



## IP66 THERMAL IMAGING CAMERA INTEGRATED BY PANASONIC

THANKS TO HIGH-PERFORMANCE SPECIFICATION, FAST AND EASY INSTALLATION AND ROBUST BUILD QUALITY, PANASONIC THERMAL CAMERAS ARE THE IDEAL TOOL FOR HIGH PRIORITY SECURITY APPLICATIONS WITHIN TRANSPORTATION, UTILITIES, GOVERNMENT, COMMERCIAL AND FINANCIAL MARKETS.

### Integrated Thermal Surveillance Camera Solutions

Panasonic thermal cameras complement Panasonic's already extensive range of surveillance and security solutions which includes everything from full high definition 1080P cameras, monitors and recording solutions, cloud based recording and storage, business intelligence video analytics, IP and analogue cameras, 360 degree view cameras to infra-red cameras for low light conditions.

Panasonic thermal cameras with built-in motion detection not only allow night time vision without illumination, but also complement Panasonic vision cameras during the daytime, giving the following enhancements:

- Ability to see people and vehicles through foliage and smoke
- Easily identify the presence of people who try to blend into the scenery through camouflage
- Detect person at up to 1.5km
- Detect vehicles at up to 4km
- Inbuilt motion detection enables the creation of effective virtual fences or areas to be monitored for intrusion with significantly reduced false triggers compared to vision cameras
- Enable clearer and easier monitoring of scenes by security personnel for people and vehicle movement

### Powerful Specification, High Performance

Behind its high quality germanium window, Panasonic thermal cameras deploy a powerful uncooled silicon microbolometer thermal detector available in a choice of 384x288 and 640x480 resolutions with sensor frequency rates of below 9Hz or 25Hz and above. The 384x288 sensor has a thermal sensitivity of 50mK, the 640x480 sensor has a thermal sensitivity of 70mK. A spectral sensitivity rating of  $\mu\text{m}$  to 14 $\mu\text{m}$  enables detailed clarity even on the darkest of nights or most difficult of scenes.

Panasonic thermal cameras are a powerful electronic sensor and security measure for the most challenging operational circumstances. Available in a range of lens sizes from 15mm to 45mm with other sizes available on demand for special applications.

Connectivity is well covered with two H.264 and one .JPEG network interfaces and smart features such as Motion Adaptive Interlace / Progressive Conversion enables clear viewing of moving scenes.

Video Motion Detection can also be programmed to trigger alarms along with Command Alarm and Video Loss depending on specific requirements whilst it is possible to always display the camera title within the output image for faster identification of threat location and greater real time situational awareness.

### Fast and Easy to Install

Intelligent PoE+ provides both network connectivity and power supply in a single cable, reducing the number of cable runs required and cutting setup time whilst Plug and Play compatibility with Panasonic recorders and software ensures additional speed of install.

Panasonic thermal camera units are also designed to be lightweight using a polycarbonate main body and to simplify cable management and convenience the housing swings away from the mount during installation.

Mounting options include wall, pole and ceiling mount and 8 languages are supported through the multiple language user interfaces for maximum flexibility.

### IP66 Rugged & Robust Reliability

Aluminium mountings, IP66 rated resilience means Panasonic thermal camera offers signature Panasonic reliability, even in the most testing of conditions. Through the use of a blower and heater, continuous operation in a range of temperatures from -30°C to 55°C is possible and a sunshield further protects the unit from extreme sunlight.

### Ready for a Range of Applications

Panasonic thermal cameras are designed to enhance the extensive existing range of Panasonic solutions in a broad range of high priority security and surveillance applications.

- Transportation / Airports, railways and sea ports
- Utilities / Power, water and gas facilities
- Government / Military and border security use
- Commercial / Research and data centres, manufacturing, financial and banking organisations where cash is frequently handled

