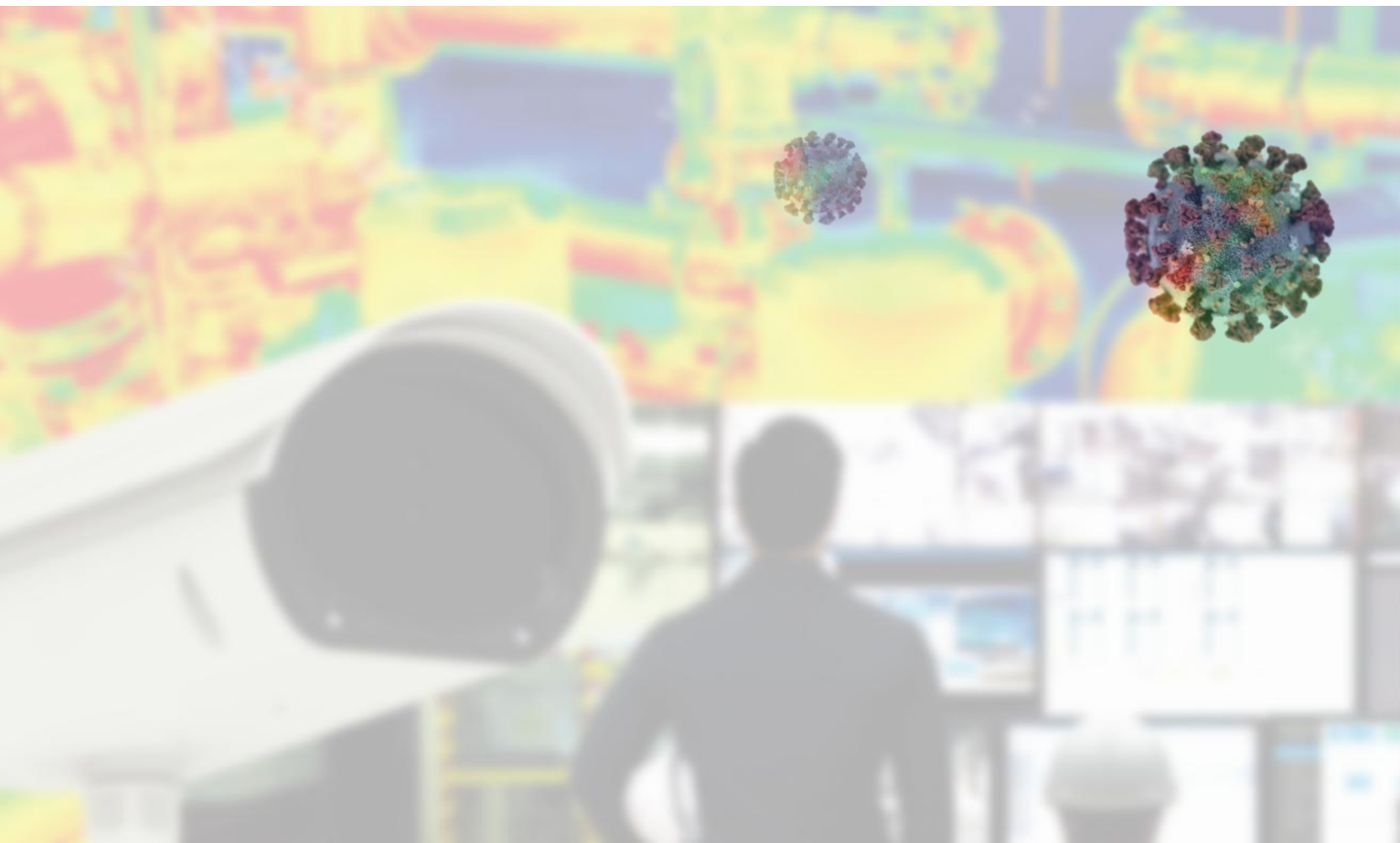




EOC Thermal Solution



Single Thermal IP Camera

NEW

EN8060-MINI

(Thermal: 80 X 60) FLIR Sensor

EN1612-MINI

(Thermal: 160 X 120) FLIR Sensor

EN2519-MINI

(Thermal: 256 X 192)



