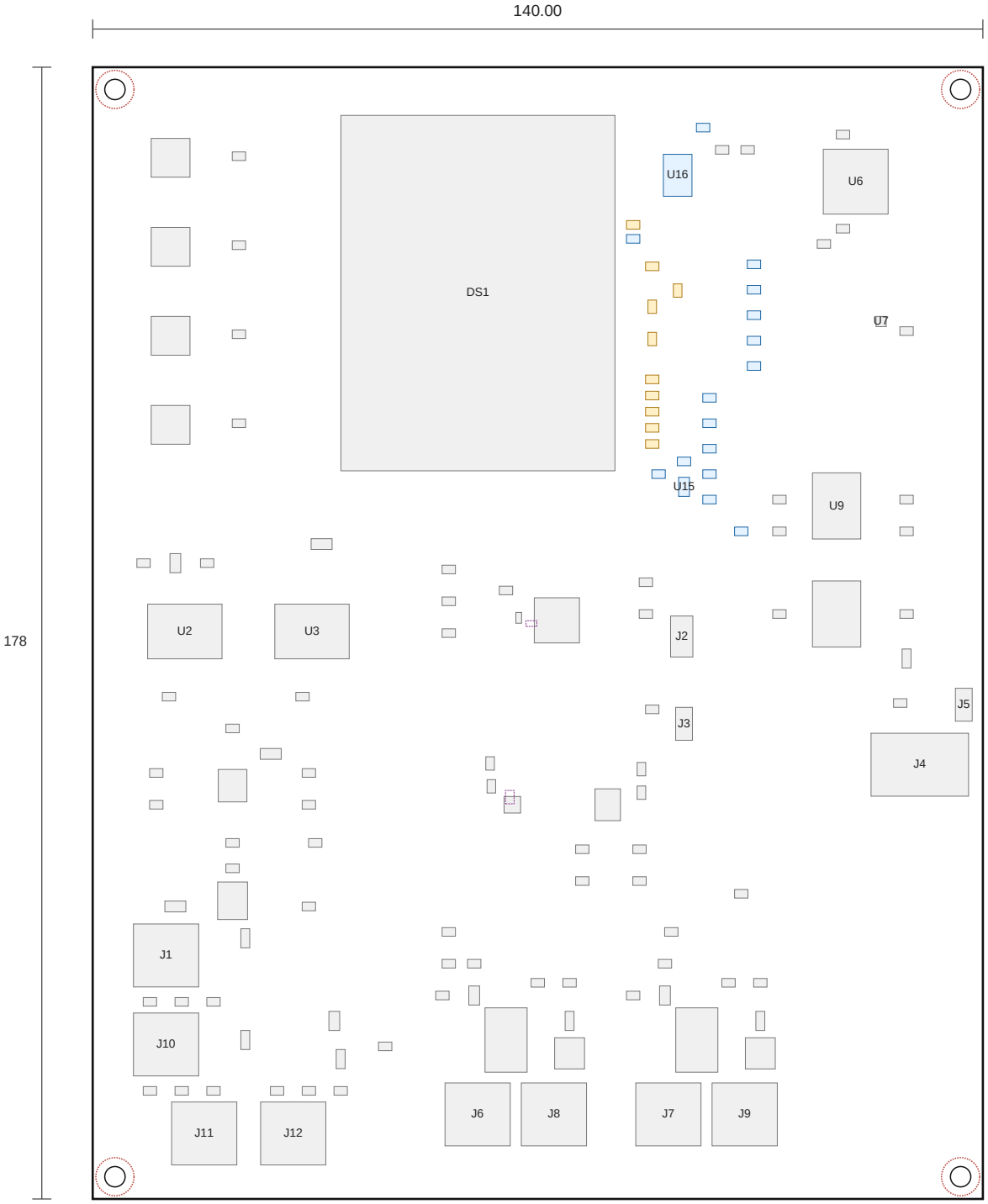
AQCTRL-A01 / mechanical review r2

Native power-r6 top view; millimetres; board drawing at 1:1



4 x NPTH 3.20

X 3.5 / 136.5

Y 3.5 / 174.5

Pitch 133 x 171

Blue: added

Amber: moved

Purple: bottom

C9 / C22

