DATASHEET

ChArUco Calibration Target, Aluminium Composite

ChArUco combines a checkerboard with ArUco markers in the white squares. Markers identify each corner, so the board can be partly outside the image or partly occluded and still contribute corners — which is exactly where lens distortion is strongest. Native in OpenCV (`cv2.aruco.CharucoBoard`), supported by MATLAB and most multi-camera toolchains.

1 Ordering

Part number	Size (W × H)	Squares (rows × cols)	Square / marker	Dictionary	Corners	Markers
CT-CHA-P-200150-{DICT}	200 × 150 mm	5 × 7	25 / 18 mm	see below	24	17
CT-CHA-P-300200-{DICT}	300 × 200 mm	7 × 10	25 / 18 mm		54	35
CT-CHA-P-400300-{DICT}	400 × 300 mm	9 × 12	30 / 22 mm		88	54
CT-CHA-P-600400-{DICT}	600 × 400 mm	9 × 14	40 / 30 mm		104	63
CT-CHA-P-800600-{DICT}	800 × 600 mm	11 × 15	50 / 37 mm		140	82

2 Key specifications

ACCURACY
±0.3 mm + 0.2 mm/m (any corner to nominal grid, at 20 °C)

SUBSTRATE
Aluminium / LDPE / aluminium composite, 6 mm

FLATNESS
≤ 0.5 mm per metre, board supported on three points

Unless stated otherwise, dimensions are nominal at 20 °C.

1 Specifications · geometry

FEATURE	SPECIFICATION
Feature position tolerance	±0.3 mm + 0.2 mm/m (any corner to nominal grid, at 20 °C)
Square pitch, mean	±0.05 mm
Orthogonality	±0.02°
Marker-to-square ratio	0.72–0.75 (see ordering table for per-size marker dimensions)
Edge radius	R6 mm

2 Specifications · physical

FEATURE	SPECIFICATION
Substrate	Aluminium / LDPE / aluminium composite, 6 mm
Weight	6.6 kg/m² (300 × 200: ≈ 0.4 kg · 800 × 600: ≈ 3.2 kg)
Pattern	Direct UV print, matte, black on white; optical density ≥ 1.6
Flatness	≤ 0.5 mm per metre, board supported on three points
Rigidity (E·J)	≈ 3800 kN·cm²/m
Mounting	4 × M4 threaded inserts on the rear (300 × 200 and larger); ¼″ fixture ACC-A-FIX-14 clamps any size

3 Specifications · environment

FEATURE	SPECIFICATION
Operating temperature	–50 to +80 °C
Thermal expansion	≈ 24 µm/(m·°C)
Storage	–20 to +60 °C, dry
Outdoor lifetime	up to 3 years (UV-stable print)
Cleaning	water or ≤ 70 % isopropyl alcohol, soft cloth

4 Deliverables

INCLUDED		SERVICE	
Inspection report	CT-IR-, per board, dimensional + flatness + visual	Lead time	Made to order · ships in 2–3 weeks
Files	`.opencv.json`, `.kalibr.yaml` (checkerboard mode), `.ros2.yaml`, `.halcon.descr`, `.dxf`	Options	Logo print (-L) · hard case (ACC-A-CSE) · custom NRE
Documents	this datasheet, CT-UM-GEN user manual, CT-UM-CHA-P quick start		

5 Compliance & customs

TOPIC	STATEMENT
RoHS	RoHS-compliant materials.
HS code	`9031 80` Not a toy. not for food contact.

6 Revision history

REV	DATE	CHANGE
A	`2026-10`	First issue, planning values

7 Disclaimer

Values are nominal unless stated as measured; per-unit values are in the inspection report.