

NanoArc ACE RevA Equipment BOM

Linked Canadian procurement list - soldering, desoldering and board-handling equipment

Planning snapshot: 2026-06-29 | Currency: CAD | Prices exclude tax and shipping

Budget rule: buy the core set first. The current solder sucker is retained, so a replacement pump is optional. The solder spool and perfboards are cross-referenced rather than duplicated because they are already present in the RevA missing-materials BOM.

Package	Included	Total CAD
Minimum core order	Holder, braid, flux, cutters and tweezers	\$71.03
Core + bench comfort	Adds silicone mat and 4x magnifier	\$97.66
Core + comfort + pump upgrade	Adds SS-02-style pump	\$129.75
Everything listed	Also adds deferred fume extractor	\$194.02

1. Core equipment - buy now

This is the minimum practical equipment order for assembling and correcting the RevA perfboard prototypes without replacing tools already on hand.

Item / supplier part	Qty	CAD	Why it is included	Link
Adjustable PCB clamp holder Adafruit Industries 3791 DigiKey: 1528-2581-ND	1	\$31.77	Rigidly supports the RevA perfboards while soldering; preferable to flexible helping-hands arms.	OPEN
No-clean desoldering braid, 1.91 mm x 1.52 m MG Chemicals 425-NS DigiKey: 473-1076-ND	1	\$10.17	General through-hole and pad cleanup. The 1.91 mm width is a useful middle size for headers and IC pins.	OPEN
No-clean liquid flux pen Chip Quik CQ4LF DigiKey: CQ4LF-ND	1	\$11.63	Improves solder flow and makes braid and pump desoldering substantially more effective.	OPEN
Flush side cutters American Hakko CHP-170 DigiKey: 1691-1037-ND	1	\$11.33	Trims through-hole leads and header pins cleanly after soldering.	OPEN
Fine curved ESD-safe tweezers Adafruit Industries 422 DigiKey: 1528-2189-ND	1	\$6.13	Holds small parts, wires and SOIC adapter components without paying for premium precision tweezers.	OPEN

2. Optional and deferred equipment

These items improve comfort or throughput, but they are not required to begin RevA assembly. Keep them out of the first order if the budget is tight.

Item / supplier part	Qty	CAD	Why it is included	Link
Engineer SS-02 style desoldering pump Adafruit Industries 1597 DigiKey: 1528-1597-ND	1	\$32.09	Upgrade only if the existing solder sucker is weak or awkward. Not required to start.	OPEN
Insulated silicone rework mat Adafruit Industries 3536 DigiKey: 1528-2325-ND	1	\$15.51	Protects the bench from solder, flux and hot tools; useful but not required if a safe work surface already exists.	OPEN
4x magnifier/helping-hand stand Adafruit Industries 291 DigiKey: 1528-2144-ND	1	\$11.12	Low-cost visual aid for SOIC adapters and close inspection. The PCB clamp remains the primary holder.	OPEN
Benchtop fume extractor, 110 VAC SRA Soldering Products AO486 DigiKey: 2260-AO486-ND	1	\$64.27	Useful for a permanent bench, but defer if the current workspace already has effective local ventilation.	OPEN

3. Already owned - do not repurchase

- Sremtch 9160 soldering iron
- Replacement iron tips
- Brass tip cleaner
- Tip tinner
- Manual solder sucker
- Heat gun
- Dremel
- Multimeter
- Metal dental pick / solder pick

4. Cross-reference: already in the materials BOM

Item	Part / source	Status	Link
Lead-free solder wire, SAC305, 0.79 mm, 56.7 g	SMDSWLF.031 2OZ SMDSWLF.0312OZ-ND	Already included in the RevA missing-materials BOM; do not add twice.	OPEN
Perfboard assortment	ELEGOO 32-piece double-sided FR4 kit Amazon item	Already included in the RevA missing-materials BOM; do not add twice.	OPEN

5. Desoldering approach for RevA

Use the existing manual pump for clearing plated through-holes, and use flux plus braid for residual solder and pad cleanup. The optional SS-02-style pump is an upgrade, not a prerequisite. A powered desoldering station is deliberately omitted because its cost is not justified for the present prototype workload.

Pricing note: Supplier prices and stock can change. Verify the cart before checkout. The PDF links point to the exact selected listings rather than category searches.