



BRAHMWORKS

Design.Manufacture.Innovation.

FOUNDER TOOL · FILLABLE PDF + SPREADSHEET

BOM Cost Estimator

Bill of materials at 100, 1k, and 10k units — with NRE, tooling, and the landed-cost adders founders forget

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PRODUCT / PROJECT

TEAM / FOUNDER

DATE / REVISION

2026

Bangalore · Hardware product design & engineering

brahmworks.com/resources

00 How to use the estimator

Three BOM sections, an NRE list, and a landed-cost page. Enter plain numbers in one currency.

1 Enter one line per part

List everything that ships in or with the product. A bought-in sub-assembly can be one line.

2 Quote at three volumes

Ask for unit cost at 100, 1k, and 10k. Leave a cell blank if there is no quote yet, and note any estimate.

3 Qty per unit × unit cost

Extended costs, section subtotals, and totals are shaded. They calculate in viewers that run PDF form scripts.

4 Keep NRE separate

Tools, fixtures, stencils, certification, and engineering are one-time costs. Spread them over a volume you choose.

5 Enter landed-cost adders

Freight, duty, GST, handling, yield, and warranty are entered by you, per unit. No rates are prefilled.

6 Watch MOQ and lead time

A cheap part with a large MOQ or a long lead time can cost more than it saves. Flag it in the notes.

Calculations: shaded totals use PDF form scripts (Adobe Acrobat / Reader). If a viewer leaves them blank, type them or use the .xlsx.

Enter plain numbers without currency symbols or units. Set the currency once on the landed-cost page. Save a copy after filling.

01 Mechanical parts

Enclosure parts, brackets, fasteners, gaskets, inserts, labels, cosmetic parts. One line per part number.

#	PART / DESCRIPTION	FUNCTION	SUPPLIER	MAKE / BUY	QTY / UNIT	UNIT COST @ 100	UNIT COST @ 1K	UNIT COST @ 10K	EXT. COST @ 100	EXT. COST @ 1K	EXT. COST @ 10K	MOQ	LEAD TIME	NOTES
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														

MECHANICAL SUBTOTAL PER UNIT														
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Ext. cost = qty per unit × unit cost. Shaded cells calculate in viewers that run PDF form scripts (e.g. Adobe Acrobat / Reader); elsewhere, type them by hand or use the companion .xlsx.

02 Electronics

PCBs, PCBA, key ICs and modules, connectors, cables, displays, batteries, chargers. Group passives if you buy them as one line.

#	PART / DESCRIPTION	FUNCTION	SUPPLIER	MAKE / BUY	QTY / UNIT	UNIT COST @ 100	UNIT COST @ 1K	UNIT COST @ 10K	EXT. COST @ 100	EXT. COST @ 1K	EXT. COST @ 10K	MOQ	LEAD TIME	NOTES
1														
2														
3														
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15														
16														
17														
18														

ELECTRONICS SUBTOTAL PER UNIT														
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Ext. cost = qty per unit × unit cost. Shaded cells calculate in viewers that run PDF form scripts (e.g. Adobe Acrobat / Reader); elsewhere, type them by hand or use the companion .xlsx.

03 Packaging, assembly & test

Cartons, inserts, manuals, labels; assembly and test labour per unit. For labour lines use qty 1 and the cost per unit.

#	PART / DESCRIPTION	FUNCTION	SUPPLIER	MAKE / BUY	QTY / UNIT	UNIT COST @ 100	UNIT COST @ 1K	UNIT COST @ 10K	EXT. COST @ 100	EXT. COST @ 1K	EXT. COST @ 10K	MOQ	LEAD TIME	NOTES
1														
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PACKAGING, ASSEMBLY & TEST SUBTOTAL PER UNIT

Ext. cost = qty per unit × unit cost. Shaded cells calculate in viewers that run PDF form scripts (e.g. Adobe Acrobat / Reader); elsewhere, type them by hand or use the companion .xlsx.

04 NRE & tooling

One-time costs: tools, fixtures, stencils, jigs, certification testing, engineering. Keep them out of the per-unit BOM.

#	NRE / TOOLING ITEM	TYPE	SUPPLIER	ONE-TIME COST	LEAD TIME	OWNER	TOOL OWNERSHIP / NOTES
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
NRE TOTAL							

Type examples: mould tool, sheet-metal tooling, stencil, test fixture, programming jig, certification testing, design / engineering, first-article inspection. Record who owns each tool — it matters when you change suppliers.

05 Landed cost per unit

Adders are yours to enter per unit at each volume — no rates are prefilled. Confirm freight, duty, and tax treatment with your forwarder and accountant.

LINE ITEM	BASIS / NOTES	PER UNIT @ 100	PER UNIT @ 1K	PER UNIT @ 10K
Mechanical subtotal	From page 3			
Electronics subtotal	From page 4			
Packaging, assembly & test subtotal	From page 5			
BOM cost per unit	Sum of the three subtotals			
Inbound freight & insurance				
Customs duty				
GST / other taxes				
Clearing, handling & local transport				
Yield / scrap allowance				
Warranty / returns allowance				
OTHER:				
Adders subtotal	Sum of the adders above			
NRE amortisation volume (units)	Units you spread NRE over			
NRE per unit	NRE total ÷ amortisation units			
Landed unit cost	BOM + adders + NRE per unit			
Target unit cost	Your target from the product brief			
Gap: landed – target	Positive means over target			

ASSUMPTIONS

Write down what the numbers mean so they can be compared later.

CURRENCY

QUOTES DATED

DELIVERY POINT

ASSUMPTIONS BEHIND THE ADDERS

NOT INCLUDED / OPEN QUESTIONS

Shaded cells are calculated. If your viewer does not run form scripts (some browsers and macOS Preview), type the totals by hand or use the companion spreadsheet.

Next steps with BrahmWorks

A BOM with gaps is still useful. The gaps show where design choices are driving cost.

Where is your cost estimate today?

Rough — list of parts, few quotes

Quoted — prototype-volume prices in hand

Volume — quotes at production quantities

Over target — need cost-down or DFM help

WHERE THE COST IS HURTING, AND WHAT YOU WANT TO CHANGE

Talk to us

brahmworks.com/contact →

Share the estimate, your target unit cost, and the drawings or CAD behind it. We will look at where design and process choices move the number.

WHAT TO BRING

- This estimate (or the .xlsx), with blanks marked
- Your target unit cost and volumes
- Drawings, CAD, or the current prototype

DFM / DFA

brahmworks.com/dfm-dfa →

Design for manufacture and assembly — part count, process choice, and tolerances that drive unit cost and tooling.

Resources for founders

brahmworks.com/resources →

More fillable tools, playbooks, and guides for hardware founders — including the Hardware Founder Toolkit and the Product Anatomy Workbook.

Partner, not vendor. Cost is designed in. We review the BOM with you and change the design where it moves the number most.