COMPACT SIZE
(50 x 70 x 28mm)

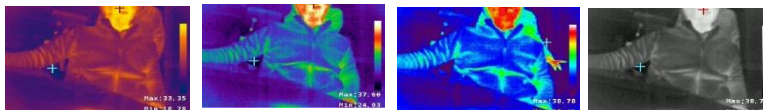
Features

- **Korean SoC: EN675**
- COMPACT SIZE (50 x 70 x 28mm)
- ONVIF Compliant
- API Document available for integration with 3rd party NVR
- Temperature Checking & Alarm Setting
- Monitoring Software (EVMS) available for live streaming and Temperature monitoring

Specifications

Features	Units	EN8060-MINI	EN1612-MINI	EN2519-MINI
Horizontal Resolution	Pixel	80	160	256
Vertical Resolution	Pixel	60	120	192
Pixel Pitch	μm	17	12	12
Horizontal Angle of viewing	Degree	50°	56°	56° or 90°
Vertical Angle of viewing	Degree	38°	71°	42° or 65°
Frame Rate	Hz	≤ 8.6Hz	≤ 8.6Hz	≤ 25Hz
Spectral Range	μm	8 ~ 14, LWIR	8 ~ 14 LWIR	8 ~ 14 LWIR
Temperature Sensitivity	mK	≤ 50mK@F#1.1	≤ 50mK@F#1.1	≤ 50mK@F#1.1
Temperature Range	°C	Low Gain : -10~+450 High Gain : -10~+140	Low Gain : -10~+450 High Gain : -10~+140	Low Gain : +50~+550 High Gain : -15~+150
Overlay(CMOS+Thermal)		None (Only Thermal Sensor)	None (Only Thermal Sensor)	None (Only Thermal Sensor)
Overlay/Thermal Resolutions	Pixel	640(H)x480(V)	640(H)x480(V)	640(H)x480(V)
Image Sensor	Inch	None	None	None
Effective Pixels	Pixel	None	None	None
Frame Rates	FPS	None	None	None
Viewing Angle	Degree	None	None	None
Resolutions(HxV)	Pixel	None	None	None
Ethernet		Ethernet 10/100 base-T(RJ-45)	Ethernet 10/100 base-T(RJ-45)	Ethernet 10/100 base-T(RJ-45)
Video Compression Format		H.264 / MJPEG	H.264 / MJPEG	H.264 / MJPEG
Bitrates Control Method		H.264:VBR,CBR / MJPEG:VBR	H.264:VBR,CBR / MJPEG:VBR	H.264:VBR,CBR / MJPEG:VBR
Streaming Capability		Primary, Secondary(Not Support)	Primary, Secondary(Not Support)	Primary, Secondary(Not Support)
Max.User Access		8persons(RTSP Streaming)	8persons(RTSP Streaming)	8persons(RTSP Streaming)
Application Program		EVMS / EOC API SDK	EVMS / EOC API SDK	EVMS / EOC API SDK
Webpage Language		English / Korean	English / Korean	English / Korean
Power Supply		PoE(802.3.af), Min DC12V/1A	PoE(802.3.af), Min DC12V/1A	PoE(802.3.af), Min DC12V/1A
Power Consumption	Watt	Max. 5W	Max. TBD	Max. TBD
Operating condition		-10°C ~ +60°C / Less than 80% RH	-10°C ~ +60°C / Less than 80% RH	-10°C ~ +60°C / Less than 80% RH
Storage condition		-50°C ~ +60°C / Less than 90% RH	-50°C ~ +60°C / Less than 90% RH	-50°C ~ +60°C / Less than 90% RH
Dimensions	mm	50x70x28	50x70x28	50x70x28
Weight	g	TBD.	TBD.	TBD.

