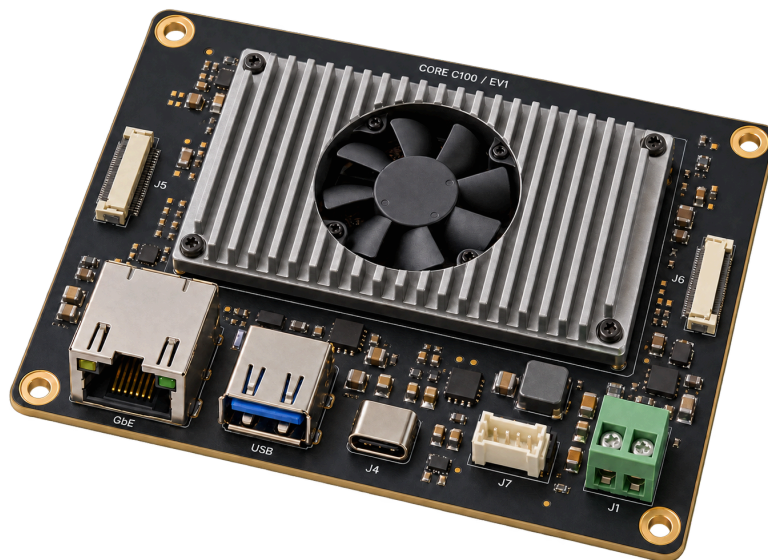


NODERIQ Core C100

Mission compute



A mission computer sized for the machine.

A compact compute-carrier profile for mobile robots and observation platforms that need local perception, storage and a clear handoff to a separate machine controller.

PCB outline

100 × 80 mm

Assembled height allocation

40 mm

Nominal bench input

12 V

Steady power allocation

45 W

Defined evaluation specification. Imagery illustrates the specified architecture; physical measurements, electrical release and completed system integration are not asserted.

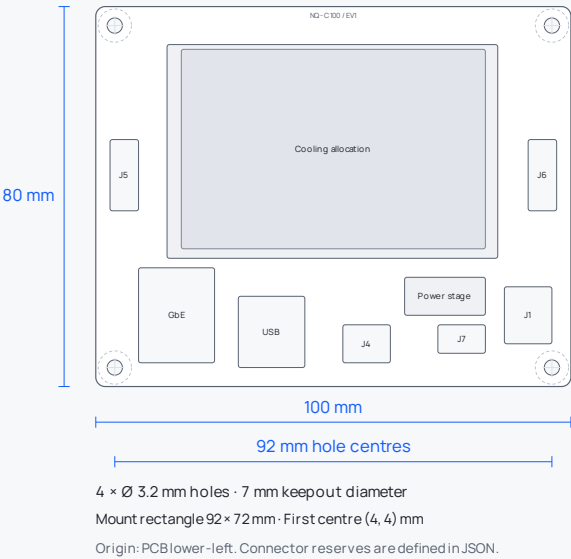
Dimensions and mounting

NODERIQ / HARDWARE ENGINEERING

NODERIQ Core C100

EV1 · Mechanical and installation allocation · 23 October 2026

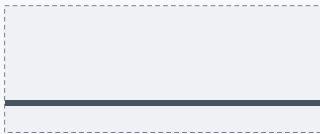
TOPVIEW / MILLIMETRES



ASSEMBLY / CLEARANCE

100 × 80 × 40 mm

Allocated assembly box, including PCB and both sides.



Installation reserve

120 × 110 × 60 mm

Includes initial access and cable space. Validate the actual harness.

PCB 1.6 ± 0.15 mm

Outline ± 0.2 mm · Hole centres ± 0.15 mm

Placement envelopes do not define copper, pad stacks, pin multiplexing, isolation ratings or an electrical release.

Use stated dimensions. Preview is not a measuring tool. Separate 1:1 SVG and millimetre DXF supplied.

Evaluation specification · Physical acceptance requires recorded bench measurements. No manufacturing or certification claim.

NQ-C100 / M-01 / EV1

Mounting coordinates

(4, 4) · (96, 4) · (96, 76) · (4, 76) mm

Lower-left PCB origin, top view. Four Ø 3.2 mm holes. Centre tolerance ± 0.15 mm.

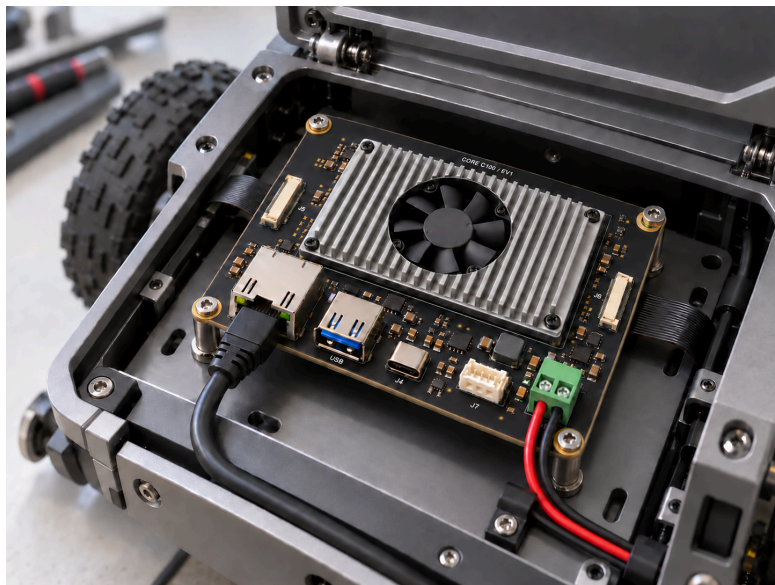
Installation reserve

120 × 110 × 60 mm

Allow access to mating parts, service screws and the actual cable bend. The final enclosure still needs a physical fit check.