# Specifications

Thermal Detector	Detector Type	Silicon Microbolometer	
	Detector Resolution Options	384x288 or 640x480	
	Image refresh rate options	Below 9Hz or 25Hz and above	
	Spectral Response	8µm to 14µm	
	Thermal Sensitivity	384x288	50mK @ 20°C ambient and 30°C scene temperature
		640x480	70mK @ 20°C ambient and 30°C scene temperature
	Colour Palette	Greyscale - Blackhot, Greyscale - Whitehot, Ironbow	
	Digital Zoom	Continuous	
	Pan & Tilt	Electronic Pan & Tilt whilst in zoom	
	Focus	Fixed preset	
	Standard Model Lens options (other available upon request)	384 x 288 models	15mm 18.5mm 25mm 45mm
		640 x 480 models	25mm 45mm
Browser GUI	Camera Control	Digital zoom - Pan / tilt in zoomed image	
	Display Mode	Up to 16 cameras can be displayed simultaneously on a multi-screen (Including the camera itself)	
	Unit title	Up to 20 characters	
	Camera Title (OSD)	Up to 20 characters (alphanumeric characters, marks) On/Off	
	Clock Display	Time 12H/24H, Date: 5 formats on the browser, Summer time (Auto/manual)	
	Alarm Control	Reset	
	One Shot Capture	A still picture will be displayed on a newly opened window	
	GUI / Setup Menu Language	English, French, Italian, Spanish, German, Russian, Chinese, Japanese	
	System Log	Up to 100 (internal)	
	Supported OS *1 *2	Microsoft Windows 7 Microsoft Windows Vista Microsoft Windows XP Professional SP3	
	Supported Browser	Windows Internet Explorer 9.0 32 bit Windows Internet Explorer 8.0 32 bit Windows Internet Explorer 7.0 32 bit Internet Explorer 6.0 SP3	
	Network	Network IF	10Base-T / 100Base-TX, RJ45 connector
Display Resolution		H.264: VGA (640x480)/OVGA (320x240), max. 30 fps* JPEG: VGA (640x480)/OVGA (320x240), max. 30 fps* *Dependent on Thermal Detector resolution and frame rate	
H.264 *3		Transmission Mode	Constant bitrate / Framerate priority / Best effort
		Frame Rate	1 / 3 / 5 / 7.5 / 10 / 15 / 20 / 30 fps
		Bit Rate/Client	64 / 128 / 256 / 384 / 512 / 768 / 1024 / 1536 / 2048 / 3072 / 4096 kbps
		Image Quality	LOW / NORMAL / FINE
		Refresh Interval	0.2 / 0.25 / 0.33 / 0.5 / 1 / 2 / 3 / 4 / 5 s
		Transmission Type	UNICAST / MULTICAST
JPEG		Image Quality	10 steps
		Refresh Interval	0.1fps - 30fps (JPEG frame rate will be restricted when displaying both JPEG and H.264 images)
		Transmission Type	PULL / PUSH
Total Bit rate		64 / 128 / 256 / 384 / 512 / 768 / 1024 / 2048 / 4096 / 8192 kbps	
Supported Protocol	IPv6: TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP, SNMP, DHCPv6, MLD, ICMPv6 IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP		
FTP Client	Alarm image FTP transmission, FTP periodic image transmission		
No. of Simultaneous Users	Up to 14 users (depends on network conditions)		
Cellular Phone Compatibility	JPEG image		
Mobile Terminal Compatibility *4	iPad, iPhone, iPod touch (iOS 4.2.1 or later), Android mobile terminals		

Alarm	Alarm Source	Video Motion Detection(VMD), Command alarm, Video loss alarm	
	Alarm Actions	Email Notification Indication on browser, FTP image transfer, Panasonic protocol output	
General	Safety/EMC Standard	CE-EN55022 Class A, EN55024	
	Power / Network requirements	PoE+ (IEEE802.3at)	
	Dimensions	488mm x 161mm x 281mm (total dimensions including mount)	
	Mass (approx.)	3.9Kg	
	Construction	Body and Windshield	Polycarbonate
		Mounting Bracket	Cast Aluminium
Window		Germanium Glass	
Mounting style	Wall or pole		
Environmental	Water Ingress / Corrosion Standards	IP66 (dust and water ingress), NEMA 4X	
	Operating Temperature Range	-30°C to 55°C	
	Humidity	0 to 95% relative	
	Blower (internal)	Yes, continuous	
Maximum windload	150mph (240kph)		

\*1 For further information about PC System Requirements and precautions when using Microsoft Windows 7, Microsoft Windows Vista or Windows Internet Explorer, refer to the manual which can be found on our website (<http://panasonic.net/pss/security/support/info.html>)

\*2 When using IPv6 for communication, use Microsoft Windows 7 or Microsoft Windows Vista

\*3 Transmission for 2 streams can be individually set in the same compression method

\*4 For further information about compatible devices, refer to our website (<http://panasonic.net/pss/security/support/info.html>)