Display Modes



8 Various Thermal Modes

(ex.: White Hot / White Rainbow / Red Glow / Red Hot)

Dual Thermal IP Camera

(Thermal: 80 X 60) FLIR Sensor
EN8060-MW

(Thermal: 160 X 120) FLIR Sensor
EN1612-MW

Features

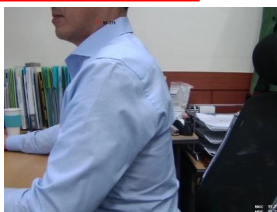


- Dual Sensor (Thermal + Visual) IP Camera
- 3 Mode Display Support (Visual / Thermal / Overlay)
- White LED (Manual or Temperature Alarm)
- IP67 rated Waterproof and Dustproof Housing
- ONVIF Compliant : Compatible with 3rd party Software & NVR
- Provides dedicated software (EVMS) for temperature monitoring and video control
- thermal by FLIR logo

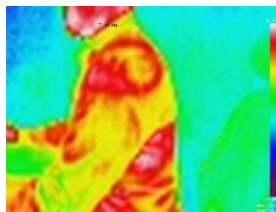
Specifications

	Features	Units	EN8060-MW	EN1612-MW
Thermal Image	Horizontal Resolution	Pixel	80	160
	Vertical Resolution	Pixel	60	120
	Pixel Pitch	μm	12	12
	Horizontal Angle of viewing	Degree	51°	57°
	Diagoal Angle	Degree	38°	71°
	Frame Rate	Hz	≤ 8.6Hz	≤ 8.7Hz
	Spectral Range	μm	8 ~ 14 LWIR	8 ~ 14 LWIR
	Temperature Sensitivity	mK	≤ 50mK@F#1.1	≤ 50mK@F#1.1
	Temperature Range	°C	Low Gain : -10~+450 High Gain : -10~+140	Low Gain : -10~+450 High Gain : -10~+140
	Overlay(CMOS+Thermal)		O (Only 1216x912)	O (Only 1216x912)
	Overlay/Thermal Resolutions	Pixel	1216(H)x912(V)	1216(H)x912(V)
CMOS Image	Image Sensor	Inch	2.8Inch CMOS Progressive Scan	
	Effective Pixels	Pixel	1,945(H)x1,109(V) : 2.16MP	
	Frame Rates	FPS	30	30
	Viewing Angle	Degree	93°(H)x52°(V)	93°(H)x52°(V)
	Resolutions(HxV)	Pixel	1920x1080,1216x912	1920x1080,1216x912
NETWORK	Ethernet		Ethernet 10/100 base-T(RJ-45)	
	Video Compression Format		H.264 / MJPEG	
	Bitrates Control Method		H.264:VBR,CBR / MJPEG:VBR	
	Streaming Capability		Primary, Secondary	
	Max.User Access		8persons(RTSP Streaming)	
	Application Program		EVMS / EOC API SDK	
	Webpage Language		English / Korean	
Generals	Power Supply		PoE(802.3.af), Min DC12V/1A	
	Power Consumption	Watt	Max. 5W	
	Operating condition		-10°C ~ +60°C / Less than 80% RH	
	Storage condition		-50°C ~ +60°C / Less than 90% RH	
	Dimensions	mm	142x128x322	
	Weight	g	680g	

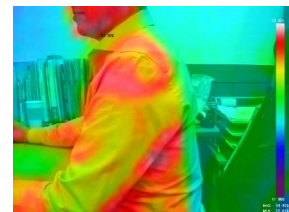
Video Display Mode



Visual Mode



Thermal Mode



Overlay Mode

* Specifications are subject to change without notice.

* Overlay (visual + thermal) is not 100% aligned.

Dual Thermal IP Camera

(256 X 192 Thermal + Visual Image)

NEW HI2519-MW



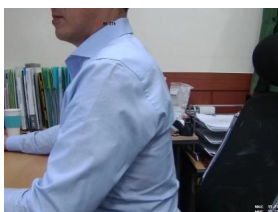
Features

- Dual Sensor (Thermal + Visual) IP Camera
- 3 Mode Display Support (Visual / Thermal / Overlay)
- White LED (Manual or Temperature Alarm)
- IP67 rated Waterproof and Dustproof Housing
- ONVIF Compliant : Compatible with 3rd party Software & NVR
- Provides dedicated software (EVMS) for temperature monitoring and video control

