



SMARTTRACK₃ & 3/M

Side-by-side comparison

The SMARTTRACK3 and SMARTTRACK3/M are integrated optical tracking systems designed for applications ranging from small tracking volumes to confined spaces. This comparison provides an overview of their key technical specifications, typical applications and benefits.



Technical Specifications

Parameter	SMARTTRACK3	SMARTTRACK3/M
Sensor type	CMOS, global shutter	
Sensor resolution	1280 x 1024 pixels, 1.3 MP	
Adjustable frame rate	up to 240 Hz	
Minimum camera latency	6 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 ¹ ; reduced tracking range	
Adjustable camera parameters (IF version only)	exposure time and marker-detection threshold adjustable ²	
Typical passive-marker detection range	3.5 m ³	2.3 m ⁴
Status indicator	2 status LEDs	
Indicator brightness	adjustable down to complete deactivation	
Data interface and cable length	Gigabit Ethernet; up to 100 m using CAT5 or higher	
Synchronization in / out	1 x BNC: Video Signal (75 Ω), TTL, LVTTTL (in / out not simultaneously)	
Peripherals	1 x USB 2.0 (e.g. Radio Transceiver2/3, service access)	
Power supply	PoE (IEEE 802.3af-2003)	
Mounting	ART D2 ceiling mount; 1/4"-20 UNC via adapter (top/bottom)	ART D2 ceiling mount; 1/4"-20 UNC via adapter (top); optional top / bottom mounting bracket
Cooling	passive, fanless	
Operating temperature	0 - 35°C	
Relative humidity	5 - 85% (non-condensing)	
Max. power consumption	12 W	
Nominal dimensions, W x H x D	381 x 54 x 93 mm	280 x 40 x 90 mm
Weight ⁵	approx. 1.5 kg	approx. 1.0 kg
Cascaded system support	Mixed cascades supported; slave operation in DTRACK4 camera systems	

¹at least 10× higher out-of-band suppression than the standard version; improves robustness under daylight and challenging ambient-light conditions by suppressing unwanted wavelengths

²for optimization of detection range or robustness against ambient light and unwanted reflections.

³measured at 180 Hz with a SMARTTRACK3 equipped with 2.86 mm lenses, using a 12.7 mm passive marker centred in the field of view and default settings

⁴measured at 180 Hz with a SMARTTRACK3/M equipped with 3.50 mm lenses, using a 12.7 mm passive marker centred in the field of view and default settings

⁵including lens, excluding mounting hardware

Applications / Benefits

Feature	SMARTTRACK3	SMARTTRACK3/M
Typical installation environment	Small rooms and immersive environments	Compact installations and confined spaces
Ideal for...	VR applications, including head tracking and interaction at small Powerwalls or CAVEs; training and simulation	In-vehicle tracking and cockpit simulation for aircraft or spacecraft
Benefits	longer tracking range	very compact design; lower weight; suitable for shorter tracking distances

Certifications

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

Tracking Area

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

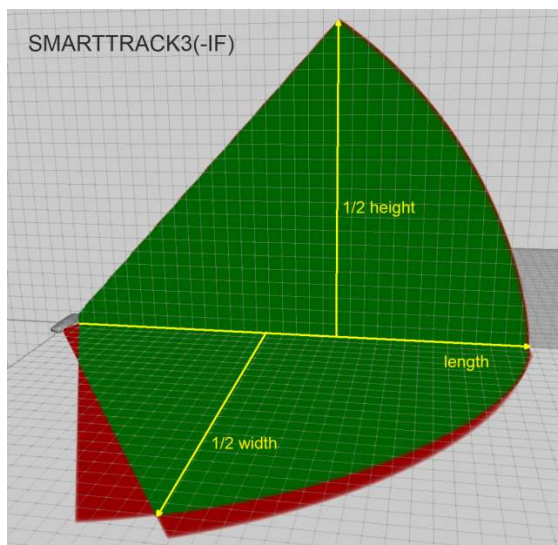


Figure 1: Schematic illustration of the tracking area (not to scale)

Tracking Area	lens (mm)	length (m)	½ width (m)	½ height (m)
SMARTTRACK3	2.86	0.3 - 3.5	3.0	1.8
SMARTTRACK3/M	2.86	0.12 - 1.7	1.4	1.0
SMARTTRACK3/M	3.5	0.3 - 2.3	0.9	0.8
SMARTTRACK3-IF	2.86	0.3 - 2.5	1.9	1.0
SMARTTRACK3/M-IF	2.86	0.12 - 1.7	1.2	0.7
SMARTTRACK3/M-IF	3.5	0.3 - 2.0	0.7	0.6