

SMARTTRACK3/M (-IF)



SMARTTRACK3/M is the latest version of the ART plug & play tracking solution for small volumes. Two tracking cameras and the controller are integrated in a compact housing. When delivered, SMARTTRACK3/M is pre-calibrated and may be used immediately. The compact size and the integrated controller make SMARTTRACK3/M the ideal mobile tracking system. The PoE power supply allows usage without separate power cable. Optionally SMARTTRACK3/M-IF is available, with a narrow bandpass filter for tracking in daylight conditions making applications possible such as in-car tracking.

Technical Data

| General Camera Data | | SMARTTRACK3/M | SMARTTRACK3/M-IF | | |
|--|---------------|--|----------------------------|----------------------------------|------------|
| Image sensor | | 1280 x 1024 Pixel | | | |
| Frame rate (sensor) | | 180 Hz @ full frame, up to 240Hz with reduced tracking volume | | | |
| Image processing | | integrated | | | |
| Status indicator | | 2 LEDs; dimmable | | | |
| IR source | | high power LEDs, 850nm, adjustable in intensity (exempt group according to IEC62471-1) | | | |
| Filters | | Longpass | Bandpass (IF) | | |
| Effective transmission | | 795 - 1100 nm | 845 - 859 nm | | |
| Suppression in rejection regions: | | avg. $> 10^4 - 10^5$ | avg. $> 10^6$ | | |
| SMARTTRACK3/M-IF: <i>Narrow bandpass filter for suppression of unwanted stray light / wavelengths (factor > 10 vs. standard SMARTTRACK3/M). Extended camera parameters to further improve daylight sensitivity in user-specific scenario available.</i> | | | | | |
| Connectors | | SMARTTRACK3/M | SMARTTRACK3/M-IF | | |
| Data transfer & power supply | | Single cable solution data: Gigabit Ethernet power: PoE (IEEE 802.3af-2003) via max. 100 m RJ45 cable (CAT5) | | | |
| Synchronization in / out | | 1x BNC: Video Signal (75 Ω), TTL, LVTTTL (in / out not simultaneously) | | | |
| Peripherals | | 1 x USB 2.0 (e.g. Radio Transceiver2/3, service access) | | | |
| Operating conditions | | SMARTTRACK3/M | SMARTTRACK3/M-IF | | |
| Cooling | | passive, noiseless | | | |
| Temperature | | 0 ... 35° C | | | |
| Relative humidity | | 5 ... 85% (non-condensing) | | | |
| Power consumption | | 12 W | | | |
| Dimensions | | SMARTTRACK3/M | SMARTTRACK3/M-IF | | |
| Size (W x H x D) | | approx. 280 x 40 x 90 mm | | | |
| Weight | | approx. 1.0 kg | | | |
| Available lenses and operation modes | | | | | |
| Compatible lenses | Item number | | Operation mode | | |
| | SMARTTRACK3/M | SMARTTRACK3/M-IF | @ 180Hz | @ 240Hz | |
| 2.86 mm | V135121 | V135131 | Sensor resolution (pixels) | 1280 x 1024 | 1280 x 800 |
| | | | FoV (horiz. x vert.) [deg] | 135° x 102° | 135° x 78° |
| | | | Tracking range* | 0.12m – 1.7 m (0.12m – 1.7 m) ** | |
| 3.5 mm | V135122 | V135132 | FoV (horiz. x vert.) [deg] | 83° x 70° | 83° x 56° |
| | | | Tracking range* | 0.3m – 2.3m (0.3m – 2.0m) ** | |

* based on 12 mm spherical passive markers: Higher ranges possible with larger or active markers

** in brackets: Tracking range for SMARTTRACK3/M-IF with bandpass filter with default sensitivity parameters

| System latency | @ 180Hz | @ 240Hz |
|----------------|---------|---------|
| 4 targets | 9ms | 6ms |