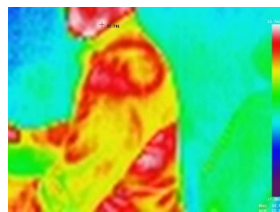
Specifications

	Features	Units	HI2519-MW
Thermal Image	Horizontal Resolution	Pixel	256
	Vertical Resolution	Pixel	192
	Pixel Pitch	μm	12
	Horizontal Angle of viewing	Degree	56° or 90°
	Vertical Angle of viewing	Degree	62.5°
	Frame Rate	Hz	≤ 25Hz
	Spectral Range	μm	8 ~ 14, LWIR
	Temperature Sensitivity	mK	≤ 50mK@F#1.0
	Temperature Range	°C	Low Gain : +50~+550 High Gain : -15~+150
	Overlay(CMOS+Thermal)		O (Only 640x480)
CMOS Image	Overlay/Thermal Resolutions	Pixel	640(H)x480(V)
	Image Sensor	Inch	2.8Inch CMOS Progressive Scan
	Effective Pixels	Pixel	1,945(H)x1,109(V) : 2.16MP
	Frame Rates	FPS	30
	Viewing Angle	Degree	93°(H) x 52°(V)
NETWORK	Resolutions(HxV)	Pixel	1920x1080,1280x720,640x480
	Ethernet		Ethernet 10/100 base-T(RJ-45)
	Video Compression Format		H.264 / MJPEG
	Bitrates Control Method		H.264:VBR,CBR / MJPEG:VBR
	Streaming Capability		Primary, Secondary
	Max.User Access		8persons(RTSP Streaming)
	Application Program		EVMS / EOC API SDK
Generals	Webpage Language		English / Korean
	Power Supply		PoE(802.3.af), Min DC12V/1A
	Power Consumption	Watt	Max. 5W
	Operating condition		-10°C ~ +60°C / Less than 80% RH
	Storage condition		-50°C ~ +60°C / Less than 90% RH
	Dimensions	mm	80x130x45
	Weight	g	350g

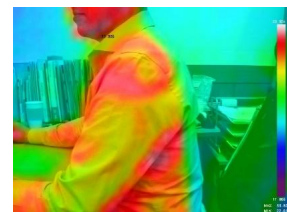
Video Display Mode



Visual Mode



Thermal Mode



Overlay Mode

* Specifications are subject to change without notice. * Overlay (visual + thermal) might not be 100% aligned.

Dual Thermal IP Camera

(Thermal: 80 X 60) FLIR Sensor
HI8060-OH

(Thermal: 160 X 120) FLIR Sensor
HI1612-OH



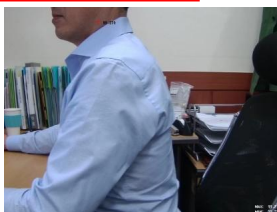
Features

- Dual Sensor (Thermal + Visual) IP Camera
- 3 Mode Display Support (Visual / Thermal / Overlay)
- ONVIF Compliant : Compatible with 3rd party Software & NVR
- Provides dedicated software (EVMS) for temperature monitoring and video control
- IP66 Rated Aluminum housing for Indoor / Outdoor use
- thermal by FLIR logo

