

AT7-80

High-precision tracking camera for large areas

The AT7-80 is designed for long-range optical tracking in large measurement volumes. Typical applications include HMD arenas, high-precision measurement tasks, training and simulation environments, and large-scale projection systems.



Technical Specifications

Parameter	Specification
Sensor type	CMOS, global shutter
Sensor resolution	2856 x 2848 pixels, 8.1 MP
Adjustable frame rate	up to 450 Hz
Minimum camera latency	2.7 ms
Image processing	integrated
IR source	high-power LEDs, 850 nm, adjustable in intensity (exempt group according to IEC 62471-1)
IR filter, standard version	long-pass filter
IR filter, IF version	narrow band-pass filter for improved suppression of stray light and unwanted wavelengths; out-of-band suppression at least 10 times higher than with the standard version; reduced tracking range
Adjustable camera parameters	Exposure time, sensor gain and marker-detection threshold adjustable to increase passive-marker detection range under favorable conditions or improve robustness against ambient light and unwanted reflections.
Typical passive-marker detection range	18 m ¹
Status indicator	RGB LED ring; 3-digit alphanumeric display; 2 status LEDs; brightness adjustable down to complete deactivation
Data interface, synchronization and power supply	Gigabit Ethernet with PoE+ according to IEEE 802.3at-2009; cable length up to 100 m using CAT5 or higher
Mounting	ART D2 ceiling mount; 2 x 1/4"-20 UNC mounting threads
Cooling	passive, fanless
Operating temperature	0 - 35°C
Relative humidity	5 - 85% (non-condensing)
Max. power consumption	25 W
Nominal dimensions, W x H x D	134 x 102 x 104 mm
Weight	approx. 1.35 kg, including lens, excluding mounting hardware

¹ measured at 180 Hz with an AT7-80 equipped with an 8.0 mm lens, using a 12.7 mm passive marker centred in the field of view and default settings

Camera Configuration

Typical camera operating modes		180 Hz mode	300 Hz mode	450 Hz mode
Available lens options	Sensor resolution (pixels)	2856 x 2848	2856 x 1632	2856 x 1024
4.8 mm	Field of view H x V (°)	86 x 86	86 x 51	86 x 32
6.0 mm		72 x 72	72 x 41	72 x 25
8.0 mm		56 x 56	56 x 31	56 x 20
Camera latency [ms]		5.8	3.7	2.7

Certifications

- CE
- FCC Part 15 Subpart B, Class B
- TÜV SÜD NRTL

Technical Drawing

all dimensions shown are nominal in [mm] unless otherwise specified