Red: support

disc 6.0 max

candidate only

Nominal board

thickness 1.6

142 purchased

11 test pads

4 mounting holes

100 mm scale check - print at 100%

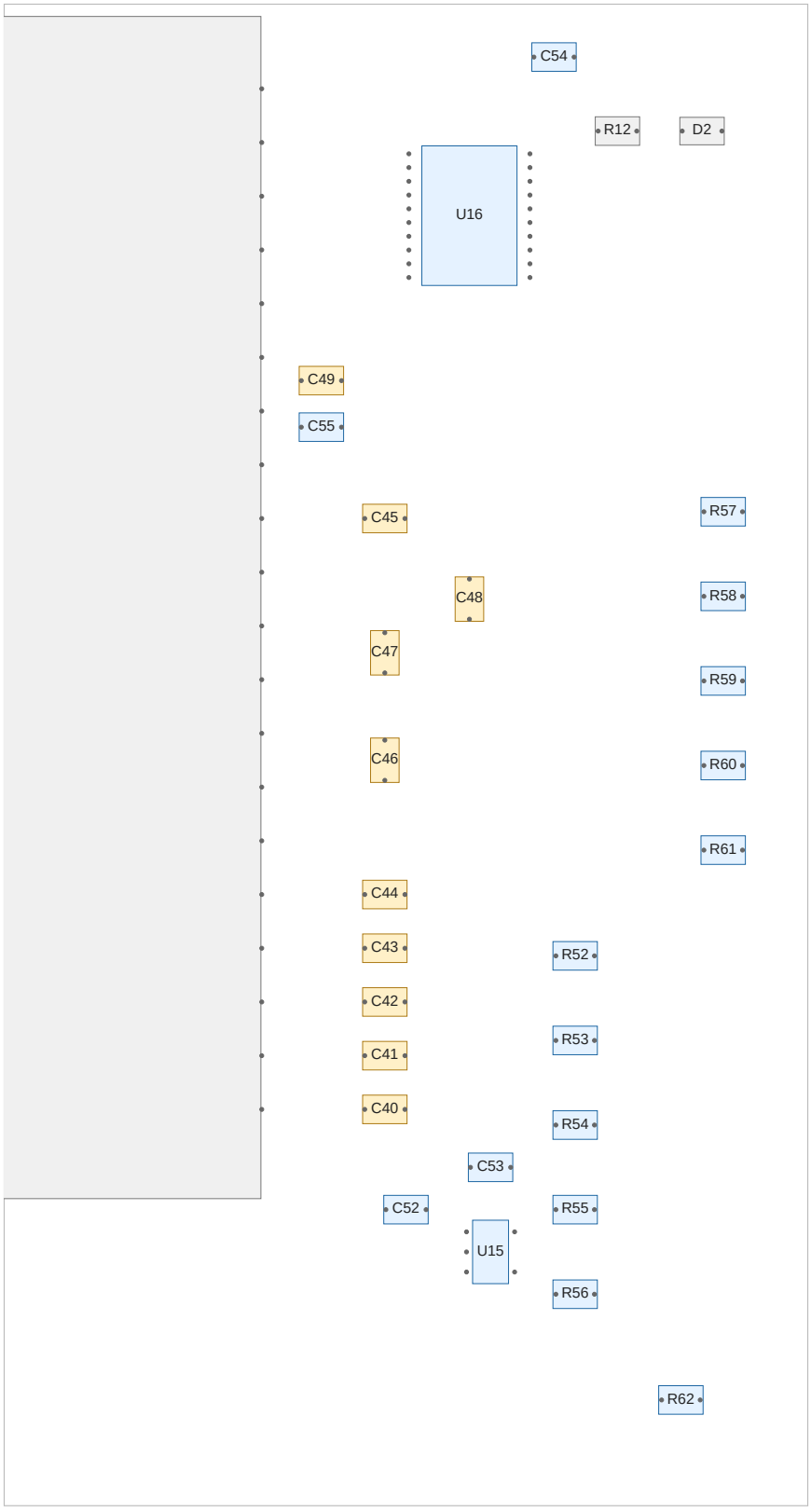
Fab graphic bounding boxes include stroke; not maximum 3D outlines.