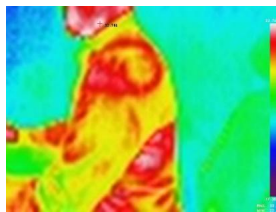
Specifications

	Features	Units	HI8060-OH	HI1612-OH
Thermal Image	Horizontal Resolution	Pixel	80	160
	Vertical Resolution	Pixel	60	120
	Pixel Pitch	μm	12	12
	Horizontal Angle of viewing	Degree	51°	57°
	Diagoal Angle	Degree	38°	71°
	Frame Rate	Hz	≤ 8.6Hz	≤ 8.7Hz
	Spectral Range	μm	8 ~ 14 LWIR	8 ~ 14 LWIR
	Temperature Sensitivity	mK	≤ 50mK@F#1.1	≤ 50mK@F#1.1
	Temperature Range	°C	Low Gain : -10~+450 High Gain : -10~+140	Low Gain : -10~+450 High Gain : -10~+140
	Overlay(CMOS+Thermal)		O (Only 1216x912)	O (Only 1216x912)
	Overlay/Thermal Resolutions	Pixel	1216(H)x912(V)	1216(H)x912(V)
CMOS Image	Image Sensor	Inch	2.8Inch CMOS Progressive Scan	
	Effective Pixels	Pixel	1,945(H)x1,109(V) : 2.16MP	
	Frame Rates	FPS	30	30
	Viewing Angle	Degree	93°(H)x52°(V)	93°(H)x52°(V)
	Resolutions(HxV)	Pixel	1920x1080,1216x912	1920x1080,1216x912
NETWORK	Ethernet		Ethernet 10/100 base-T(RJ-45)	
	Video Compression Format		H.264 / MJPEG	
	Bitrates Control Method		H.264:VBR,CBR / MJPEG:VBR	
	Streaming Capability		Primary, Secondary	
	Max.User Access		8persons(RTSP Streaming)	
	Application Program		EVMS / EOC API SDK	
	Webpage Language		English / Korean	
Generals	Power Supply		PoE(802.3.af), Min DC12V/1A	
	Power Consumption	Watt	Max. 5W	
	Operating condition		-10°C ~ +60°C / Less than 80% RH	
	Storage condition		-50°C ~ +60°C / Less than 90% RH	
	Dimensions	mm	420 x 170 x 140 (h)	
	Weight	g	1.9kgs	

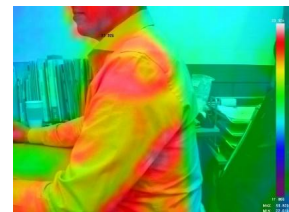
Video Display Mode



Visual Mode



Thermal Mode



Overlay Mode

* Specifications are subject to change without notice.

* Overlay (visual + thermal) is not 100% aligned.

DUAL SENSOR THERMAL IP CAMERA

NEW

- ◆ EN8060-SH
FLIR thermal sensor
- ◆ EN1612-SH
FLIR thermal sensor
- ◆ EN2519-SH



Features

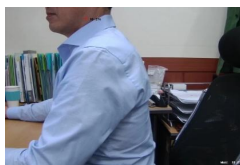
- SoC: Korean chip (EN675)
- Dual Sensor (Thermal + Visual) IP Camera
- 3 Mode Display Support (Visual / Thermal / Overlay)
- White LED (Manual or upon temperature alarm)
- IP67 rated waterproof and dustproof housing
- ONVIF compliant : Compatible with 3rd party software or NVR
- Provides dedicated software (EVMS) for temperature monitoring & video control
- FLIR thermal sensor: thermal by FLIR long on EN8060 & EN1612 model

