

BenchBook

Bench sensor mount

Sample engineering review

ISSUED	RELEASE
2026-10-17T19:19:23Z	855aa965adccf290156cdade

Engineering record & client handoff

Human engineering review. Acceptance is a recorded human decision, not automated certification.

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Section contents list; page numbers appear on every page. Original files and the machine-readable manifest accompany this report.

01 Project brief & success criteria

Client

Example client

Discipline

Integrated product

Description

A compact fixture project bringing mechanical, electronic and test evidence together.

Objectives

Review a mounting design, record engineering observations, and issue a traceable BenchBook.

Constraints

Example data only. No physical testing has been performed.

Success Criteria

Inspectable files, documented review and a complete recoverable handoff.

02 Requirements & verification

Mount envelope

Requirement | Planned | Sample reviewer

Notes: Fit within a 40 × 20 × 10 mm envelope.

Verification: Inspect supplied STEP model and measure the envelope.

Criteria: Each bounding dimension matches within 0.05 mm.

03 Design revision manifest

mount.step • R1

Mechanical | mount.step | 22,170 bytes

Revision ID: 88b341b1905b0e37f2a1e9f3

SHA-256: f44bef34e72afd183e0b5f455706d691c7c9025518294baeb9b6091833510909

Revision note: CC0 sample fixture. Expected mount envelope: 40 × 20 × 10 mm.

fabrication.zip • R1

Electronics | fabrication.zip | 903 bytes

Revision ID: 4d3d747a9cc3258f1f221fb0

SHA-256: 9a9106be03d21011325db1c85f8c7a16a0bc13046d294fba5ab55b15e2218c7

Revision note: CC0 sample fixture. Demonstration evidence; not validated hardware.

test-evidence.pdf • R1

Test evidence | test-evidence.pdf | 2,571 bytes

Revision ID: 1df15dfca2aa8bc9d5945479

SHA-256: 7d779037dd348bb463e69d626f12a721f3466de765defe2c08070b09e268a8dc

Revision note: CC0 sample fixture. Demonstration evidence; not validated hardware.

schematic-project.zip • R1

Schematic | schematic-project.zip | 1,260 bytes

Revision ID: a9ccc549a7137e131f2f7547

SHA-256: b39d9da3bd2969d25dd42323b7fc415237aa13acb5f12bb7d5d733ac9eb9dd83

Revision note: CC0 sample fixture. Demonstration evidence; not validated hardware.

sensor.kicad_pcb • R1

Electronics | sensor.kicad_pcb | 548 bytes

Revision ID: f7b9b4763e14c361147be1a0

SHA-256: 0f01d2f151d60116ad37f3b6086d577b7ce9c5a0628c43cbdd0b29ef73289615

Revision note: CC0 sample fixture. Demonstration evidence; not validated hardware.

board-photo.png • R1

Test evidence | board-photo.png | 4,980 bytes

Revision ID: ac8e3438af2a0fb351a9905a

SHA-256: 40f6e8a58f8edb689aadeece7dcab2978f6dd2aa1a2dd7fbd5c8930093dff298

Revision note: CC0 sample fixture. Demonstration evidence; not validated hardware.

mount.stl • R1

Mechanical | mount.stl | 26,084 bytes

Revision ID: 8d71eecd865e851f09faa16f

SHA-256: 0abb5786285f39e5857fd50aa15261f9bbec63cc0e1cfc8dc15a5cbd1286cbb2

Revision note: CC0 sample fixture. Expected mount envelope: 40 × 20 × 10 mm.

mount.obj • R1

Mechanical | mount.obj | 65,319 bytes

Revision ID: 949cc8e48a0e21d38286ea6d

SHA-256: 09e8494a5ed47ac7709e69aa4dd133ab9f664c38847c4557f54a896a399d034f

Revision note: CC0 sample fixture. Expected mount envelope: 40 × 20 × 10 mm.

mount.glb • R1

Mechanical | mount.glb | 25,948 bytes

Revision ID: 1a978aa0104ba15342a6b180

SHA-256: d3f1e5188ce2c928ea1bbc84eed10cb63554fbeafb663ca667ce6834f9e81416

Revision note: CC0 sample fixture. Expected mount envelope: 40 × 20 × 10 mm.

mount.3mf • R1

Mechanical | mount.3mf | 10,760 bytes

Revision ID: fe93707d3fbfd751b9a1527a

SHA-256: 85bd4f9c30074c64037fa0111e15170813dc42f18628dcc9115b3a5f97a2eee1

Revision note: CC0 sample fixture. Expected mount envelope: 40 × 20 × 10 mm.