The separate 1:1 SVG and millimetre DXF preserve the outline and mounting geometry. Placement rectangles are not land patterns, routed copper or a fabrication release.

Connectors and service access



Benchtop integration visualisation; use the electrical release and approved harness for wiring.

J1 / VIN 2-position power terminal	9–24 V protected bench input; positive and return identified on the harness.
J2 / GbE RJ45 envelope	Wired host or sensor-network evaluation.
J3 / USB USB-A envelope	One host peripheral within the shared power budget.
J4 / REC USB-C envelope	Recovery/data; not a second power source.
J5 / CSI 1 22-position FFC envelope	Internal camera assembly reserve; vendor-specific harness approval required.
J6 / CSI 2 22-position FFC envelope	Second camera assembly reserve; do not assume Pi-camera pin compatibility.
J7 / HOST 6-position locking header	Observation or controller-bridge link; never direct actuator power.

Define the complete test configuration

Compute produces observations and bounded requests. A separate machine controller retains interlocks, motion limits and physical stop authority.

Configured Orin NX mode at or below 25 W; one camera or host data source and local storage. Record the exact module, JetPack image and workload.

EV1 screening values

Input range	9–24 V
Regulated rail	4.75–5.25 V
Maximum steady input	45 W
Minimum workload duration	30 min
Bench ambient	20–25 °C
Maximum measured surface	70 °C

Bench numbers are EV1 engineering screening criteria, not achieved measurements, accuracy ratings or qualified operating limits. Record configuration, equipment and raw evidence for engineer review.

Wired network link
Minimum negotiated link / Mbit/s: 1000
Minimum transmitted packets: 1000
Maximum lost packets: 0
USB cold-start enumeration
Minimum cold starts: 3
Maximum enumeration failures: 0

Keep actuator power disconnected during the bench fixture. The independent machine controller and interlock remain separate from observation and mission software.

Fit, power and sustained load

Use the matching EV1 configuration and retain a raw record for every performed check.

MECHANICAL-FIT

Mechanical fit

Use callipers and the 1:1 outline or millimetre DXF. Record width, height, thickness, maximum hole-centre error and total assembled height. Inspect every fastener and mating connector with the intended enclosure and harness.

Retain: Measured dimensions, mounting photograph and enclosure/harness revision.

RAIL-STABILITY

Power rails and backfeed

With the approved assembly and supply, measure input and regulated-rail minimum/maximum values during start-up and the named workload. Record steady input power and test disconnected host/peripheral supply paths for unintended backfeed.

Retain: Power trace, instrument range, probe points, supply limit and fitted configuration.

THERMAL-LOAD

Sustained thermal load

Run the exact workload for the specified interval in the stated bench ambient range. Record the hottest measured surface, configured compute mode, cooling arrangement, resets and thermal-throttle flags. These screening conditions do not define an outdoor operating rating.

Retain: Timestamped thermal trace, ambient measurement, surface location and workload version.

Exercise the named interfaces

Use the matching EV1 configuration and retain a raw record for every performed check.

ETHERNET-LINK

Wired network link

Connect to a known-good wired host or switch and record the negotiated link rate. Send the defined packet fixture, count loss and preserve the interface statistics. Link negotiation is not an application-throughput benchmark.

Retain: Host configuration, link negotiation and packet-count capture.

USB-ENUMERATION

USB cold-start enumeration

Repeat cold starts with the approved cable and host. Record the enumerated device and the actual firmware-provided identifiers; do not assume that an unreleased image implements a USB interface. Count enumeration failures explicitly.

Retain: Host USB log, firmware image identifier, cable and cold-start count.

AUTHORITY-BOUNDARY

Physical authority boundary

Keep actuator power disconnected during the fixture and retain the machine's independent interlock. Confirm that reconnecting a data link cannot automatically resume physical action. Identify the separate controller and review record that govern any later machine test.

Retain: Fixture boundary record, controller/interlock identity and supervised sign-off path.

Keep the measurements inspectable

EV1 reserves the Orin NX module geometry and a non-Super power configuration. It does not claim a qualified carrier, completed JetPack port, thermal rating or interchangeable support for Thor and future Nano 2 modules.

Measurement record and offline checker

Fill the matching blank JSON template with measured values, configuration, current instrument records and the identifier/SHA-256 hash of each raw record. Empty values remain missing; synthetic examples stay example-only.

```
node validate-evidence.mjs core-c100-specification.json measurements.json
```

Requires Node.js 20 or later. Exit 0 means the checklist is ready for engineer review; it does not certify hardware or authorise physical operation. Incomplete, out-of-criteria and example-only records return exit 2.

Relevant component sources

[NVIDIA / Jetson Orin production modules](#)

C100 compute-family reference; vendor peak compute is not a measured card result.

[NVIDIA / Orin NX module datasheet DS-10712-001 v1.7](#)

69.6 × 45 mm module; 260-contact SO-DIMM. MAXN_SUPER has different supply and thermal requirements and is outside C100 EV1.

[NVIDIA / Jetson Linux power and performance](#)

Power modes and throttling must be qualified on the carrier and cooling assembly.

Product record: neuraparse.com/products/noderiq/cards/core-c100/

Original PNGs, dimensional files, specification, blank record and checker accompany the evaluation pack. No proprietary firmware, routed board data or private NODERIQ endpoint is included.