EBIPAX INCORPORATED
MISSION CRITICAL SOLUTIONS

MULTI SENSOR IMAGING
COOLED HIGH DEFINITION SYSTEM
OPTICAL MONITORING AND
SURVEILLANCE SYSTEM
EPX-3300U

EPX-3300U SOLUTION

The EPX-3300U is a state of the art monitoring and surveillance system that integrates various high definition imaging sensors and provides ultra-long range target detection, recognition and identification based on superior sensors, optics and image processing. System comprises a cooled MWIR high definition thermal imager, a color low light day/night high definition imager, and an optional SWIR imager, each of them with ultra-long range optics and a system hybrid real-time image stabilization. System also comprises a pan/tilt platform with gyro stabilization and works in high temperature range, so it is convenient in most stationary and mobile installations.

Remote control and monitoring allow system parameters full control from control center.

EPX-3300U IMAGE

The EPX-3300U is able to detect a vehicle target up to 24km away. The cooled thermal imager exposes targets even in total darkness irrespective of weather conditions or atmospheric conditions caused by rain, snow, fog, dust, sends or smokes and is suitable for both land and coastal applications.

The color low light imager provides improved target identification in appropriate conditions, and the optional SWIR imaging further improves target visualization and tracking in tough weather and atmospheric conditions. An optional video stabilization, image enhancement, vision tracking, motion detection algorithms and mapping toolkit are also available. Additionally, system can include optional components like an eye-safe laser rangefinder, a digital magnetic compass and a GPS. System is ready for installation of EBIPAX unique remotely controlled optical surfaces washing system.

CUSTOMIZABLE, MODULAR & SCALABLE

Modular system that can be tailored to specific customer needs. Competitive in the market for quality and price. EPX-3300U consists of 1280 x 1024 cooled MWIR thermal imager and 1920x1080 full HD low light color imager with motorized zoom optics providing HFOV for vehicle detection at 24 km. Possibility of custom sensor configurations and image processing.

KEY FEATURES

- Modular multi sensor high definition imaging system
- State of the art cooled MWIR high definition thermal vision equipment
- Ultra long range color low light high definition imaging with atmospheric interference reduction
- Crisp high resolution image
- Excellent range performance, up to 24km vehicle target detection
- High performance U-shaped gyro stabilized pan-tilt unit
- System hybrid real-time image stabilization
- Optional SWIR imaging
- Protection windows for each imager
- Optional control and monitoring console with one or three monitors
- Optional optical surfaces cleaning system
- All outdoor design, rugged enclosure- remotely or locally controlled
- 24/7/365 high performance
- Easily maintained and reconfigurable
- Unique pan tilt with fluid pass through slip ring
- Ready for installation of remotely controlled optical surfaces washing system
- Optional features: video stabilization, image enhancement, video tracking, motion detection algorithms and mapping toolkit
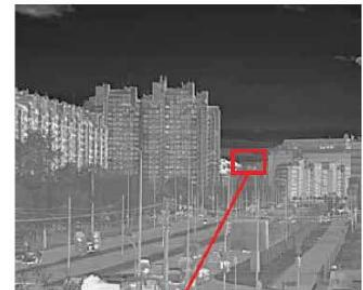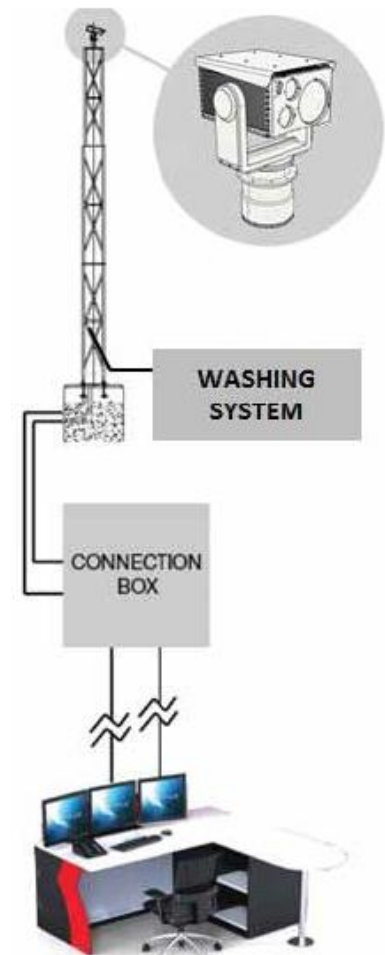
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OPERATIONAL AND TECHNICAL SPECIFICATIONS

MWIR thermal imager

Array format:	1280 x 1024 pixels
Detector type:	XBn (HOT) FPA
Resolution:	1.3 Megapixels
Pixel pitch:	15 µm
Spectral band:	3.6 to 4.2 µm
NETD:	20mK@50% well fill capacity (mean)
Cooler MTTF:	20 000 hours
Optics:	Motorized continous zoom lens
Focal length:	55 mm - 1200 mm
F#:	4.7

Color low light imager

Array format:	1974 x 1110 pixels
Detector type:	Single CMOS / RGB Bayer
Resolution:	2.2 Megapixels
Pixel size:	5 µm
Sensor sensitivity:	<0.0025 lx
Minimal subject illumination:	0.04 lx (F4, 30 fps, 50IRE, +72db, color) (Night level 2 - half moon or cloudy full moon equivalent)
Optics:	Motorized continous zoom lens
Focal length:	12 mm - 1680 mm, with motorized 2.5x extender

SWIR imager – optional

Array format:	640 x 512 pixels
Detector type:	InGaAs 2D array
Resolution:	640 x 512
Pixel pitch:	15 µm
Spectral band:	0.9 to 1.7 µm
Noise (RMS):	<195 electrons Low Gain
	<50 electrons High Gain
Optics:	Motorized continuous zoom lens
Focal length:	20 mm - 750 mm

Laser rangefinder – optional

Range:	10 km for target 2.3 x 2.3m, 30% reflectivity and 23.5km visibility
Wavelength:	1.54 µm
Range of measurement:	80 to 20 000 m
Fully Eye-safe:	Class 1

Pan tilt platform

Azimuth movement range:	N x 360°
Elevation movement range:	+60° to -25°
Azimuth speed range:	from 0.05°/sec to 100°/sec
Elevation speed range:	from 0.05°/sec to 100°/sec

General

Interface:	1000BaseT
Power supply:	230V, 4A
Dimensions:	757 mm x 780 mm x 1210 mm
Weight:	Up to 220 kg depending on configuration
Operational temperature:	0° - 55°C

Operating console (optional)

Displays:	1 - 3 depending on choice
Resolution:	Up to full HD (1920 x 1080)

Optical surfaces cleaning system (optional)

Operation:	Remotely controlled (on demand or scheduled)

DRI Range Calculation (*)

Range (km)	Detection	Recognition	Identification
Human	19.9	11.8	6.3
Vehicle	24.1	19.1	13.1

(*) Per STANAG 4347: 50% probability at 0.2/km atmospheric attenuation factor and 2K temperature difference. Actual range may vary depending on environmental conditions, camera set-up, type of display and user experience.

For more information on our mission critical intelligence solutions, please contact us at: support@ebipax.com

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