006	N006	154
	319		032	Port 5 – TM'				
YT	299	YL013	028	Port 5 – TDI	Spare	F006	N006	155
	321		033	Port 5 – TDI'				
YT	301	YL013	025	Port 5 – CLI	Spare	F006	N006	156
	323		036	Port 5 – CLI'				
YT	291	YL013	024	Port 5 – CLO	Spare	F006	N006	157
	313		037	Port 5 – CLO'				
YT	278	YL013	027	Port 5 – TDO	Spare	F006	N006	158
	300		034	Port 5 – TDO'				
YT	289	YL013	026	Port 5 – RCLK	Spare	F006	N006	459
	311		035	Port 5 – RCLK'				
YM003	007	YL013	002	Voltage sense	Spare	F006	N006	160
	008		059					
YM003	009	YL013	003	Voltage sense	Spare	F006	N006	161
	010		058					

Source		Destination		Channel Bit	Mainframe Connection			Wire Pair
Plug	Pin	Plug	Pin		CRAY T94 Mainframe	Quads 01 and 02	Quads 03 and 00	
YM003	011	YL013	004	Voltage sense	Spare	F006	N006	162
	012		057					
YT	302	YL014	030	Port 11 – TCLK	Spare	F007	N007	163
	327		031	Port 11 – TCLK'				
YT	304	YL014	029	Port 11 – TM	Spare	F007	N007	164
	329		032	Port 11 – TM'				
YT	306	YL014	028	Port 11 – TDI	Spare	F007	N007	165
	331		033	Port 11 – TDI'				
YT	308	YL014	025	Port 11 – CLI	Spare	F007	N007	166
	333		036	Port 11 – CLI'				
YT	285	YL014	024	Port 11 – CLO	Spare	F007	N007	167
	307		037	Port 11 – CLO'				
YT	281	YL014	027	Port 11 – TDO	Spare	F007	N007	168
	303		034	Port 11 – TDO'				
YT	283	YL014	026	Port 11 – RCLK	Spare	F007	N007	469
	305		035	Port 11 – RCLK'				
YM003	013	YL014	002	Voltage sense	Spare	F007	N007	170
	014		059					
YM003	015	YL014	003	Voltage sense	Spare	F007	N007	171
	016		058					
YM003	017	YL014	004	Voltage sense	Spare	F007	N007	172
	018		057					
YT	318	YL015	030	Port 15 – TCLK	Spare	F008	N008	173
	343		031	Port 15 – TCLK'				
YT	320	YL015	029	Port 15 – TM	Spare	F008	N008	174
	345		032	Port 15 – TM'				
YT	322	YL015	028	Port 15 – TDI	Spare	F008	N008	175
	347		033	Port 15 – TDI'				
YT	324	YL015	025	Port 15 – CLI	Spare	F008	N008	176
	349		036	Port 15 – CLI'				
YT	314	YL015	024	Port 15 – CLO	Spare	F008	N008	177
	339		037	Port 15 – CLO'				
YT	310	YL015	027	Port 15 – TDO	Spare	F008	N008	178
	335		034	Port 15 – TDO'				
YT	312	YL015	026	Port 15 – RCLK	Spare	F008	N008	479
	337		035	Port 15 – RCLK'				

Source		Destination		Channel Bit	Mainframe Connection			Wire Pair
Plug	Pin	Plug	Pin		CRAY T94 Mainframe	Quads 01 and 02	Quads 03 and 00	
YM003	019	YL015	002	Voltage sense	Spare	F008	N008	180
	020		059					
YM003	021	YL015	003	Voltage sense	Spare	F008	N008	181
	022		058					
YM003	023	YL015	004	Voltage sense	Spare	F008	N008	182
	024		057					
YT	342	YL016	030	Port 21 – TCLK	Spare	G001	O001	183
	365		031	Port 21 – TCLK'				
YT	344	YL016	029	Port 21 – TM	Spare	G001	O001	184
	367		032	Port 21 – TM'				
YT	346	YL016	028	Port 21 – TDI	Spare	G001	O001	185
	369		033	Port 21 – TDI'				
YT	348	YL016	025	Port 21 – CLI	Spare	G001	O001	186
	371		036	Port 21 – CLI'				
YT	338	YL016	024	Port 21 – CLO	Spare	G001	O001	187
	361		037	Port 21 – CLO'				
YT	334	YL016	027	Port 21 – TDO	Spare	G001	O001	188
	357		034	Port 21 – TDO'				
YT	336	YL016	026	Port 21 – RCLK	Spare	G001	O001	489
	359		035	Port 21 – RCLK'				
YM004	001	YL016	002	Voltage sense	Spare	G001	O001	190
	002		059					
YM004	003	YL016	003	Voltage sense	Spare	G001	O001	181
	004		058					
YM004	005	YL016	004	Voltage sense	Spare	G001	O001	192
	006		057					
YT	356	YL017	030	Port 25 – TCLK	Spare	G002	O002	193
	377		031	Port 25 – TCLK'				
YT	358	YL017	029	Port 25 – TM	Spare	G002	O002	194
	379		032	Port 25 – TM'				
YT	360	YL017	028	Port 25 – TDI	Spare	G002	O002	195
	381		033	Port 25 – TDI'				
YT	362	YL017	025	Port 25 – CLI	Spare	G002	O002	196
	383		036	Port 25 – CLI'				
YT	332	YL017	024	Port 25 – CLO	Spare	G002	O002	197
	355		037	Port 25 – CLO'				

Source		Destination		Channel Bit	Mainframe Connection			Wire Pair
Plug	Pin	Plug	Pin		CRAY T94 Mainframe	Quads 01 and 02	Quads 03 and 00	
YT	328	YL017	027	Port 25 – TDO	Spare	G002	O002	198
	351		034	Port 25 – TDO'				
YT	330	YL017	026	Port 25 – RCLK	Spare	G002	O002	199
	353		035	Port 25 – RCLK'				
YM004	007	YL017	002	Voltage sense	Spare	G002	O002	200
	008		059					
YM004	009	YL017	003	Voltage sense	Spare	G002	O002	201
	010		058					
YM004	011	YL017	004	Voltage sense	Spare	G002	O002	202
	012		057					
YT	382	YL018	030	Port 31 – TCLK	Spare	G003	O003	203
	397		031	Port 31 – TCLK'				
YT	384	YL018	029	Port 31 – TM	Spare	G003	O003	204
	399		032	Port 31 – TM'				
YT	386	YL018	028	Port 31 – TDI	Spare	G003	O003	205
	401		033	Port 31 – TDI'				
YT	388	YL018	025	Port 31 – CLI	Spare	G003	O003	206
	403		036	Port 31 – CLI'				
YT	372	YL018	024	Port 31 – CLO	Spare	G003	O003	207
	389		037	Port 31 – CLO'				
YT	364	YL018	027	Port 31 – TDO	Spare	G003	O003	208
	385		034	Port 31 – TDO'				
YT	370	YL018	026	Port 31 – RCLK	Spare	G003	O003	209
	387		035	Port 31 – RCLK'				
YM004	007	YL018	002	Voltage sense	Spare	G003	O003	210
	008		059					
YM004	009	YL018	003	Voltage sense	Spare	G003	O003	211
	010		058					
YM004	011	YL018	004	Voltage sense	Spare	G003	O003	212
	012		057					
YT	398	YL019	030	Port 35 – TCLK	Spare	G004	O004	213
	415		031	Port 35 – TCLK'				
YT	400	YL019	029	Port 35 – TM	Spare	G004	O004	214
	417		032	Port 35 – TM'				
YT	402	YL019	028	Port 35 – TDI	Spare	G004	O004	215
	419		033	Port 35 – TDI'				

Source		Destination		Channel Bit	Mainframe Connection			Wire Pair
Plug	Pin	Plug	Pin		CRAY T94 Mainframe	Quads 01 and 02	Quads 03 and 00	
YT	404	YL019	025	Port 35 – CLI	Spare	G004	O004	216
	421		036	Port 35 – CLI'				
YT	394	YL019	024	Port 35 – CLO	Spare	G004	O004	217
	411		037	Port 35 – CLO'				
YT	376	YL019	027	Port 35 – TDO	Spare	G004	O004	218
	391		034	Port 35 – TDO'				
YT	390	YL019	026	Port 35 – RCLK	Spare	G004	O034	219
	407		035	Port 35 – RCLK'				
YM004	007	YL019	002	Voltage sense	Spare	G004	O004	220
	008		059					
YM004	009	YL019	003	Voltage sense	Spare	G004	O004	221
	010		058					
YM004	011	YL019	004	Voltage sense	Spare	G004	O004	222
	012		057					
YT	408	YT	462	TDO to TDI	Internal to 514-pin (YT) connector in all MC01 harness assemblies – Port 41 to IO02 boundary scan, zone A			N/A
	423		484	TDO' to TDI'				
	410		464	RCLK to RCLK				
	429		486	RCLK' to RCLK'				
	412		466	CLO to CLI				
	431		488	CLO' to CLI'				
	416		440	TCLK to TCLK				
	435		465	TCLK' to TCLK'				
	420		458	TDI to TDO				
	443		480	TDI' to TDO'				
	422		460	CLI to CLO				
	447		482	CLI' to CLO'				

Source		Destination		Channel Bit	Mainframe Connection			Wire Pair
Plug	Pin	Plug	Pin		CRAY T94 Mainframe	Quads 01 and 02	Quads 03 and 00	
YT	424	YT	456	TDO to TDI	Internal to 514-pin (YT) connector in all MC01 harness assemblies – Port 45 to IO02 boundary scan, zone C			N/A
	449		478	TDO' to TDI'				
	426		469	RCLK to RCLK				
	451		493	RCLK' to RCLK				
	428		471	CLO to CL				
	453		495	CLO' to CLI'				
	432		448	TCLK to TCLK				
	457		470	TCLK' to TCLK'				
	434		450	TM to TM				
	459		472	TM' to TM'				
	436		452	TDI to TDO				
	461		474	TDI' to TDO				
	438		454	CLI to CLO				
	463		476	CLI' to CLO'				
YT	442	YT	489	TM Port 0 Return	489/513 force zero/force one			N/A
	467		513	TM' Port 0 Return				
YL001	001	YL001	060	Clock Power Jumpers	All YL connectors on each MC01 harness assembly contain these jumpers.			N/A
YL002	001	YL002	060					
YL003	001	YL003	060					
YL004	001	YL004	060					
YL005	001	YL005	060					
YL006	001	YL006	060					
YL007	001	YL007	060					
YL008	001	YL008	060					
YL009	001	YL009	060					
YL010	001	YL010	060					
YL011	001	YL011	060					
YL012	001	YL012	060					
YL013	001	YL013	060					
YL014	001	YL014	060					
YL015	001	YL015	060					
YL016	001	YL016	060					
YL017	001	YL017	060					
YL018	001	YL018	060					
YL019	001	YL019	060					

MC02 Harness Assembly

Each CRAY T916 and CRAY T932 mainframe with GigaRing I/O capability requires an MC02 harness assembly for each IO module in a primary location. Each MC02 harness assembly contains thirty connectors: one 514-pin (YT) module connector, twenty-three 60-pin (YL) maintenance connectors, one 60-pin (YK) MC03 connector, and five 24-pin (YM) voltage sense connectors. Figure 3 illustrates the MC02 harness assembly. Table 5 provides the MC02 harness assembly wire list.