No enclosure window, airflow, wire access or physical fit sign-off.

Source PCB SHA256: 6b5de13d...c78b6ff64c (full hash in receipt).

LCD region / assembly detail

PCB region X70..108 / Y7..78; 3:1; labels and pad-centre markers



DS1 right pin row

C40-C48: pump

C49 / C55: VDD

U16: buffer

U15: 3.2V LDO

C52: input 1u

C53: output 10u

C54: buffer 100n

R52-R56: 10k

MCU input defaults

R57-R61: 100k

LCD output defaults

R62: 2.7k load

Blue: new r6 part

Amber: moved part

Pad dots are centre markers only; use native PCB + CAM for actual pad shape.

U15 height <=1.45 mm above seating plane (TI drawings).

Install LCD after factory-approved board soldering / inspection.

Seating height, pin trimming, solder clearance and display direction: NOT_RUN.

EVT insulating carrier / installation candidate

Flat plate and support stack; not an enclosure, order or fit approval



160 x 198 x 3 plate (candidate) / 1:2 plan

PCB offset 10 / 10

Plate holes 3.3

PCB holes 3.2

Insulating supports 10

Max bearing disc 6.0

Nominal XY edge gap

at support disc: 0.5

See per-hole bbox

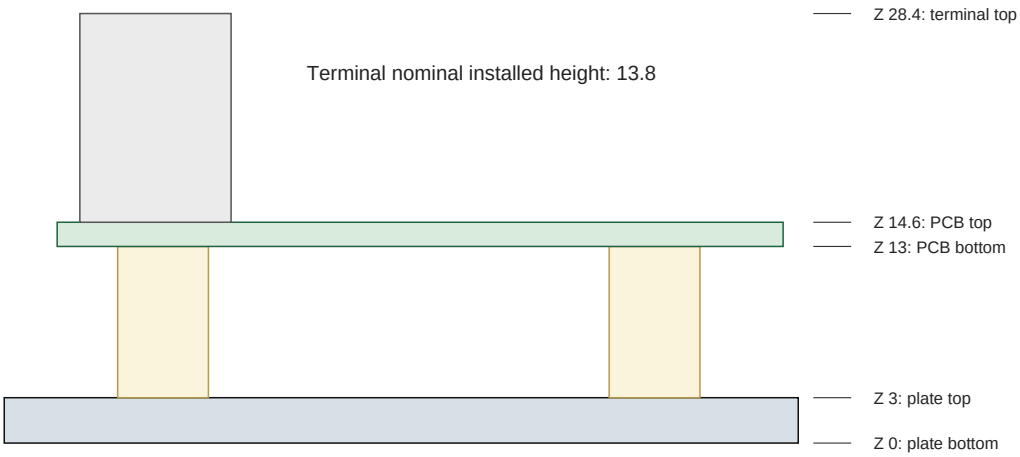
clearance JSON.

Tolerance / material /

thread / creep / load:

not frozen or tested.

SIDE SECTION (schematic; horizontal spacing not to scale)



3.5 mm terminal tails + bottom C9/C22 need physical clearance checks.

Support terminal bodies during wiring; keep isolated COM separate.

Lid / tool / cable space and exact component maximum heights: TBD.

Power ramp, LCD levels/pump/discharge, sensor airflow and heat: NOT_RUN.