



## 10 km Day, 5km Night Long Range Laser Camera System

### Description

ST-HD-IP10KLS system is a tactical, robust, Day/Night and long-range surveillance system that provides military and law enforcement agencies with a 24/7 situational awareness. The system has been in-house tested for MIL-STD-810G, MIL-STD-HDBK-217-F, MIL-STD-416-F and MIL-STD-1275-D military standards to ensure the reliability and durability of the system during critical missions in all weather, environmental and operation conditions.

In addition to the military standards specifications and the IP67 protection rating, ST-HD-IP10KLS system has its upper housing and its Pan-Tilt unit housing Nitrogen-Pressurized to protect sensitive optics, electronics and mechanical components while providing the clearest image and smoothest movement possible under a wide range of environmental conditions.

## Operational Capabilities

The Multi-sensor ST-HD-IP10KLS system is composed of a Laser illuminator with collimator and Day/ Nigh Camera in the same enclosure, mounted on a Pan-Tilt unit. Day/Nigh camera allows observation under all weather conditions even in fog, rain or snow. The platform (Pan-Tilt unit) is able to turn cameras in all direction, both in azimuth and elevation and controlled from the operator place or remotely by the existing control room. Integrated Infra-red laser Illuminator has synchronized beam with the cameras field of view enables the camera to see in total darkness without emitting any visible light. This makes this system the best low-cost day / night long range observation system without using a thermal camera

## Optical Capabilities

ST-HD-IP10KLS system is equipped with a top-class full HD motorized continuous zoom lens with up to 1000mm focal length (2000mm with e-extender), the zoom power combined with the 2MP CMOS image sensor and the advanced image processing and improved image quality enables the user to monitor large areas efficiently during daytime up to 10km for human detection.

At night time the powerful synchronized IR laser illuminator -supported by its 40w laser emitter and a 100mm zoom lens- enables clear surveillance in complete darkness up to 5km.



## Pan-Tilt Module

Simple and efficient is what describes the pan-tilt unit. In fully marinated body lies a single powerful motion control driver. It is capable of handling payloads up to 35kg in full range of motion. Its compact design and low weight make it perfect for integration where space is limited. Multiple slip-ring options make it compatible with most payloads from high frequency antenna applications to Gigabit electro-optical head connections.



<b>Day/Night camera Module</b>	
<b>Sensor type</b>	1/1.8" Progressive Scan CMOS
<b>Resolution</b>	2.0 megapixel (1920×1080)
<b>Lens</b>	Motorized Continuous Zoom Lens 20~1000mm, Zoom Power 50X(40-2000 mm with 2X e-extender)
<b>Operation Mode</b>	Day/night auto switch, day/night double mode parameter setup Integrated ICR double optical filter
<b>Minimum Illumination</b>	0.001lux Day Mode, 0.0001lux Night Mode (0 Lux with illuminator)
<b>Shutter speed</b>	Auto/Manual adjust
<b>Image Control</b>	AGC, AWB, support manual/auto
<b>WDR</b>	120dB, On/Off
<b>BLC</b>	On/Off
<b>ROI</b>	On/Off
<b>De-noise function</b>	3D DNR(digital noise reduction)
<b>De-Fog Function</b>	On/Off
<b>Image Stabilization</b>	On/Off
<b>Encoding format</b>	H.264/MJPEG/MPEG4
<b>Video resolution</b>	1080p, support Triple Streaming
<b>Video Baud rate</b>	32Kbps~16Mbps
<b>Video frame rate</b>	PAL: 50Hz:25fps(1920×1080),25fps (1280×720) NTSC:60Hz:30fps(1920×1080),30fps (1280×720)
<b>Filter title overlay</b>	Station caption, time, date
<b>Image adjust</b>	Brightness, Contrast, Saturation
<b>Network protocol</b>	TCP/IP/RTP/RTSP/HTTP/DNS/DDNS/DH CP/FTP/NTP/PP-POE/SMTP/UPNP/Unicast/Multicast
<b>Other features</b>	Heartbeat, Video Cover, Password Protection
<b>Laser Illuminator Module</b>	
<b>Wavelength</b>	810nm or 940nm
<b>Peak Power</b>	40W out of 400μm fiber
<b>Maximum pulselength</b>	4ms
<b>Maximum duty cycle</b>	0.1
<b>Clear diameter of Lens</b>	50mm
<b>Focal length</b>	100mm
<b>Adjustable field of illumination</b>	between 2° and 15° synchronous continuous adjustment

<b>Pan-Tilt Module</b>	
<b>Load capacity / Torque</b>	35 kg / 60 Nm
<b>Pan axis range / angle</b>	n x 360°
<b>Pan axis speed</b>	0.001°/s - 45 °/s
<b>Tilt axis range / angle</b>	± 90°
<b>Tilt axis speed</b>	0.001°/s - 45 °/s
<b>Accuracy</b>	0.02°
<b>Backlash</b>	None
<b>Brake</b>	Self-Locking
<b>Communication to the unit</b>	Eth 10/100 Base-T, RS-232, RS-485/422
<b>Control protocol</b>	Proprietary protocol, PelcoD(Optional)
<b>Environmental</b>	
<b>In-house Military Standard Testing:</b>	MIL-STD-810G, MIL-STD-HDBK-217-F, MIL-STD-416-F and MIL-STD-1275-D
<b>Camera and Pan-Tilt Housing</b>	Dry Nitrogen Pressurized
<b>Coating</b>	Electro-static painted for protection against Contamination by Fluids, Solar Radiation (Sunshine), Rain, Humidity, Fungus, Salt Fog, Sand and Dust
<b>Weight</b>	66 kg
<b>Dimensions (H x W x L)</b>	323 x 220 x 336 mm
<b>Materials</b>	Aluminium
<b>Protection / IP rating</b>	IP 67 compliant
<b>Operating temperature</b>	-32°C to +65°C
<b>Electrical Specifications</b>	
<b>Operating voltage</b>	24 - 48 VDC
<b>Maximum power</b>	160 W