Figure 3. MC02 Harness Assembly

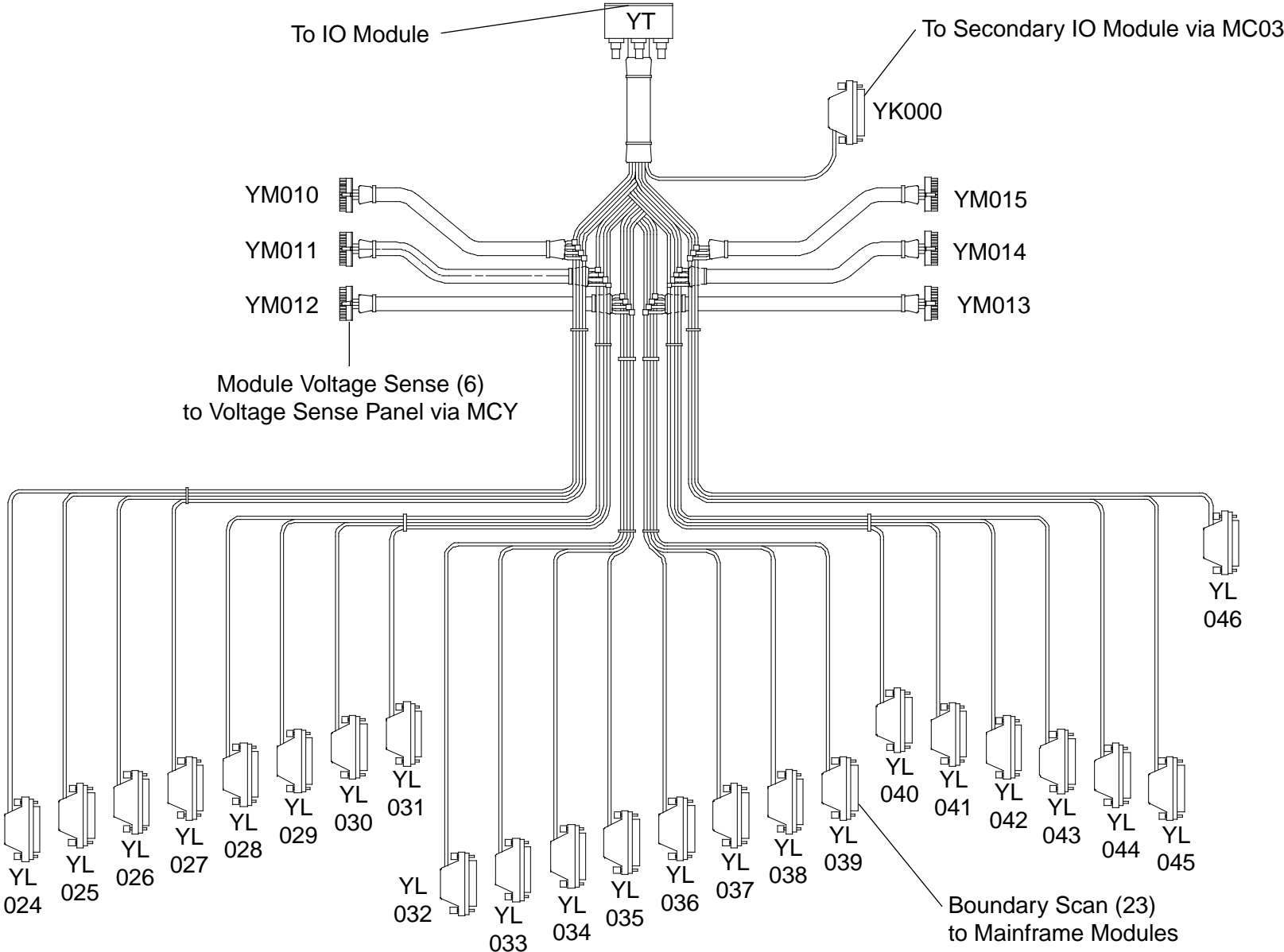


Table 5. MC02 Harness Assembly Wire List

Source			Destination		Channel Bit	Mainframe Connection		Wire Pair												
Plug	Pin	Signal	Plug	Pin		Quads 01 and 02	Quads 03 and 00													
YT	009	OAA	YK000	047	Port 51 – TCLK	Port 51 to MC03		1												
	033	oaa		048	Port 51 – TCLK'															
YT	011	OAB	YK000	055	Port 51 – TM			Port 51 to MC03		2										
	035	oab		056	Port 51 – TM'															
YT	013	OAC	YK000	053	Port 51 – TDI					Port 51 to MC03		3								
	037	oac		054	Port 51 – TDI'															
YT	015	OAD	YK000	059	Port 51 – CLI							Port 51 to MC03		4						
	039	oad		060	Port 51 – CLI'															
YT	005	IAC	YK000	057	Port 51 – CLO									Port 51 to MC03		5				
	029	iac		058	Port 51 – CLO'															
YT	001	IAA	YK000	051	Port 51 – TDO											Port 51 to MC03		6		
	025	iaa		052	Port 51 – TDO'															
YT	003	IAB	YK000	049	Port 51 – RCLK													Port 51 to MC03		7
	027	iab		050	Port 51 – RCLK'															
YT	034	OBA	YK000	032	Port 55 – TCLK	Port 55 to MC03														8
	056	oba		033	Port 55 – TCLK															
YT	036	OBB	YK000	040	Port 55 – TM			Port 55 to MC03												9
	058	obb		041	Port 55 – TM'															
YT	038	OBC	YK000	038	Port 55 – TDI					Port 55 to MC03										10
	060	obc		039	Port 55 – TDI'															
YT	040	OBD	YK000	044	Port 55 – CLI							Port 55 to MC03								11
	062	obd		045	Port 55 – CLI'															
YT	030	IBC	YK000	042	Port 55 – CLO									Port 55 to MC03						12
	052	ibc		043	Port 55 – CLO'															
YT	026	IBA	YK000	036	Port 55 – TDO											Port 55 to MC03				13
	048	iba		037	Port 55 – TDO'															
YT	028	IBB	YK000	034	Port 55 – RCLK													Port 55 to MC03		14
	050	ibb		035	Port 55 – RCLK'															
YT	055	OCA	YL024	030	Port 2 – TCLK	J001	B001													15
	079	oca		031	Port 2 – TCLK'															
YT	057	OCB	YL024	029	Port 2 – TM	J001	B001	16												
	081	ocb		032	Port 2 – TM'															
YT	059	OCC	YL024	028	Port 2 – TDI	J001	B001	17												
	083	occ		033	Port 2 – TDI'															

Source			Destination		Channel Bit	Mainframe Connection		Wire Pair
Plug	Pin	Signal	Plug	Pin		Quads 01 and 02	Quads 03 and 00	
YT	061	OCD	YL024	025	Port 2 – CLI	J001	B001	18
	085	ocd		036	Port 2 – CLI'			
YT	051	ICC	YL024	024	Port 2 – CLO	J001	B001	19
	075	icc		037	Port 2 – CLO'			
YT	047	ICA	YL024	027	Port 2 – TDO	J001	B001	20
	071	ica		034	Port 2 – TDO'			
YT	049	ICB	YL024	026	Port 2 – RCLK	J001	B001	21
	073	icb		035	Port 2 – RCLK'			
YM010	001		YL024	002	Voltage sense	J001	B001	22
	002			059				
YM010	003		YL024	003	Voltage sense	J001	B001	23
	004			058				
YM010	005		YL024	004	Voltage sense	J001	B001	24
	006			057				
YT	082	ODA	YL025	030	Port 6 – TCLK	J002	B002	25
	101	oda		031	Port 6 – TCLK'			
YT	084	ODB	YL025	029	Port 6 – TM	J002	B002	26
	103	odb		032	Port 6 – TM'			
YT	086	ODC	YL025	028	Port 6 – TDI	J002	B002	27
	105	odc		033	Port 6 – TDI'			
YT	092	ODD	YL025	025	Port 6 – CLI	J002	B002	28
	107	odd		036	Port 6 – CLI'			
YT	067	IDC	YL025	024	Port 6 – CLO	J002	B002	29
	091	idc		037	Port 6 – CLO'			
YT	063	IDA	YL025	027	Port 6 – TDO	J002	B002	30
	087	ida		034	Port 6 – TDO'			
YT	065	IDB	YL025	026	Port 6 – RCLK	J002	B002	31
	089	idb		035	Port 6 – RCLK'			
YM010	007		YL025	002	Voltage sense	J002	B002	32
	008			059				
YM010	009		YL025	003	Voltage sense	J002	B002	33
	010			058				
YM010	011		YL025	004	Voltage sense	J002	B002	34
	012			057				
YT	098	OEA	YL026	030	Port 12 – TCLK	J003	B003	35
	115	oea		031	Port 12 – TCLK'			

Source			Destination		Channel Bit	Mainframe Connection		Wire Pair
Plug	Pin	Signal	Plug	Pin		Quads 01 and 02	Quads 03 and 00	
YT	100	OEB	YL026	029	Port 12 – TM	J003	B003	36
	117	oeb		032	Port 12 – TM'			
YT	102	OEC	YL026	028	Port 12 – TDI	J003	B003	37
	119	oec		033	Port 12 – TDI'			
YT	104	OED	YL026	025	Port 12 – CLI	J003	B003	38
	121	oed		036	Port 12 – CLI'			
YT	080	IEC	YL026	024	Port 12 – CLO	J003	B003	39
	099	iec		037	Port 12 – CLO'			
YT	072	IEA	YL026	027	Port 12 – TDO	J003	B003	40
	095	iea		034	Port 12 – TDO'			
YT	074	IEB	YL026	026	Port 12 – RCLK	J003	B003	41
	097	ieb		035	Port 12 – RCLK'			
YM010	013		YL026	002	Voltage sense	J003	B003	42
	014			059				
YM010	015		YL026	003	Voltage sense	J003	B003	43
	016			058				
YM010	017		YL026	004	Voltage sense	J003	B003	44
	018			057				
YT	118	OFA	YL027	030	Port 16 – TCLK	J004	B004	45
	133	ofa		031	Port 16 – TCLK'			
YT	120	OFB	YL027	029	Port 16 – TM	J004	B004	46
	135	ofb		032	Port 16 – TM'			
YT	122	OFC	YL027	028	Port 16 – TDI	J004	B004	47
	137	ofc		033	Port 16 – TDI'			
YT	124	OFD	YL027	025	Port 16 – CLI	J004	B004	48
	139	ofd		036	Port 16 – CLI'			
YT	112	IFC	YL027	024	Port 16 – CLO	J004	B004	49
	127	ifc		037	Port 16 – CLO'			
YT	106	IFA	YL027	027	Port 16 – TDO	J004	B004	50
	123	ifa		034	Port 16 – TDO'			
YT	108	IFB	YL027	026	Port 16 – RCLK	J004	B004	51
	125	ifb		035	Port 16 – RCLK'			
YM010	019		YL027	002	Voltage sense	J004	B004	52
	020			059				
YM010	021		YL027	003	Voltage sense	J004	B004	53
	022			058				

