

Camera Mount — Bill of Materials

Overhead iPhone SE scanning rig · 1-5/8" Unistrut · 5-ft-wide sheets · sourced to Home Depot where stocked

The camera carrier (trolley → plate → clamp → phone)

■	Qty	Part	Source / notes
■	2	Strut trolley, 4-wheel, sealed bearing (1-5/8")	Home Depot — NEWHOUSE HT4W-158S (or light-duty 4WLD-158). ~\$25–45 ea. Use 1 if going single-rail.
■	1	Crossmember plate	SuperStrut flat plate fitting (Home Depot flat-fitting line) — OR a ~10" offcut of your own channel (free, guaranteed hole match).
■	1	1/4"-20 tripod adapter	Home Depot — OBLGEV 27ISA10084. Gives the standard camera thread.
■	1	Universal phone spring clamp (1/4"-20 socket)	Amazon ~\$6–10 (Home Depot selection thin). Holds the iPhone SE.
■	1	1/4"-20 bolt	Runs adapter → plate. Hardware aisle.

The rails & running gear

■	Qty	Part	Source / notes
■	2	Strut channel, 1-5/8", 10 ft	Home Depot — Unistrut / SuperStrut. One length per rail (single-rail build needs 1).
■	4	End stops / caps	Keep trolleys from rolling off the ends. Home Depot strut aisle.
■	~8	Spring nuts + bolts	Standard strut fastener — plate-to-trolley and rail mounting.

The freestanding gantry (all 1-5/8" strut — bolts together, no welding, knocks down)

■	Qty	Part	Source / notes
■	4	Strut legs, ~4.3 ft (cut from 10-ft channel)	2 legs per end frame × 2 frames. Cut two 10-ft lengths in half → four ~5-ft legs (trim to height).
■	2	Top beams, ~6 ft (one per end frame)	Carry the rail pair; span wide enough that legs clear the 5-ft sheet.
■	4	Base feet, ~2 ft, run along travel direction	Post base pads — extend fore-and-aft to stop the tall frame rocking lengthwise.

■	4	Diagonal brace / gusset (one per corner)	Square the legs to the top beam — rigidity. Strut angle brackets or short diagonals.
■	4	Swivel casters w/ brake, 1/4"-20 or strut-mount (optional)	Roll the whole frame down the bay to scan runs longer than 10 ft; lock to shoot.
■	~16	Strut corner brackets + spring nuts/bolts	90° brackets to join legs/beams/feet. Home Depot strut aisle.

Frame note: two “goalpost” end frames, one at each end of the 10-ft run; the two rails span across their tops. Legs stand ~6 ft apart so they straddle the 5-ft sheet. See gantry-elevation.svg.

Left to decide (depends on your space)

■	Qty	Part	Source / notes
■	—	Sheet at floor vs. raised	On the floor = simplest (frame ~4.3 ft). On a low table = more comfortable, taller frame.
■	—	Lighting	Even, glare-free illumination of the sheet — matters for stitch quality.

Key spec (from the optics): lens sits ~4.2 ft above the sheet for a 5-ft-wide frame; one shot every ~2.6 ft at 35% overlap (8-ft sheet = 3 shots, 10-ft = 4). Two rails give a rigid, non-rotating carriage for clean stitching; a single rail works if the phone is bolted rigidly to one trolley. Prove the stitch in Hugin before buying steel.

Prices intentionally omitted — verify at purchase; hardware prices drift. Companion files in this folder: scan-rig-scene.step, rig-cross-section.svg, gantry-elevation.svg, camera-mount-next-steps.pdf.