04 Review findings & decisions

Confirm mounting-hole clearance

Finding | Open | Sample reviewer

Severity: Medium

Confidence: High

Evidence: The sample CAD hole is nominally 4 mm.

Action: Verify the actual fastener and manufacturing tolerance before accepting the design.

Exact revision: 88b341b1905b0e37f2a1e9f3

05 Development, BOM & test evidence

Fabricated mount

Bom | Recorded | Sample reviewer

Quantity: 1

Unit: each

Unit Cost: 12.5

Reference: M1

Supplier: Local fabrication

Mounting hardware

Bom | Recorded | Sample reviewer

Quantity: 4

Unit: each

Unit Cost: 0.4

Reference: H1-H4

Supplier: Stock

Fit and integration review

Labor | Recorded | Sample reviewer

Hours: 2

Rate: 125

Notes: Illustrative entered rate; not a quotation.

Connector spacing inspection

Test | Not run | Sample reviewer

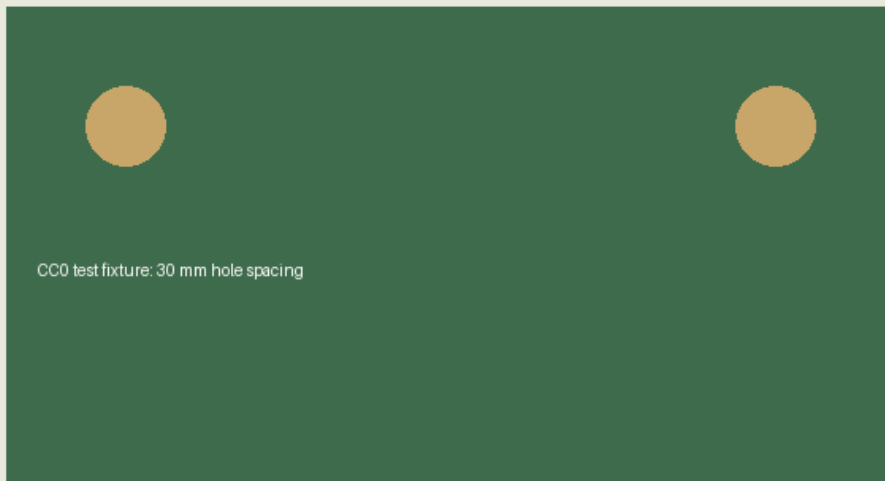
Procedure: Enable copper and drill layers. Measure drill centers.

Criteria: 30.000 mm center-to-center spacing.

Result: Awaiting human inspection.

Attachments: board-photo.png R1

Exact revision: 4d3d747a9cc3258f1f221fb0



Evidence: board-photo.png

Inspect mechanical/electrical fit

Task | To do | Sample reviewer

Notes: Review the mount and PCB before issuing the handoff.

Unverified physical fit

Risk | Open | Sample reviewer

Probability: 3

Impact: 3

Mitigation: Fabricate one fit-check sample before production.

Entered cost estimate

CALCULATION	USD
Parts: $\Sigma(\text{quantity} \times \text{unit cost})$	14.10
Labor: $\Sigma(\text{hours} \times \text{rate})$	250.00
Total: parts + labor	264.10

Entered values only. Tax, shipping, overhead and contingency are excluded unless recorded as line items.

06 Assumptions, limitations & next actions

Illustrative hardware only

Assumption | Recorded | Sample reviewer

Notes: This sample demonstrates traceability. No prototype was fabricated or physically tested.

07 Sources & research

No records selected for this section.