Source			Destination		Channel Bit	Mainframe Connection		Wire Pair
Plug	Pin	Signal	Plug	Pin		Quads 01 and 02	Quads 03 and 00	
YM010	023		YL027	004	Voltage sense	J004	B004	54
	024			057				
YT	134	OGA	YL028	030	Port 22 – TCLK	J005	B005	55
	155	oga		031	Port 22 – TCLK'			
YT	136	OGB	YL028	029	Port 22 – TM	J005	B005	56
	157	ogb		032	Port 22 – TM'			
YT	138	OGC	YL028	028	Port 22 – TDI	J005	B005	57
	163	ogc		033	Port 22 – TDI'			
YT	140	OGD	YL028	025	Port 22 – CLI	J005	B005	58
	165	ogd		036	Port 22 – CLI'			
YT	130	IGC	YL028	024	Port 22 – CLO	J005	B005	59
	151	igc		037	Port 22 – CLO'			
YT	126	IGA	YL028	027	Port 22 – TDO	J005	B005	60
	143	iga		034	Port 22 – TDO'			
YT	128	IGB	YL028	026	Port 22 – RCLK	J005	B005	61
	145	igb		035	Port 22 – RCLK'			
YM011	001		YL028	002	Voltage sense	J005	B005	62
	002			059				
YM011	003		YL028	003	Voltage sense	J005	B005	63
	004			058				
YM011	005		YL028	004	Voltage sense	J005	B005	64
	006			057				
YT	158	OHA	YL029	030	Port 26 – TCLK	J006	B006	65
	181	oha		031	Port 26 – TCLK'			
YT	160	OHB	YL029	029	Port 26 – TM	J006	B006	66
	183	ohb		032	Port 26 – TM'			
YT	162	OHC	YL029	028	Port 26 – TDI	J006	B006	67
	185	ohc		033	Port 26 – TDI'			
YT	164	OHD	YL029	025	Port 26 – CLI	J006	B006	68
	187	ohd		036	Port 26 – CLI'			
YT	154	IHC	YL029	024	Port 26 – CLO	J006	B006	69
	177	ihc		037	Port 26 – CLO'			
YT	150	IHA	YL029	027	Port 26 – TDO	J006	B006	70
	173	iha		034	Port 26 – TDO'			
YT	152	IHB	YL029	026	Port 26 – RCLK	J006	B006	71
	175	ihb		035	Port 26 – RCLK'			

Source			Destination		Channel Bit	Mainframe Connection		Wire Pair
Plug	Pin	Signal	Plug	Pin		Quads 01 and 02	Quads 03 and 00	
YM011	007		YL029	002	Voltage sense	J006	B006	72
		008						
YM011	009		YL029	003	Voltage sense	J006	B006	73
		010						
YM011	011		YL029	004	Voltage sense	J006	B006	74
		012						
YT	168	OIA	YL030	030	Port 32 – TCLK	J007	B007	75
		193		oia	031			
YT	170	OIB	YL030	029	Port 32 – TM	J007	B007	76
		195		oib	032			
YT	172	OIC	YL030	028	Port 32 – TDI	J007	B007	77
		197		oic	033			
YT	174	OID	YL030	025	Port 32 – CLI	J007	B007	78
		199		oid	036			
YT	148	IIC	YL030	024	Port 32 – CLO	J007	B007	79
		171		iic	037			
YT	144	IIA	YL030	027	Port 32 – TDO	J007	B007	80
		167		iia	034			
YT	146	IIB	YL030	026	Port 32 – RCLK	J007	B007	81
		169		iib	035			
YM011	013		YL030	002	Voltage sense	J007	B007	82
		014						
YM011	015		YL030	003	Voltage sense	J007	B007	83
		016						
YM011	017		YL030	004	Voltage sense	J008	B008	84
		018						
YT	184	OJA	YL031	030	Port 36 – TCLK	J008	B008	85
		209		oja	031			
YT	186	OJB	YL031	029	Port 36 – TM	J008	B008	86
		211		ojb	032			
YT	188	OJC	YL031	028	Port 36 – TDI	J008	B008	87
		213		ojc	033			
YT	212	OJD	YL031	025	Port 36 – CLI	J008	B008	88
		235		ojd	036			
YT	180	IJC	YL031	024	Port 36 – CLO	J008	B008	89
		205		ijc	037			

Source			Destination		Channel Bit	Mainframe Connection		Wire Pair
Plug	Pin	Signal	Plug	Pin		Quads 01 and 02	Quads 03 and 00	
YT	176	IJA	YL031	027	Port 36 – TDO	J008	B008	90
	201	ija		034	Port 36 – TDO'			
YT	178	IJB	YL031	026	Port 36 – RCLK	J008	B008	91
	203	ijb		035	Port 36 – RCLK'			
YM011	019		YL031	002	Voltage sense	J008	B008	92
	020			059				
YM011	021		YL031	003	Voltage sense	J008	B008	93
	022			058				
YM011	023		YL031	004	Voltage sense	J008	B008	94
	024			057				
YT	204	OKA	YL032	030	Port 42 – TCLK	L001	D001	95
	227	oka		031	Port 42 – TCLK'			
YT	206	OKB	YL032	029	Port 42 – TM	L001	D001	96
	229	okb		032	Port 42 – TM'			
YT	208	OKC	YL032	028	Port 42 – TDI	L001	D001	97
	231	okc		033	Port 42 – TDI'			
YT	210	OKD	YL032	025	Port 42 – CLI	L001	D001	98
	233	okd		036	Port 42 – CLI'			
YT	200	IKC	YL032	024	Port 42 – CLO	L001	D001	99
	223	ikc		037	Port 42 – CLO'			
YT	196	IKA	YL032	027	Port 42 – TDO	L001	D001	100
	219	ika		034	Port 42 – TDO'			
YT	198	IKB	YL032	026	Port 42 – RCLK	L001	D001	101
	221	ikb		035	Port 42 – RCLK'			
YM012	001		YL032	002	Voltage sense	L001	D001	102
	002			059				
YM012	003		YL032	003	Voltage sense	L001	D001	103
	042			058				
YM012	005		YL032	004	Voltage sense	L001	D001	104
	006			057				
YT	218	OLA	YL033	030	Port 46 – TCLK	L002	D002	105
	242	ola		031	Port 46 – TCLK'			
YT	220	OLB	YL033	029	Port 46 – TM	L002	D002	106
	244	olb		032	Port 46 – TM'			
YT	222	OLC	YL033	028	Port 46 – TDI	L002	D002	107
	246	olc		033	Port 46 – TDI'			

Source			Destination		Channel Bit	Mainframe Connection		Wire Pair
Plug	Pin	Signal	Plug	Pin		Quads 01 and 02	Quads 03 and 00	
YT	224	OLD	YL033	025	Port 46 – CLI	L002	D002	108
	248	old		036	Port 46 – CLI'			
YT	214	ILC	YL033	024	Port 46 – CLO	L002	D002	109
	238	ilc		037	Port 46 – CLO'			
YT	192	ILA	YL033	027	Port 46 – TDO	L002	D002	110
	215	ila		034	Port 46 – TDO'			
YT	194	ILB	YL033	026	Port 46 – RCLK	L002	D002	111
	217	ilb		035	Port 46 – RCLK'			
YM012	007		YL033	002	Voltage sense	L002	D002	112
	008			059				
YM012	009		YL033	003	Voltage sense	L002	D002	113
	010			058				
YM012	011		YL033	004	Voltage sense	L002	D002	114
	012			057				
YT	234	OMA	YL034	030	Port 52 – TCLK	L003	D003	115
	258	oma		031	Port 52 – TCLK'			
YT	255	OMB	YL034	029	Port 52 – TM	L003	D003	116
	275	omb		032	Port 52 – TM'			
YT	257	OMC	YL034	028	Port 52 – TDI	L003	D003	117
	277	omc		033	Port 52 – TDI'			
YT	259	OMD	YL034	025	Port 52 – CLI	L003	D003	118
	279	omd		036	Port 52 – CLI'			
YT	230	IMC	YL034	024	Port 52 – CLO	L003	D003	119
	254	imc		037	Port 52 – CLO'			
YT	226	IMA	YL034	027	Port 52 – TDO	L003	D003	120
	250	ima		034	Port 52 – TDO'			
YT	228	IMB	YL034	026	Port 52 – RCLK	L003	D003	121
	252	imb		035	Port 52 – RCLK'			
YM012	013		YL034	002	Voltage sense	L003	D003	122
	014			059				
YM012	015		YL034	003	Voltage sense	L003	D003	123
	016			058				
YM012	017		YL034	004	Voltage sense	L003	D003	124
	018			057				
YT	249	ONA	YL035	030	Port 56 – TCLK	L004	D004	125
	269	ona		031	Port 56 – TCLK'			

Source			Destination		Channel Bit	Mainframe Connection		Wire Pair
Plug	Pin	Signal	Plug	Pin		Quads 01 and 02	Quads 03 and 00	
YT	251	ONB	YL035	029	Port 56 – TM	L004	D004	126
	271	onb		032	Port 56 – TM'			
YT	253	ONC	YL035	028	Port 56 – TDI	L004	D004	127
	273	onc		033	Port 56 – TDI'			
YT	260	OND	YL035	025	Port 56 – CLI	L004	D004	128
	282	ond		036	Port 56 – CLI'			
YT	245	INC	YL035	024	Port 56 – CLO	L004	D004	129
	265	inc		037	Port 56 – CLO'			
YT	241	INA	YL035	027	Port 56 – TDO	L004	D004	130
	261	ina		034	Port 56 – TDO'			
YT	243	INB	YL035	026	Port 56 – RCLK	L004	D004	131
	263	inb		035	Port 56 – RCLK'			
YM012	019		YL035	002	Voltage sense	L004	D004	132
	020			059				
YM012	021		YL035	003	Voltage sense	L004	D004	133
	022			058				
YM012	023		YL035	004	Voltage sense	L004	D004	134
	024			057				
YT	270	OOA	YL036	030	Port 3 – TCLK	L005	D005	135
	292	ooa		031	Port 3 – TCLK'			
YT	272	OOB	YL036	029	Port 3 – TM	L005	D005	136
	294	oob		032	Port 3 – TM'			
YT	274	OOC	YL036	028	Port 3 – TDI	L005	D005	137
	296	ooc		033	Port 3 – TDI'			
YT	276	OOD	YL036	025	Port 3 – CLI	L005	D005	138
	298	ood		036	Port 3 – CLI'			
YT	266	IOC	YL036	024	Port 3 – CLO	L005	D005	139
	288	ioc		037	Port 3 – CLO'			
YT	262	IOA	YL036	027	Port 3 – TDO	L005	D005	140
	284	ioa		034	Port 3 – TDO'			
YT	264	IOB	YL036	026	Port 3 – RCLK	L005	D005	141
	286	iob		035	Port 3 – RCLK'			
YM013	001		YL036	002	Voltage sense	L005	D005	142
	002			059				
YM013	003		YL036	003	Voltage sense	L005	D005	143
	004			058				