Specifications

	Features	Units	EN1612-NW SEN1612-NW (Smart AI)	EN2519-NW SEN2519-NW (Smart AI)
Thermal Image	Horizontal Resolution	Pixel	160	256
	Vertical Resolution	Pixel	120	192
	Pixel Pitch	μm	12	12
	Horizontal Angle of viewing	Degree	56°	56° or 90°
	Vertical Angle of viewing	Degree	71°	62.5°
	Frame Rate	Hz	≤ 8.6Hz	≤ 25Hz
	Spectral Range	μm	8 ~ 14 LWIR	8 ~ 14, LWIR
	Temperature Sensitivity	mK	≤ 50mK@F#1.1	≤ 50mK@F#1.0
	Temperature Range	°C	Low Gain : -10~+450 High Gain : -10~+140	Low Gain : +50~+550 High Gain : -15~+150
	Overlay(CMOS+Thermal)		O (Only 1216x912)	Not Support
	Overlay/Thermal Resolutions	Pixel	1216(H)x912(V)	Not Support
CMOS Image	Image Sensor	Inch	2.8Inch CMOS Progressive Scan	2.8Inch CMOS Progressive Scan
	Effective Pixels	Pixel	1,945(H)x1,109(V) : 2.16MP	1,945(H)x1,109(V) : 2.16MP
	Frame Rates	FPS	30	30
	Viewing Angle	Degree	93°(H)x52°(V)	93°(H)x52°(V)
	Resolutions(HxV)	Pixel	1920x1080,1216x912	1920x1080,1280x720,640x480
NETWORK	Ethernet		Ethernet 10/100 base-T(RJ-45)	Ethernet 10/100 base-T(RJ-45)
	Video Compression Format		H.264 / MJPEG	H.264 / MJPEG
	Bitrates Control Method		H.264:VBR,CBR / MJPEG:VBR	H.264:VBR,CBR / MJPEG:VBR
	Streaming Capability		Primary, Secondary	Primary, Secondary
	MaxUser Access		8persons(RTSP Streaming)	8persons(RTSP Streaming)
	Application Program		EVMS / EOC API SDK	EVMS / EOC API SDK
	Webpage Language		English / Korean	English / Korean
Generals	Power Supply		PoE(802.3.af), Min DC12V/1A	PoE(802.3.af), Min DC12V/1A
	Power Consumption	Watt	Max. 5W	Max. 5W
	Operating condition		-10°C ~ +60°C / Less than 80% RH	-10°C ~ +60°C / Less than 80% RH
	Storage condition		-50°C ~ +60°C / Less than 90% RH	-50°C ~ +60°C / Less than 90% RH
	Dimensions	mm	TBD.	TBD.
	Weight	g	TBD.	TBD.

Video Display Mode

Visual Mode



Thermal Mode



Overlay Mode



Dual Thermal Camera

NEW

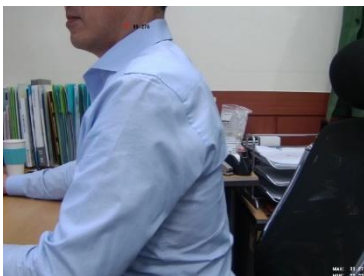
- ◆ EN3225-LH
- ◆ EN6451-LH



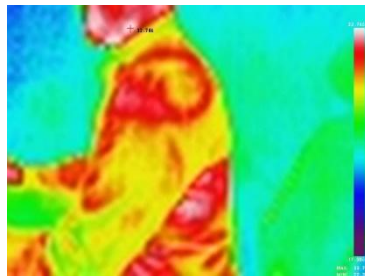
Features

- SoC: Korean chip (EN675)
- FLIR BOSON MODULE AVAILABLE
- Dual Sensors (Thermal + Visual) IP Camera: Display (Thermal & Visual)
- LED light (Upon Event Alarm or Manual)
- IP Rating: IP67
- ONVIF compliant : NVR / VMS compatible
- EVMS (monitoring software with temperature information for PC)

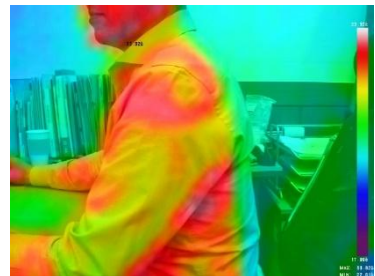
Video Display Mode



Visual Mode



Thermal Mode



Overlay Mode

Specifications

	Features	Units	XMS3828-LH	XMS6451-LH
Thermal Image	Horizontal Resolution	Pixel	384	640
	Vertical Resolution	Pixel	288	512
	Pixel Pitch	μm	17	12
	Horizontal Angle of viewing	Degree	19.5°	22.9° / 8°
	Vertical Angle of viewing	Degree	14.7°	18.4° / 6.4°
	Frame Rate	Hz	≤ 25Hz	≤ 25Hz
	Spectral Range	μm	8 ~ 14, LWIR	8 ~ 14, LWIR
	Temperature Sensitivity	mK	≤ 50mK@F#1.0	≤ 50mK@F#1.0
	Overlay(CMOS+Thermal)		O (Only 1216x912)	Not Support : Only Thermal
	Overlay/Thermal Resolutions	Pixel	1216(H)x912(V)	Only Thermal
NETWORK	Ethernet		Ethernet 10/100 base-T(RJ-45)	
	Video Compression Format		H.264 / MJPEG	
	Bitrates Control Method		H.264:VBR,CBR / MJPEG:VBR	
	Streaming Capability		Primary, Secondary	
	Max.User Access		8persons(RTSP Streaming)	
	Application Program		EVMS / EOC API SDK	
	Webpage Language		English / Korean	
Generals	Power Supply		PoE(802.3.af), Min DC12V/1A	
	Power Consumption	Watt	Max. 5W	Max. 5W
	Dimensions	mm	26 x 21 x 15cm (h)	
	Weight	g	1.8kgs	

