Estimated Cost of Thermoelectric Refrigerator Powered By Photovoltaic Module and Incorporating IoT

Below is a breakdown of the bill of quantity proposed for the prototype thermoelectric refrigerator production, the sum of Nine Million Seventy one and two hundred naira (~~₦~~**9, 071,200**) for the production of four thermoelectric refrigerators powered by photovoltaic module and incorporating IoT

S/N	Components	Quantity	Unit cost	Total cost
1	Pelter module	10	5680	56,800
2	Heat sink fan	1	60,000	60,000
3	Production of cold chamber mold	1	20,000	20,000
4	Production of 1 piece of the cold chamber	1	80,000	80,000
5	Temperature sensor	3	15,000	45,000
6	Relative humidity sensor	3	6,000	18,000
7	Charge controller	2	40,000	80,000
8	Deep cycle battery	1	250,000	250,000
9	Converter (DC-DC)	1	60,000	60,000
10	Microcontroller	3	14,000	42,000
11	Photovoltaic module	1	150,000	150,000
12	Display unit	3	7,000	21,000
13	Wireless communication link	2	18,000	36,000
14	Things platform	Free	Nil	Nil
15	Cables, connectors, fuse, wires	10 lots	6,000	6,000
16	Mounting bracelet	1	19,000	19,000
17	Double sided coated PCB	2	40,000	80,000
18	Metal structure	1 lot	14,000	14,000
19	Stainless steel material	1 lot	140,000	140,000
20	Cost of developing the machine language	-	280,000	280,000
21	Cost of embodiment development	1 lot	190,000	190,000
22	Miscellaneous	Nil	195,000	620,000
Total				**2,267,800**

For four thermoelectric refrigerators powered by photovoltaic module and incorporating IoT: ~~**₦2,**~~ **267,800 × 4 =** ~~**₦9,**~~ **071,200**