Source			Destination		Channel Bit	Mainframe Connection		Wire Pair
Plug	Pin	Signal	Plug	Pin		Quads 01 and 02	Quads 03 and 00	
YM013	005		YL036	004	Voltage sense	L005	D005	144
	006			057				
YT	295	OPA	YL037	030	Port 7 – TCLK	L006	D006	145
	317	opa		031	Port 7 – TCLK'			
YT	297	OPB	YL037	029	Port 7 – TM	L006	D006	146
	319	opb		032	Port 7 – TM'			
YT	299	OPC	YL037	028	Port 7 – TDI	L006	D006	147
	321	opc		033	Port 7 – TDI'			
YT	301	OPD	YL037	025	Port 7 – CLI	L006	D006	148
	323	opd		036	Port 7 – CLI'			
YT	291	IPC	YL037	024	Port 7 – CLO	L006	D006	149
	313	ipc		037	Port 7 – CLO'			
YT	278	IPA	YL037	027	Port 7 – TDO	L006	D006	150
	300	ipa		034	Port 7 – TDO'			
YT	289	IPB	YL037	026	Port 7 – RCLK	L006	D006	151
	311	ipb		035	Port 7 – RCLK'			
YM013	007		YL037	002	Voltage sense	L006	D006	152
	008			059				
YM013	009		YL037	003	Voltage sense	L006	D006	153
	010			058				
YM013	011		YL037	004	Voltage sense	L006	D006	154
	012			057				
YT	302	OQA	YL038	030	Port 13 – TCLK	L007	D007	155
	327	oqa		031	Port 13 – TCLK'			
YT	304	OQB	YL038	029	Port 13 – TM	L007	D007	156
	329	oqb		032	Port 13 – TM'			
YT	306	OQC	YL038	028	Port 13 – TDI	L007	D007	157
	331	oqc		033	Port 13 – TDI'			
YT	308	OQD	YL038	025	Port 13 – CLI	L007	D007	158
	333	oqd		036	Port 13 – CLI'			
YT	285	IQC	YL038	024	Port 13 – CLO	L007	D007	159
	307	iqc		037	Port 13 – CLO'			
YT	281	IQA	YL038	027	Port 13 – TDO	L007	D007	160
	303	iqa		034	Port 13 – TDO'			
YT	283	IQB	YL038	026	Port 13 – RCLK	L007	D007	161
	305	iqb		035	Port 13 – RCLK'			

Source			Destination		Channel Bit	Mainframe Connection		Wire Pair
Plug	Pin	Signal	Plug	Pin		Quads 01 and 02	Quads 03 and 00	
YM013	013		YL038	002	Voltage sense	L007	D007	162
	014			059				
YM013	015		YL038	003	Voltage sense	L007	D007	163
	016			058				
YM013	017		YL038	004	Voltage sense	L007	D007	164
	018			057				
YT	318	ORA	YL039	030	Port 17 – TCLK	L008	D008	165
	343	ora		031	Port 17 – TCLK'			
YT	320	ORB	YL039	029	Port 17 – TM	L008	D008	166
	345	orb		032	Port 17 – TM'			
YT	322	ORC	YL039	028	Port 17 – TDI	L008	D008	167
	347	orc		033	Port 17 – TDI'			
YT	324	ORD	YL039	025	Port 17 – CLI	L008	D008	168
	349	ord		036	Port 17 – CLI'			
YT	314	IRC	YL039	024	Port 17 – CLO	L008	D008	156
	339	irc		037	Port 17 – CLO'			
YT	310	IRA	YL039	027	Port 17 – TDO	L008	D008	170
	335	ira		034	Port 17 – TDO'			
YT	312	IRB	YL039	026	Port 17 – RCLK	L008	D008	171
	337	irb		035	Port 17 – RCLK'			
YM013	019		YL039	002	Voltage sense	L008	D008	172
	020			059				
YM013	021		YL039	003	Voltage sense	L008	D008	173
	022			058				
YM013	023		YL039	004	Voltage sense	L008	D008	174
	024			057				
YT	342	OSA	YL040	030	Port 23 – TCLK	K001	C001	175
	365	osa		031	Port 23 – TCLK'			
YT	344	OSB	YL040	029	Port 23 – TM	K001	C001	176
	367	osb		032	Port 23 – TM'			
YT	346	OSC	YL040	028	Port 23 – TDI	K001	C001	177
	369	osc		033	Port 23 – TDI'			
YT	348	OSD	YL040	025	Port 23 – CLI	K001	C001	178
	371	osd		036	Port 23 – CLI'			
YT	338	ISC	YL040	024	Port 23 – CLO	K001	C001	176
	361	isc		037	Port 23 – CLO'			

Source			Destination		Channel Bit	Mainframe Connection		Wire Pair
Plug	Pin	Signal	Plug	Pin		Quads 01 and 02	Quads 03 and 00	
YT	334	ISA	YL040	027	Port 23 – TDO	K001	C001	180
	357	isa		034	Port 23 – TDO'			
YT	336	ISB	YL040	026	Port 23 – RCLK	K001	C001	181
	359	isb		035	Port 23 – RCLK'			
YM014	001		YL040	002	Voltage sense	K001	C001	182
	002			059				
YM014	003		YL040	003	Voltage sense	K001	C001	183
	004			058				
YM014	005		YL040	004	Voltage sense	K001	C001	184
	006			057				
YT	356	OTA	YL041	030	Port 27 – TCLK	K002	C002	185
	377	ota		031	Port 27 – TCLK'			
YT	358	OTB	YL041	029	Port 27 – TM	K002	C002	186
	379	otb		032	Port 27 – TM'			
YT	360	OTC	YL041	028	Port 27 – TDI	K002	C002	187
	381	otc		033	Port 27 – TDI'			
YT	362	OTD	YL041	025	Port 27 – CLI	K002	C002	188
	383	otd		036	Port 27 – CLI'			
YT	332	ITC	YL041	024	Port 27 – CLO	K002	C002	186
	355	itc		037	Port 27 – CLO'			
YT	328	ITA	YL041	027	Port 27 – TDO	K002	C002	190
	351	ita		034	Port 27 – TDO'			
YT	330	ITB	YL041	026	Port 27 – RCLK	K002	C002	191
	353	itb		035	Port 27 – RCLK'			
YM014	007		YL041	002	Voltage sense	K002	C021	192
	008			059				
YM014	009		YL041	003	Voltage sense	K002	C002	193
	010			058				
YM014	011		YL041	004	Voltage sense	K002	C002	194
	012			057				
YT	382	OUA	YL042	030	Port 33 – TCLK	K003	C003	195
	397	oua		031	Port 33 – TCLK'			
YT	384	OUB	YL042	029	Port 33 – TM	K003	C003	196
	399	oub		032	Port 33 – TM'			
YT	386	OUC	YL042	028	Port 33 – TDI	K003	C003	197
	401	ouc		033	Port 33 – TDI'			

Source			Destination		Channel Bit	Mainframe Connection		Wire Pair
Plug	Pin	Signal	Plug	Pin		Quads 01 and 02	Quads 03 and 00	
YT	388	ODU	YL042	025	Port 33 – CLI	K003	C003	198
	403	oud		036	Port 33 – CLI'			
YT	372	IUC	YL042	024	Port 33 – CLO	K003	C003	196
	389	iuc		037	Port 33 – CLO'			
YT	364	IUA	YL042	027	Port 33 – TDO	K003	C003	200
	385	iua		034	Port 33 – TDO'			
YT	370	IUB	YL042	026	Port 33 – RCLK	K003	C003	201
	387	iub		035	Port 33 – RCLK'			
YM014	013		YL042	002	Voltage sense	K003	C003	202
	014			059				
YM014	015		YL042	003	Voltage sense	K003	C003	203
	016			058				
YM014	017		YL042	004	Voltage sense	K003	C003	204
	018			057				
YT	398	OVA	YL043	030	Port 37 – TCLK	K004	C004	205
	415	ova		031	Port 37 – TCLK'			
YT	400	OVB	YL043	029	Port 37 – TM	K004	C004	206
	417	ovb		032	Port 37 – TM'			
YT	402	OVC	YL043	028	Port 37 – TDI	K004	C004	207
	419	ovc		033	Port 37 – TDI'			
YT	404	OVD	YL043	025	Port 37 – CLI	K004	C004	208
	421	ovd		036	Port 37 – CLI'			
YT	394	IVC	YL043	024	Port 37 – CLO	K004	C004	206
	411	ivc		037	Port 37 – CLO'			
YT	376	IVA	YL043	027	Port 37 – TDO	K004	C004	210
	391	iva		034	Port 37 – TDO'			
YT	390	IVB	YL043	026	Port 37 – RCLK	K004	C004	211
	407	ivb		035	Port 37 – RCLK'			
YM014	019		YL043	002	Voltage sense	K004	C004	212
	020			059				
YM014	021		YL043	003	Voltage sense	K004	C004	213
	022			058				
YM014	023		YL043	004	Voltage sense	K004	C004	214
	024			057				
YT	416	OWA	YL044	030	Port 43 – TCLK	G005	C005	215
	435	owa		031	Port 43 – TCLK'			

Source			Destination		Channel Bit	Mainframe Connection		Wire Pair
Plug	Pin	Signal	Plug	Pin		Quads 01 and 02	Quads 03 and 00	
YT	418	OWB	YL044	029	Port 43 – TM	G005	C005	216
	437	owb		032	Port 43 – TM'			
YT	420	OWC	YL044	028	Port 43 – TDI	G005	C005	217
	443	owc		033	Port 43– TDI'			
YT	422	OWD	YL044	025	Port 43 – CLI	G005	C005	218
	447	owd		036	Port 43 – CLI'			
YT	412	IWC	YL044	024	Port 43 – CLO	G005	C005	216
	431	iwc		037	Port 43 – CLO'			
YT	408	IWA	YL044	027	Port 43 – TDO	G005	C005	220
	423	iwa		034	Port 43 – TDO'			
YT	410	IWB	YL044	026	Port 43 – RCLK	G005	C005	221
	429	iwb		035	Port 43 – RCLK'			
YM015	001		YL044	002	Voltage sense	G005	C005	222
	002			059				
YM015	003		YL044	003	Voltage sense	G005	C005	223
	004			058				
YM015	005		YL044	004	Voltage sense	G005	C005	224
	006			057				
YT	432	OXA	YL045	030	Port 47 – TCLK	I	A	225
	457	oxa		031	Port 47 – TCLK'			
YT	434	OXB	YL045	029	Port 47 – TM	I	A	226
	459	oxb		032	Port 47 – TM'			
YT	436	OXC	YL045	028	Port 47 – TDI	I	A	227
	461	oxc		033	Port 47 – TDI'			
YT	438	OXD	YL045	025	Port 47 – CLI	I	A	228
	463	oxd		036	Port 47 – CLI'			
YT	428	IXC	YL045	024	Port 47 – CLO	I	A	226
	453	ixc		037	Port 47 – CLO'			
YT	424	IXA	YL045	027	Port 47 – TDO	I	A	230
	449	ixa		034	Port 47 – TDO'			
YT	426	IXB	YL045	026	Port 47 – RCLK	I	A	231
	451	ixb		035	Port 47 – RCLK'			
YM015	007		YL045	002	Voltage sense	I	A	232
	008			059				
YM015	009		YL045	003	Voltage sense	I	A	233
	010			058				

