



AAEON Technology INC.  
ISO-9001/ISO-14001 Certified  
Industrial Automation PCs

PCM-3730  
**Reliability Prediction Report**  
(MTBF)

Release Date: MAR. 11, 2002

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Issue Stamp

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QA Manager

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QE Manager

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Test Engineer

# Reliability Prediction (MTBF)

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**I . Model Name:** PCM-3730

**II .Description:** PC/104. PLUS. Triple Ethernet Module.(Rev:A1.0)

**III . Prediction Date:** MAR. 11. 2002

**IV. Prediction Site:** AAEON QE Dept.

**V . Predicted by :** Linda Sun

**VI. Equipment:** Relx Ver.7.2 Visual Reliability Software

## **VII. Simulation Environment:**

- Temperature: 25 degrees C(No temperature rise condition )
- Standard: Telcordia (Bellcore) Standard

## **VIII. Term and Definition:**

- Unit            An assembly of device.
- Duty Cycle    Used to specify the percentage of time that the element is in an on state, and it is equal to the percentage of total time the item is in the active environment.
- Quantity       The quantity of the selected item.
- Failure Rate   Used to specify that the failure rate is to be calculated based the selected Calculation models. The multiplier is 1,000,000.
- MTBF           MTBF is always specified in hours.

## **IX. Prediction Result:**

- Failure Rate: 2.021409ppm
- MTBF: 494,704Hours

## **X. Prediction Table:**

**AAEON Reliability Prediction Report**

**Part Number** 9697373004  
**Reference Des**  
**Date** 03. 11, 2002  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temperature** 25.00



**Description** Top-level assembly  
**File Name** 3730.rpj  
**Time** 1:43 PM  
**Failure Rate** 2.021409  
**MTBF** 494,704

Assembly Name	Part Number	Model	Method	Environment	Duty Cycle	Qty	Failure Rate	MTBF
PCM-3730	9697373004	Bellcore	Method I Case 3	GF, GU - Ground Fixed,	100.00	1.00	2.021409	494,704

### AAEON Reliability Prediction Report

**Part Number** 9697373004  
**Reference Des**  
**Date** 03. 11, 2002  
**Environment** GF, GU - Ground Fixed, Uncontrolled  
**Temperature** 25.00



**Description** Top-level assembly  
**File Name** 3730.rpj  
**Time** 1:43 PM  
**Failure Rate** 2.021409  
**MTBF** 494,704

Part Number	Category	Location	Calculation Model	Quality	Tem. Rise	Failure Rate, Unit	Quantity	Failure Rate, %	Failure Rate	MTBF, Unit
105A503300	Resistor	R40,R77,R107	Bellcore Issue 6	Level I		0.002268	3.00	.3366	0.006803	440974090.03
105A554903	Resistor	R29,R50,R87	Bellcore Issue 6	Level I		0.002268	3.00	.3366	0.006803	440974090.03
105A507503	Resistor	R1,R3-4,R9-10,R12,R20,R33,R57--58,R90-91	Bellcore Issue 6	Level I		0.002268	12.00	1.3462	0.027212	440974090.03
105A520003	Resistor	R16	Bellcore Issue 6	Level I		0.002268	1.00	.1122	0.002268	440974090.03
105A512103	Resistor	R17	Bellcore Issue 6	Level I		0.002268	1.00	.1122	0.002268	440974090.03
105A510003	Resistor	R21-22,R44-45,R81-82	Bellcore Issue 6	Level I		0.002268	6.00	.6731	0.013606	440974090.03
105A561903	Resistor	R24,R47,R84	Bellcore Issue 6	Level I		0.002268	3.00	.3366	0.006803	440974090.03
105A700133	Resistor	R43,R80,R110	Bellcore Issue 6	Level I		0.002268	3.00	.3366	0.006803	440974090.03
105A733003	Resistor	R18-19,R34,R55-56,R71-73,R92	Bellcore Issue 6	Level I		0.002268	9.00	1.0097	0.020409	440974090.03
105A706233	Resistor	R39,R76,R106	Bellcore Issue 6	Level I		0.002268	3.00	.3366	0.006803	440974090.03
105A702723	Resistor	R30,R51,R88	Bellcore Issue 6	Level I		0.002268	3.00	.3366	0.006803	440974090.03
105A704723	Resistor	R23,R46,R49,R83,R86,R112,R119	Bellcore Issue 6	Level I		0.002268	7.00	.7853	0.015874	440974090.03
105A710033	Resistor	R25,R35,R59,R63,R93,R97	Bellcore Issue 6	Level I		0.002268	6.00	.6731	0.013606	440974090.03
105A700003	Resistor	R26,R31,R36,R38,R52,R54,R60,R64-66,R70,R75,R94,R98,R100-101-R103,R105,R113-118	Bellcore Issue 6	Level I		0.002268	24.00	2.6924	0.054425	440974090.03
105A701033	Resistor	R27,R61,R68,R95	Bellcore Issue 6	Level I		0.002268	4.00	.4487	0.009071	440974090.03
105A704733	Resistor	R120-122	Bellcore Issue 6	Level I		0.002268	3.00	.3366	0.006803	440974090.03
1122701680	Capacitor	BC1,BC11-12,BC14-15,BC17,BC19-BC21,BC23,BC25,BC27,BC29,BC31,BC33-34,BC36,BC38-39,BC41,-BC45,BC47-52,C1,C4,C7,C29-40	Bellcore Issue 6			0.001822	41.00	3.6953	0.074697	548885106.58
1121747660	Capacitor	BC9-10,BC13,BC18,BC20,BC22,BC24,BC30,BC32,BC35,BC37,BC44	Bellcore Issue 6	Level I		0.002539	12.00	1.5073	0.030468	393852661.82
1129701080	Capacitor	BC42	Bellcore Issue 6	Level I		0.005466	1.00	.2704	0.005466	182961702.19
1124422080	Capacitor	C12-13,C18,C20,C24-25	Bellcore Issue 6	Level I		0.001060	6.00	.3147	0.006361	943198589.05
1129610260	Capacitor	C14,C19,C26	Bellcore Issue 6	Level I		0.000712	3.00	.1057	0.002137	1403854412.74
1139710060	Capacitor	BC3-8,BC40,BC46	Bellcore Issue 6	Level I		0.005466	8.00	2.1631	0.043725	182961702.19
1189633180	Capacitor	TC1	Bellcore Issue 6	Level I		0.004933	1.00	.2440	0.004933	202722669.92
1189610180	Capacitor	TC2	Bellcore Issue 6	Level I		0.004535	1.00	.2244	0.004535	220487045.01
1231125050	Miscellaneous	Y1-3	Bellcore Issue 6	Level I		0.150000	3.00	22.2617	0.450000	6666666.67
14S3000201	Inductor	TF1-3	Bellcore Issue 6	Level I		0.136062	3.00	20.1932	0.408187	7349568.17
1314108513	Integrated Circuit	Q1	Bellcore Issue 6	Level I		0.059366	1.00	2.9369	0.059366	16844654.92