Source			Destination		Channel Bit	Mainframe Connection		Wire Pair
Plug	Pin	Signal	Plug	Pin		Quads 01 and 02	Quads 03 and 00	
YM015	011		YL045	004	Voltage sense	I	A	234
	012			057				
YT	462	OYA	YL046	030	Port 53 – TCLK	E	M	235
	484	oya		031	Port 53 – TCLK'			
YT	464	OYB	YL046	029	Port 53 – TM	E	M	236
	486	oyb		032	Port 53 – TM'			
YT	466	OYC	YL046	028	Port 53 – TDI	E	M	227
	488	oyc		033	Port 53 – TDI'			
YT	468	OYD	YL046	025	Port 53 – CLI	E	M	238
	490	oyd		036	Port 53 – CLI'			
YT	458	IYC	YL046	024	Port 53 – CLO	E	M	236
	480	iyc		037	Port 53 – CLO'			
YT	440	IYA	YL046	027	Port 53 – TDO	E	M	240
	465	iya		034	Port 53 – TDO'			
YT	442	IYB	YL046	026	Port 53 – RCLK	E	M	241
	467	iyb		035	Port 53 – RCLK'			
YM015	013		YL046	002	Voltage sense	E	M	242
	014			059				
YM015	015		YL046	003	Voltage sense	E	M	243
	016			058				
YM015	017		YL046	004	Voltage sense	E	M	244
	018			057				

Source			Destination		Channel Bit	Mainframe Connection		Wire Pair
Plug	Pin	Signal	Plug	Pin		Quads 01 and 02	Quads 03 and 00	
YL024	001		YL024	060	Clock Power Jumpers	All YL connectors on each MC02 harness assembly contain these jumpers.	N/A	
YL025	001		YL025	060				
YL026	001		YL026	060				
YL027	001		YL027	060				
YL028	001		YL028	060				
YL029	001		YL029	060				
YL030	001		YL030	060				
YL031	001		YL031	060				
YL032	001		YL032	060				
YL033	001		YL033	060				
YL034	001		YL034	060				
YL035	001		YL035	060				
YL036	001		YL036	060				
YL037	001		YL037	060				
YL038	001		YL038	060				
YL039	001		YL039	060				
YL040	001		YL040	060				
YL041	001		YL041	060				
YL042	001		YL042	060				
YL043	001		YL043	060				
YL044	001		YL044	060				
YL045	001		YL045	060				
YL046	001		YL046	060				
NOTE: Port 57 is not used.								

MC03 Harness Assembly

Each CRAY T916 and CRAY T932 mainframe with an IO module in a secondary location requires an MC03 harness assembly. The MC03 harness assembly interconnects the IO module in the secondary location with the IO module in the primary location. Each MC03 harness assembly contains a 514-pin (YT) connector, which attaches to location EC on Board 1 of the secondary module, and a 60-pin (YK) connector, which attaches to the YK connector on the MC02 harness assembly. Figure 4 illustrates the MC03 harness assembly. Table 6 provides the MC03 harness assembly wire list.

Figure 4. MC03 Harness Assembly

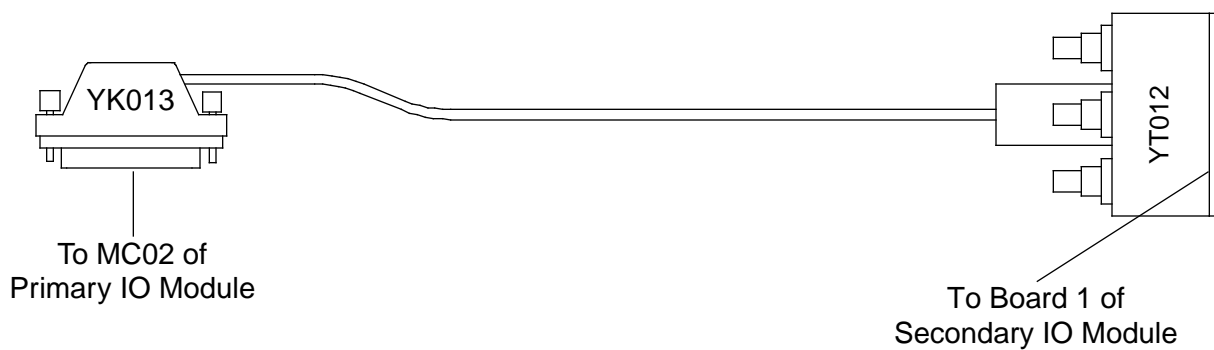


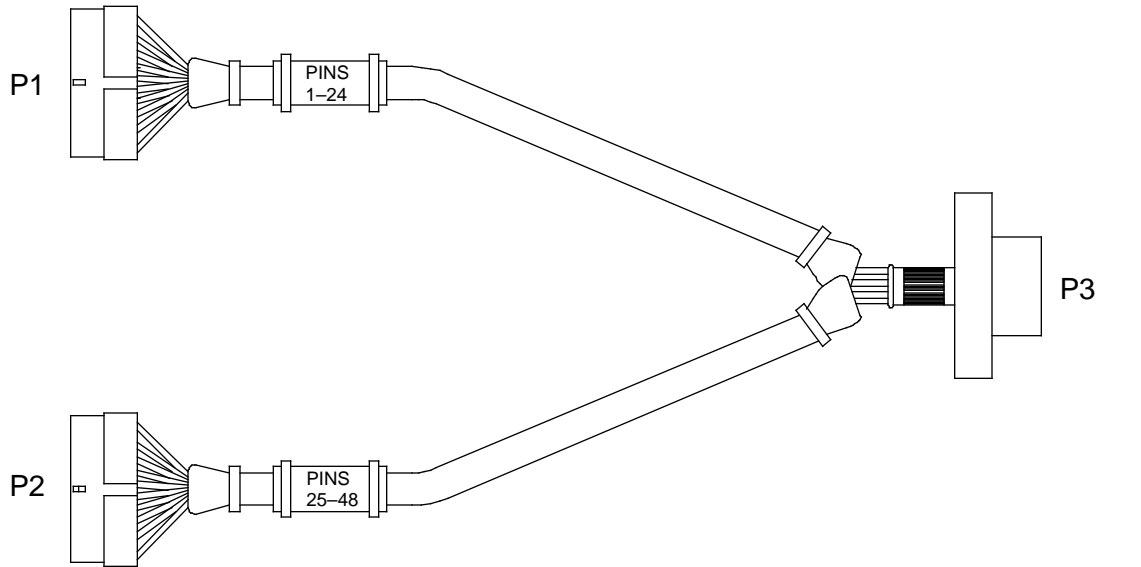
Table 6. MC03 Harness Assembly Wire List

Source			Destination		Bit	Channel	Wire Pair
Plug	Pin	Signal	Plug	Pin			
YT012	440	IYA	YK013	047	.TCLK	IO02 Boundary Scan, Zone A	1
	465	iya		048	.TCLK'		
YT012	442	IYB	YK013	055	.TM		2
	467	iyb		056	.TM'		
YT012	458	IYC	YK013	053	.TDO		3
	480	iyb		054	.TDO'		
YT012	460	IYD	YK013	059	.CLO		4
	482	iyd		060	.CLO'		
YT012	466	OYC	YK013	057	.CLI		5
	488	oyc		058	.CLI'		
YT012	462	OYA	YK013	051	.TDI		6
	484	oya		052	.TDI'		
YT012	464	OYB	YK013	049	.RCLK		7
	486	oyb		050	.RCLK'		
YT012	448	IZA	YK013	032	.TCLK	IO02 Boundary Scan, Zone C	8
	470	iza		033	.TCLK'		
YT012	450	IZB	YK013	040	.TM		9
	472	izb		041	.TM'		
YT012	452	IZC	YK013	038	.TDO		10
	474	izc		039	.TDO'		
YT012	454	IZD	YK013	044	.CLO		11
	476	izd		045	.CLO'		
YT012	471	OZC	YK013	042	.CLI		12
	495	ozc		043	.CLI'		
YT012	456	OZA	YK013	036	.TDI		13
	478	oza		037	.TDI'		
YT012	469	OZB	YK013	034	.RCLK		14
	493	ozb		035	.RCLK'		

MCY Voltage Sense Harness Assembly

The MCY harness assemblies connect the voltage sense (YM) connections in the MC01 and MC02 harness assemblies to the voltage-sense panel connections. Each MCY harness assembly contains two (P1 and P2) 24-pin connectors and one 51-pin (P3) connector. Figure 5 illustrates the MCY harness assembly. Table 7 provides the wire list for the MCY harness assembly.

Figure 5. MCY Harness Assembly



P1/P2: To YM Connectors of MC01 and MC02 Harnesses ←————→ P3: To Voltage Sense Panels

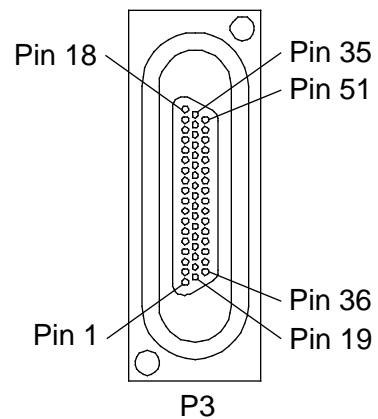
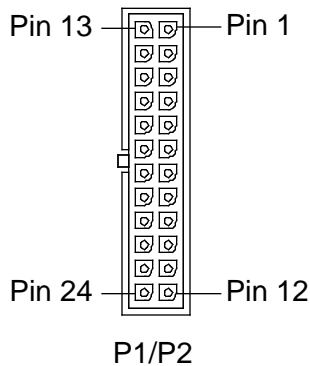


Table 7. MCY Harness Assembly Wire List

Wire Pair	Wire Color	From	To
1	White	P3-1	P1-1
	Black	P3-2	P1-2
2	White	P3-3	P1-3
	Black	P3-4	P1-4
3	White	P3-5	P1-5
	Black	P3-6	P1-6
4	White	P3-7	P1-7
	Black	P3-8	P1-8
5	White	P3-9	P1-9
	Black	P3-10	P1-10
6	White	P3-11	P1-11
	Black	P3-12	P1-12
7	White	P3-13	P1-13
	Black	P3-14	P1-14
8	White	P3-15	P1-15
	Black	P3-16	P1-16
9	White	P3-17	P1-17
	Black	P3-18	P1-18
10	White	P3-19	P1-19
	Black	P3-20	P1-20
11	White	P3-21	P1-21
	Black	P3-22	P1-22
12	White	P3-23	P1-23
	Black	P3-24	P1-24
13	White	P3-25	P2-1
	Black	P3-26	P2-2
14	White	P3-27	P2-3
	Black	P3-28	P2-4
15	White	P3-29	P2-5
	Black	P3-30	P2-6
16	White	P3-31	P2-7
	Black	P3-32	P2-8
17	White	P3-33	P2-9
	Black	P3-34	P2-10
18	White	P3-35	P2-11
	Black	P3-36	P2-12

Wire Pair	Wire Color	From	To
19	White	P3-37	P2-13
	Black	P3-38	P2-14
20	White	P3-39	P2-15
	Black	P3-40	P2-16
21	White	P3-41	P2-17
	Black	P3-42	P2-18
22	White	P3-43	P2-19
	Black	P3-44	P2-20
23	White	P3-45	P2-21
	Black	P3-46	P2-22
24	White	P3-47	P2-23
	Black	P3-48	P2-24

Voltage Sense Panels

CRAY T90 series mainframes contain voltage sense connections. The CRAY T94 mainframe contains voltage sense connectors in the I/O bulkhead panel. The CRAY T916 mainframe contains a voltage sense panel in side A, and the CRAY T932 mainframe contains a voltage sense panel in both side A and side B. Figure 6 illustrates the voltage sense connections in the CRAY T94 I/O bulkhead. Figure 7 illustrates the voltage sense panel in side A of the CRAY T916 and CRAY T932 mainframes. Figure 8 illustrates the voltage sense panel in side B of the CRAY T932 mainframe.

Figure 6. Voltage Sense Connections, CRAY T94 I/O Bulkhead

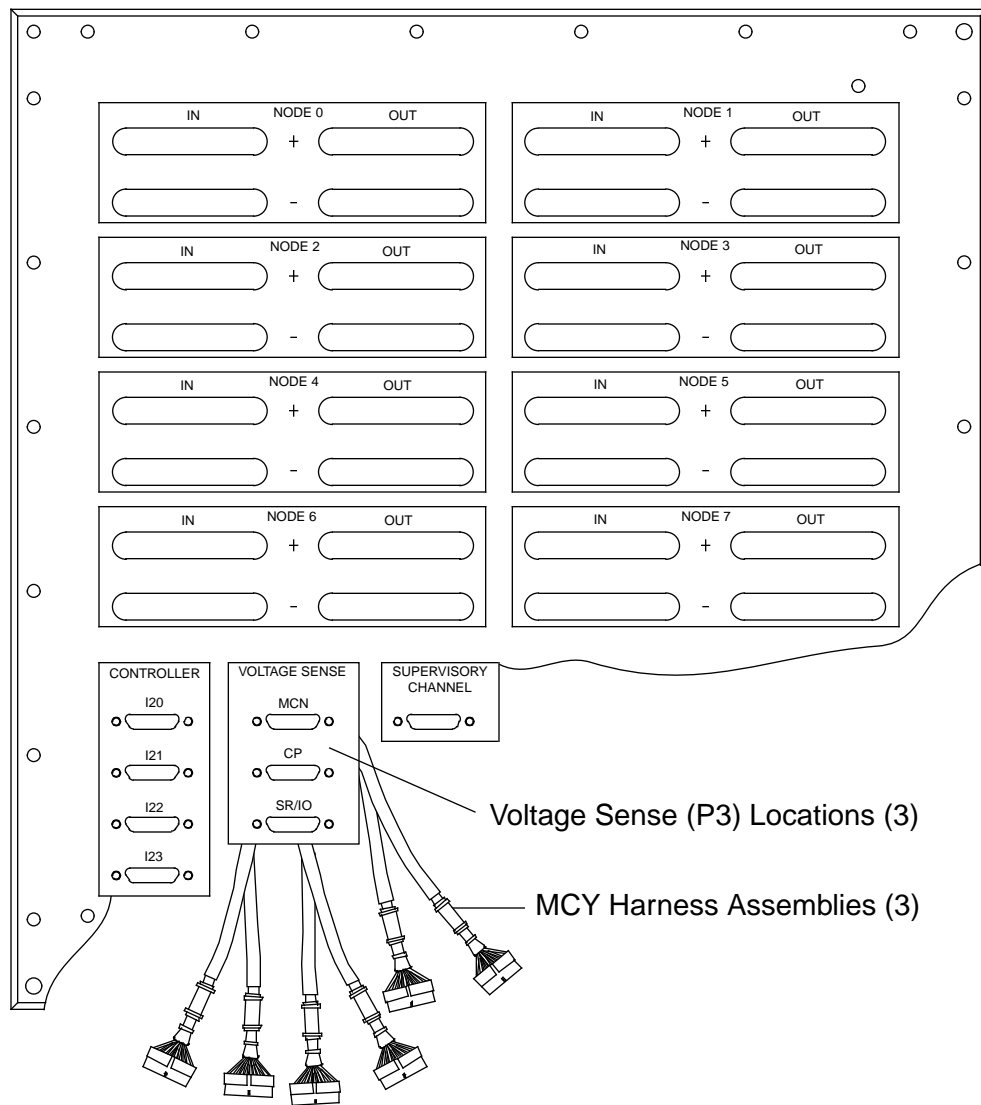


Figure 7. Voltage Sense Panel, CRAY T916 and CRAY T932 Mainframes, Side A

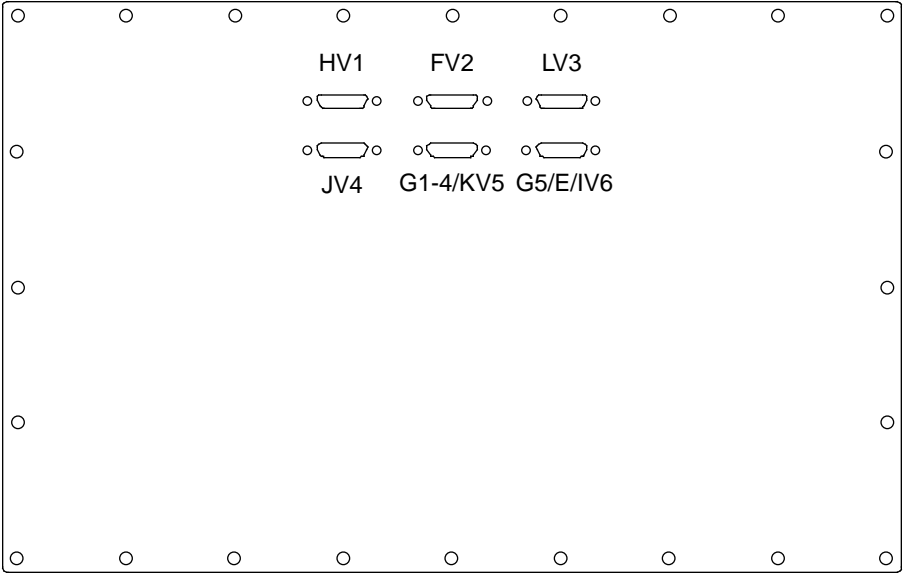
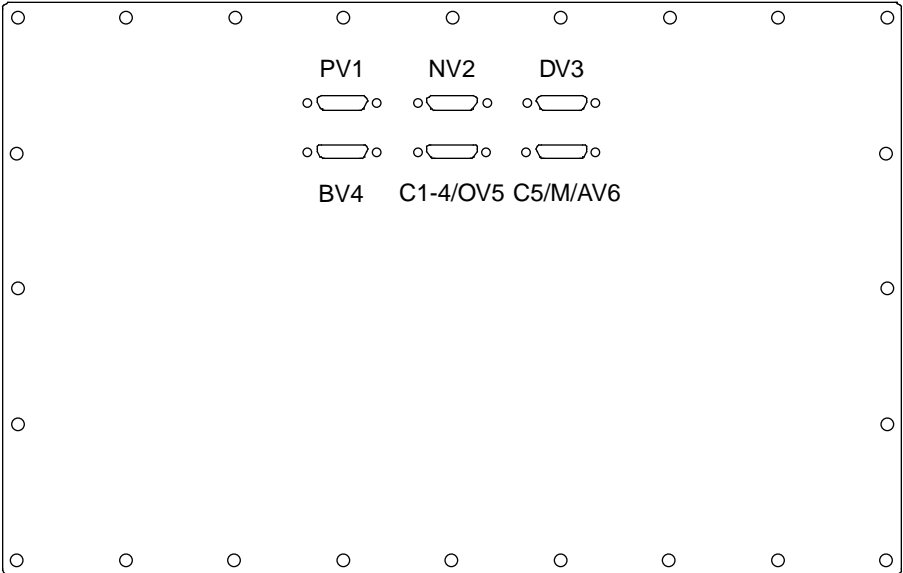


Figure 8. Voltage Sense Panel, CRAY T932 Mainframe, Side B



Voltage Sense Wire List

The MC harness assemblies transfer the operating voltage of each mainframe module to the voltage sense connectors in the I/O panels. You can, therefore, determine the voltage of each mainframe module in a CRAY T90 series computer system by reading the voltage at each pin of the 51-pin voltage sense connectors. Table 8 provides the CRAY T94 voltage sense wire list.

Table 8. CRAY T94 Voltage Sense Wire List

CRAY T94 I/O Panel	Pin	YL Connector	YL/Pin	Module Location	Voltage Sense
CM	1	YL004	002	C001	-2.7 Vdc
	2		059		Ground
	3		003		-3.5 Vdc
	4		058		Ground
	5		004		-2.0 Vdc
	6		057		Ground
CM	7	YL005	002	C002	-2.7 Vdc
	8		059		Ground
	9		003		-3.5 Vdc
	10		058		Ground
	11		004		-2.0 Vdc
	12		057		Ground
CM	13	YL006	002	C003	-2.7 Vdc
	14		059		Ground
	15		003		-3.5 Vdc
	16		058		Ground
	17		004		-2.0 Vdc
	18		057		Ground
CM	19	YL007	002	C004	-2.7 Vdc
	20		059		Ground
	21		003		-3.5 Vdc
	22		058		Ground
	23		004		-2.0 Vdc
	24		057		Ground

CRAY T94 I/O Panel	Pin	YL Connector	YL/Pin	Module Location	Voltage Sense
CP	1	YL000	002	B004	-2.7 Vdc
	2		059		Ground
	3		003		-3.5 Vdc
	4		058		Ground
	5		004		-2.0 Vdc
	6		057		Ground
CP	7	YL001	002	B002	-2.7 Vdc
	8		059		Ground
	9		003		-3.5 Vdc
	10		058		Ground
	11		004		-2.0 Vdc
	12		057		Ground
CP	13	YL002	002	B003	-2.7 Vdc
	14		059		Ground
	15		003		-3.5 Vdc
	16		058		Ground
	17		004		-2.0 Vdc
	18		057		Ground
CP	19	YL003	002	B004	-2.7 Vdc
	20		059		Ground
	21		003		-3.5 Vdc
	22		058		Ground
	23		004		-2.0 Vdc
	24		057		Ground
SR	19	YL008	002	C005	-2.7 Vdc
	20		059		Ground
	21		003		-3.5 Vdc
	22		058		Ground
	23		004		-2.0 Vdc
	24		057		Ground

NOTE: All other CRAY T94 YL connectors are spares.

Table 9 provides the voltage sense wire list for the CRAY T916 and CRAY T932 mainframes.

Table 9. Voltage Sense Wire List, CRAY T916 and CRAY T932 Mainframes

Side A/Side B Connector	Pin	YL Connector	Pin	Module Location	Voltage Sense
HV1/PV1	1	YL000	002	H001/P001	-2.7 Vdc
	2		059		Ground
	3		003		-3.5 Vdc
	4		058		Ground
	5		004		-2.0 Vdc
	6		057		Ground
HV1/PV1	7	YL001	002	H002/P002	-2.7 Vdc
	8		059		Ground
	9		003		-3.5 Vdc
	10		058		Ground
	11		004		-2.0 Vdc
	12		057		Ground
HV1/PV1	13	YL002	002	H003/P003	-2.7 Vdc
	14		059		Ground
	15		003		-3.5 Vdc
	16		058		Ground
	17		004		-2.0 Vdc
	18		057		Ground
HV1/PV1	19	YL003	002	H004/P004	-2.7 Vdc
	20		059		Ground
	21		003		-3.5 Vdc
	22		058		Ground
	23		004		-2.0 Vdc
	24		057		Ground
HV1/PV1	25	YL004	002	H005/P005	-2.7 Vdc
	26		059		Ground
	27		003		-3.5 Vdc
	28		058		Ground
	29		004		-2.0 Vdc
	30		057		Ground

Side A/Side B Connector	Pin	YL Connector	Pin	Module Location	Voltage Sense
HV1/PV1	31	YL005	002	H006/P006	-2.7 Vdc
	32		059		Ground
	33		003		-3.5 Vdc
	34		058		Ground
	36		004		-2.0 Vdc
	37		057		Ground
HV1/PV1	38	YL006	002	H007/P007	-2.7 Vdc
	39		059		Ground
	40		003		-3.5 Vdc
	41		058		Ground
	42		004		-2.0 Vdc
	43		057		Ground
HV1/PV1	44	YL007	002	H008/P008	-2.7 Vdc
	45		059		Ground
	46		003		-3.5 Vdc
	47		058		Ground
	48		004		-2.0 Vdc
	49		057		Ground
FV2/NV2	1	YL008	002	F001/N001	-2.7 Vdc
	2		059		Ground
	3		003		-3.5 Vdc
	4		058		Ground
	5		004		-2.0 Vdc
	6		057		Ground
FV2/NV2	7	YL009	002	F002/N002	-2.7 Vdc
	8		059		Ground
	9		003		-3.5 Vdc
	10		058		Ground
	11		004		-2.0 Vdc
	12		057		Ground
FV2/NV2	13	YL012	002	F003/N003	-2.7 Vdc
	14		059		Ground
	15		003		-3.5 Vdc
	16		058		Ground
	17		004		-2.0 Vdc
	18		057		Ground

Side A/Side B Connector	Pin	YL Connector	Pin	Module Location	Voltage Sense
FV2/NV2	19	YL011	002	F004/N004	-2.7 Vdc
	20		059		Ground
	21		003		-3.5 Vdc
	22		058		Ground
	23		004		-2.0 Vdc
	24		057		Ground
FV2/NV2	25	YL012	002	F005/N005	-2.7 Vdc
	26		059		Ground
	27		003		-3.5 Vdc
	28		058		Ground
	29		004		-2.0 Vdc
	30		057		Ground
FV2/NV2	31	YL013	002	F006/N006	-2.7 Vdc
	32		059		Ground
	33		003		-3.5 Vdc
	34		058		Ground
	36		004		-2.0 Vdc
	37		057		Ground
FV2/NV2	38	YL014	002	F007/N007	-2.7 Vdc
	39		059		Ground
	40		003		-3.5 Vdc
	41		058		Ground
	42		004		-2.0 Vdc
	43		057		Ground
FV2/NV2	44	YL015	002	F008/N008	-2.7 Vdc
	45		059		Ground
	46		003		-3.5 Vdc
	47		058		Ground
	48		004		-2.0 Vdc
	49		057		Ground
LV3/DV3	1	YL032	002	L001/D001	-2.7 Vdc
	2		059		Ground
	3		003		-3.5 Vdc
	4		058		Ground
	5		004		-2.0 Vdc
	6		057		Ground

Side A/Side B Connector	Pin	YL Connector	Pin	Module Location	Voltage Sense
LV3/DV3	7	YL033	002	L002/D002	-2.7 Vdc
	8		059		Ground
	9		003		-3.5 Vdc
	10		058		Ground
	11		004		-2.0 Vdc
	12		057		Ground
LV3/DV3	13	YL034	002	L003/D003	-2.7 Vdc
	14		059		Ground
	15		003		-3.5 Vdc
	16		058		Ground
	17		004		-2.0 Vdc
	18		057		Ground
LV3/DV3	19	YL035	002	L004/D004	-2.7 Vdc
	20		059		Ground
	21		003		-3.5 Vdc
	22		058		Ground
	23		004		-2.0 Vdc
	24		057		Ground
LV3/DV3	25	YL036	002	L005/D005	-2.7 Vdc
	26		059		Ground
	27		003		-3.5 Vdc
	28		058		Ground
	29		004		-2.0 Vdc
	30		057		Ground
LV3/DV3	31	YL037	002	L006/D006	-2.7 Vdc
	32		059		Ground
	33		003		-3.5 Vdc
	34		058		Ground
	36		004		-2.0 Vdc
	37		057		Ground
LV3/DV3	38	YL038	002	L007/D007	-2.7 Vdc
	39		059		Ground
	40		003		-3.5 Vdc
	41		058		Ground
	42		004		-2.0 Vdc
	43		057		Ground

Side A/Side B Connector	Pin	YL Connector	Pin	Module Location	Voltage Sense
LV3/DV3	44	YL039	002	L008/D008	-2.7 Vdc
	45		059		Ground
	46		003		-3.5 Vdc
	47		058		Ground
	48		004		-2.0 Vdc
	49		057		Ground
JV4/BV4	1	YL024	002	J001/B001	-2.7 Vdc
	2		059		Ground
	3		003		-3.5 Vdc
	4		058		Ground
	5		004		-2.0 Vdc
	6		057		Ground
JV4/BV4	7	YL025	002	J002/B002	-2.7 Vdc
	8		059		Ground
	9		003		-3.5 Vdc
	10		058		Ground
	11		004		-2.0 Vdc
	12		057		Ground
JV4/BV4	13	YL026	002	J003/B003	-2.7 Vdc
	14		059		Ground
	15		003		-3.5 Vdc
	16		058		Ground
	17		004		-2.0 Vdc
	18		057		Ground
JV4/BV4	19	YL027	002	J004/B004	-2.7 Vdc
	20		059		Ground
	21		003		-3.5 Vdc
	22		058		Ground
	23		004		-2.0 Vdc
	24		057		Ground
JV4/BV4	25	YL028	002	J005/B005	-2.7 Vdc
	26		059		Ground
	27		003		-3.5 Vdc
	28		058		Ground
	29		004		-2.0 Vdc
	30		057		Ground

Side A/Side B Connector	Pin	YL Connector	Pin	Module Location	Voltage Sense
JV4/BV4	31	YL029	002	J006/B006	-2.7 Vdc
	32		059		Ground
	33		003		-3.5 Vdc
	34		058		Ground
	36		004		-2.0 Vdc
	37		057		Ground
JV4/BV4	38	YL030	002	J007/B007	-2.7 Vdc
	39		059		Ground
	40		003		-3.5 Vdc
	41		058		Ground
	42		004		-2.0 Vdc
	43		057		Ground
JV4/BV4	44	YL031	002	J008/B008	-2.7 Vdc
	45		059		Ground
	46		003		-3.5 Vdc
	47		058		Ground
	48		004		-2.0 Vdc
	49		057		Ground
G1 – 4/KV5 C1 – 4/OV5	1	YL016	002	G001/O001	-2.7 Vdc
	2		059		Ground
	3		003		-3.5 Vdc
	4		058		Ground
	5		004		-2.0 Vdc
	6		057		Ground
G1 – 4/KV5 C1 – 4/OV5	7	YL017	002	G002/O002	-2.7 Vdc
	8		059		Ground
	9		003		-3.5 Vdc
	10		058		Ground
	11		004		-2.0 Vdc
	12		057		Ground
G1 – 4/KV5 C1 – 4/OV5	13	YL018	002	G003/O003	-2.7 Vdc
	14		059		Ground
	15		003		-3.5 Vdc
	16		058		Ground
	17		004		-2.0 Vdc
	18		057		Ground

Side A/Side B Connector	Pin	YL Connector	Pin	Module Location	Voltage Sense
G1 – 4/KV5 C1 – 4/OV5	19	YL019	002	G004/C004	–2.7 Vdc
	20		059		Ground
	21		003		–3.5 Vdc
	22		058		Ground
	23		004		–2.0 Vdc
	24		057		Ground
G1 – 4/KV5 C1 – 4/OV5	25	YL040	002	K001/C001	–2.7 Vdc
	26		059		Ground
	27		003		–3.5 Vdc
	28		058		Ground
	29		004		–2.0 Vdc
	30		057		Ground
G1 – 4/KV5 C1 – 4/OV5	31	YL041	002	K002/C002	–2.7 Vdc
	32		059		Ground
	33		003		–3.5 Vdc
	34		058		Ground
	36		004		–2.0 Vdc
	37		057		Ground
G1 – 4/KV5 C1 – 4/OV5	38	YL042	002	K003/C003	–2.7 Vdc
	39		059		Ground
	40		003		–3.5 Vdc
	41		058		Ground
	42		004		–2.0 Vdc
	43		057		Ground
G1 – 4/KV5 C1 – 4/OV5	44	YL043	002	K004/C004	–2.7 Vdc
	45		059		Ground
	46		003		–3.5 Vdc
	47		058		Ground
	48		004		–2.0 Vdc
	49		057		Ground
G5/E/IV6 C5/M/AV6	1	YL044	002	G005/C005	–2.7 Vdc
	2		059		Ground
	3		003		–3.5 Vdc
	4		058		Ground
	5		004		–2.0 Vdc
	6		057		Ground

Side A/Side B Connector	Pin	YL Connector	Pin	Module Location	Voltage Sense
G5/E/IV6 C5/M/AV6	7	YL045	002	I/A	-2.7 Vdc
	8		059		Ground
	9		003		-3.5 Vdc
	10		058		Ground
	11		004		-2.0 Vdc
	12		057		Ground
G5/E/IV6 C5/M/AV6	13	YL046	002	E/M	-2.7 Vdc
	14		059		Ground
	15		003		-3.5 Vdc
	16		058		Ground
	17		004		-2.0 Vdc
	18		057		Ground

Supervisory Cable Assembly

The supervisory cable connects the primary I/O bulkhead in a CRAY T90 series mainframe to the MPN (SBus) connection in the PC-10 cabinet. The supervisory cable contains a 51-socket connector on the (P1) mainframe end and a 50-socket connector on the (P2) MPN end. Figure 9 illustrates the supervisory cable assembly. Table 10 provides the wire list for the supervisory cable assembly.

Figure 9. Supervisory Cable Assembly

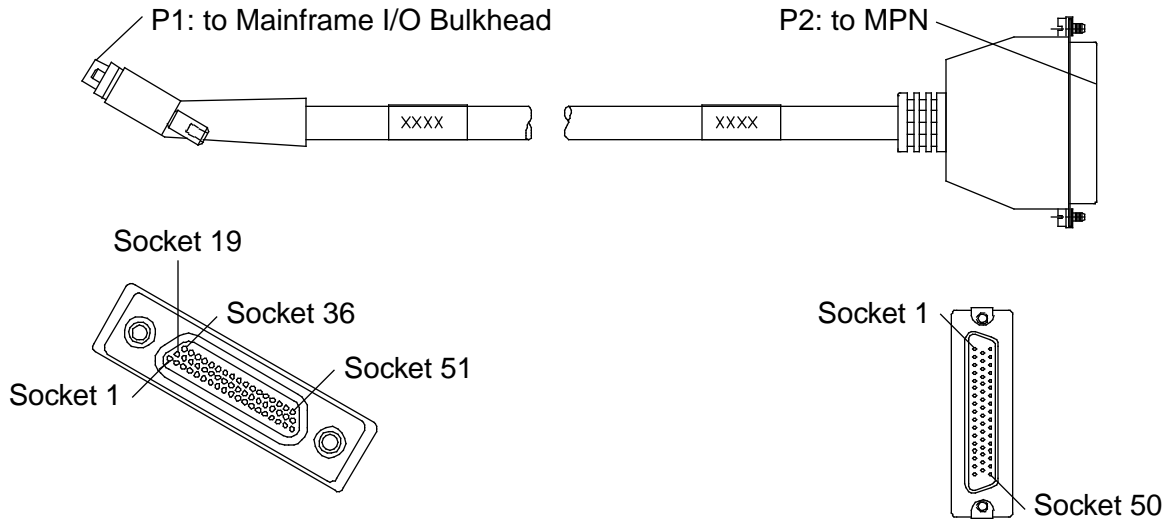


Table 10. Supervisory Cable Assembly Wire List

Wire Pair	Wire Color	From	To
1	White/tan	P1-1	P2-34
	Tan/white	P1-2	P2-1
2	White/brown	P1-3	P2-2
	Brown/white	P1-4	P2-18
3	White/pink	P1-5	P2-19
	Pink/white	P1-6	P2-35
4	White/orange	P1-7	P2-36
	Orange/white	P1-8	P2-3
5	White/yellow	P1-9	P2-4
	Yellow/white	P1-10	P2-20
6	White/green	P1-11	P2-21
	Green/white	P1-12	P2-37
7	White/blue	P1-13	P2-38
	Blue/white	P1-14	P2-5

Wire Pair	Wire Color	From	To
8	White/violet	P1-15	P2-6
	Violet/white	P1-16	P2-22
9	White/gray	P1-17	P2-23
	Gray/white	P1-18	P2-39
10	Tan/brown	P1-19	P2-40
	Brown/tan	P1-20	P2-7
11	Tan/pink	P1-21	P2-8
	Pink/tan	P1-22	P2-24
12	Tan/orange	P1-23	P2-25
	Orange/tan	P1-24	P2-41
13	Tan/yellow	P1-25	P2-42
	Yellow/tan	P1-26	P2-9
14	Tan/green	P1-27	P2-10
	Green/tan	P1-28	P2-28
15	Tan/blue	P1-29	P2-27
	Blue/tan	P1-30	P2-43
16	Tan/violet	P1-31	P2-44
	Violet/tan	P1-32	P2-11
17	Tan/gray	P1-33	P2-12
	Gray/tan	P1-34	P2-28
18	Brown/pink	P1-36	P2-29
	Pink/brown	P1-37	P2-45
19	Brown/orange	P1-38	P2-46
	Orange/brown	P1-39	P2-13
20	Brown/yellow	P1-40	P2-14
	Yellow/brown	P1-41	P2-30
21	Brown/green	P1-42	P2-31
	Green/brown	P1-43	P2-47
22	Brown/blue	P1-44	P2-48
	Blue/brown	P1-45	P2-15
23	Brown/violet	P1-46	P2-16
	Violet/brown	P1-47	P2-32
24	Brown/gray	P1-48	P2-33
	Gray/brown	P1-49	P2-49
25	Pink/orange	P1-50	P2-17
	Orange/pink	P1-51	P2-50

GigaRing I/O Cable Assembly

The GigaRing I/O cable assemblies connect the MPN in the PC-10 cabinet to the I/O harness connections at the mainframe I/O bulkhead. Each GigaRing cable assembly transfers either input or output data bits and contains 74 available I/O pins and 6 ground pins. Each GigaRing I/O cable is wired straight-through; each contact in connector P1 is wired to the contact with same number in connector P2. Figure 10 illustrates the GigaRing I/O cable assembly, and Figure 11 illustrates the 80-contact I/O connectors. Table 11 provides the GigaRing cable assembly wire list.

Figure 10. GigaRing I/O Cable Assembly

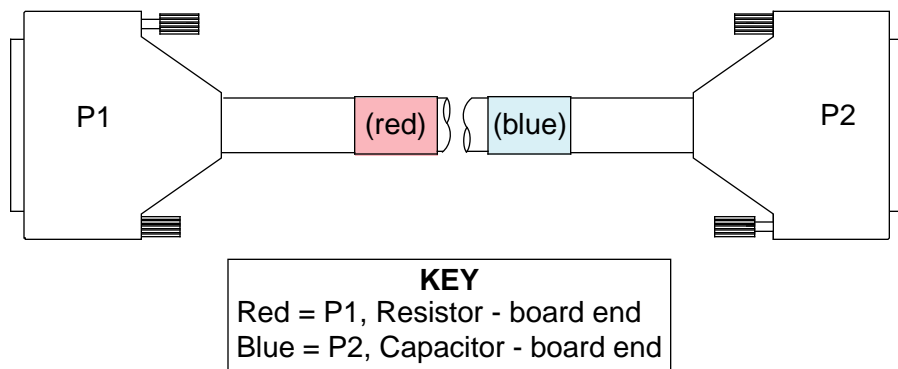


Figure 11. 80-contact GigaRing I/O Cable Connectors

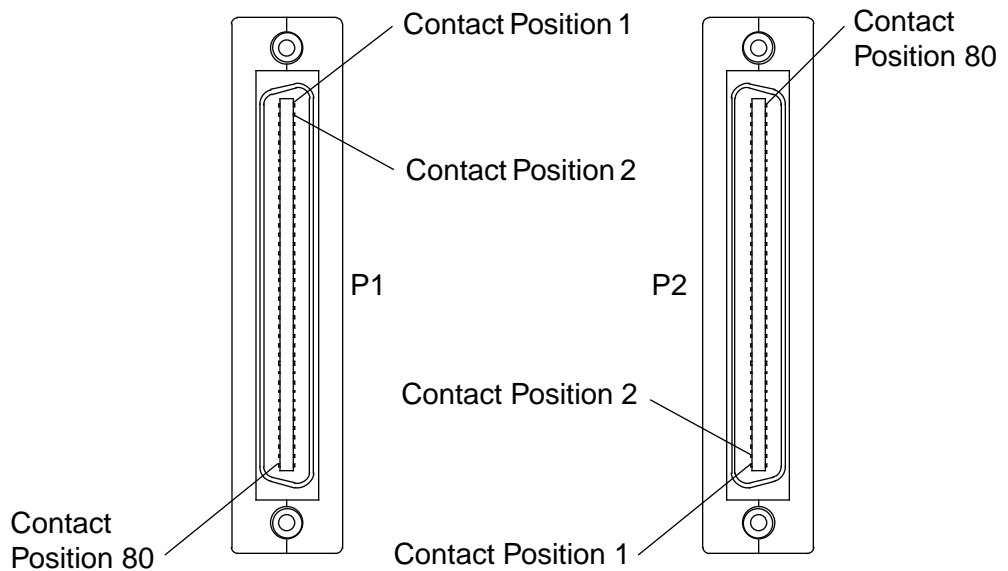


Table 11. GigaRing I/O Cable Assembly Wire List

Input Cable Pin Assignments			Output Cable Pin Assignments		
Logical Name True/False	Pin Pair True/False	Data Bit	Logical Name True/False	Pin Pair True/False	Data Bit
IAA/iaa	001/002	00	OAA/oa	001/002	00
IAB/iab	042/043	01	OAB/oab	042/043	01
IAC/iac	003/004	02	OAC/oac	003/004	02
IAD/iad	044/045	03	OAD/oad	044/045	03
IAE/iae	005/006	04	OAE/oe	005 006	04
IAF/iaf	046/047	05	OAF/oaf	046/047	05
IAG/iag	007/008	06	OAG/oag	007/008	06
IAH/iah	048/049	07	OAH/oah	048/049	07
IAI/iai	010/011	08	OAI/oi	010/011	08
IAJ/iaj	050/051	09	OAJ/oaj	050/051	09
IAK/iak	012/013	10	OAK/oak	012/013	10
IAL/ial	052/053	11	OAL/oal	052/053	11
IAM/iam	014/015	12	OAM/oam	014/015	12
IAN/ian	054/055	13	OAN/oan	054/055	13
IAO/iao	016/017	14	OAO/oa	016/017	14
IAP/iap	057/058	15	OAP/oap	057/058	15
IBA/iba	063/064	16	OBA/oba	063/064	16
IBB/ibb	024/025	17	OBB/obb	024/025	17
IBC/ibc	066/067	18	OBC/obc	066/067	18
IBD/ibd	026/027	19	OBD/obd	026/027	19
IBE/ibe	068/069	20	OBE/obe	068/069	20
IBF/ibf	028/029	21	OBF/obf	028/029	21
IBG/ibg	070/071	22	OBG/obg	070/071	22
IBH/ibh	030/031	23	OBH/obh	030/031	23
IBI/ibi	072/073	24	OBI/obi	072/073	24
IBJ/ibj	033/034	25	OBJ/obj	033/034	25
IBK/ibk	074/075	26	OBK/obk	074/075	26
IBL/ibl	035/036	27	OBL/obl	035/036	27
IBM/ibm	076/077	28	OBM/obm	076/077	28
IBN/ibn	037/038	29	OBN/obn	037/038	29
IBO/ibo	078/079	30	OBO/obo	078/079	30
IBP/ibp	039/040	31	OBP/obp	039/040	31
ICA/ica	018/019	Flag	OCA/oca	018/019	Flag
ICB/icb	059/060	Parity	OCB/ocb	059/060	Parity

Input Cable Pin Assignments			Output Cable Pin Assignments		
Logical Name True/False	Pin Pair True/False	Data Bit	Logical Name True/False	Pin Pair True/False	Data Bit
ICC/icc	022/023	Frame	OCC/occ	022/023	Frame
ICD/icd	061/062	Spare	OCD/ocd	061/062	Spare
ICE/ice	020/021	Clock	OCE/oce	020/021	Clock
Ground Pins	9, 32, 41, 56, 65, 80		Ground Pins	9, 32, 41, 56, 65, 80	