Video Display Mode



Dual Thermal IP Camera

(384 X 288 Thermal + Visual)

NEW XM3828-OH



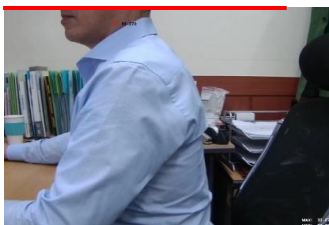
Features

- 384X288 Thermal Resolution
- 6 Thermal Imaging Palettes
 - White Hot / Black Hot / White Rainbow / Iron Rainbow / Lava / Red Hot
- ONVIF Compliant : Compatible with 3rd party Software & NVR
- Temperature Measurement
 - Center / Cold / Hot Spot
- 3 User-Defined Temperature Points

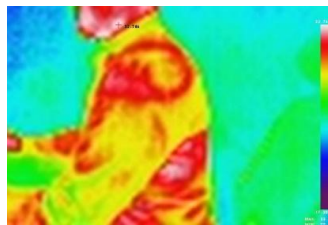
Specifications

	Features	Units	XM3828-OH : 28° / 54° / 90°
Thermal Image	Horizontal Resolution	Pixel	384
	Vertical Resolution	Pixel	288
	Pixel Pitch	μm	17
	Horizontal Angle of viewing	Degree	28° / 54° / 90°
	Vertical Angle of viewing	Degree	21° / 40° / 69°
	Frame Rate	Hz	≤ 25Hz
	Spectral Range	μm	8 ~ 14, LWIR
	Temperature Sensitivity	mK	≤ 50mK@F#1.0
	Temperature Range	°C	Low Gain : +100~+550 High Gain : -20~+120
	Overlay(CMOS+Thermal)		Support for 54° only
	Overlay/Thermal Resolutions	Pixel	1920x1080,1280x720,640x480 : Only Thermal
CMOS Image	Image Sensor	Inch	2.8Inch CMOS Progressive Scan
	Effective Pixels	Pixel	1,945(H)x1,109(V) : 2.16MP
	Frame Rates	FPS	30
	Viewing Angle	Degree	93°(H)x52°(V)
	Resolutions(HxV)	Pixel	1920(H)x1080(V)
NETWORK	Ethernet		Ethernet 10/100 base-T(RJ-45)
	Video Compression Format		H.264 / MJPEG
	Bitrates Control Method		H.264:VBR,CBR / MJPEG:VBR
	Streaming Capability		Primary, Secondary
	Max.User Access		8persons(RTSP Streaming)
	Application Program		EVMS / EOC API SDK
	Webpage Language		English / Korean
Generals	Power Supply		PoE(802.3.af), Min DC12V/1A
	Power Consumption	Watt	Max. 5W
	Operating condition		-15°C ~ +60°C / Less than 80% RH
	Storage condition		-50°C ~ +60°C / Less than 90% RH
	Dimensions	mm	142x128x322
	Weight	g	1.96Kg

Video Display Mode



Visual Mode



Thermal Mode



Overlay Mode

* Overlay is not aligned depending on models

* Specifications are subject to change without notice.

Single Thermal IP Camera

(640 X 512 Thermal)

NEW XMS6451-OH



Features

- 640X512 Thermal Resolution
- Various lenses available – up to 55mm
- 6 Thermal Imaging Palettes
 - White Hot / Black Hot / White Rainbow / Iron Rainbow / Lava / Red Hot
- ONVIF Compliant : Compatible with 3rd party Software & NVR
- Temperature Measurement
 - Center / Cold / Hot Spot
- 3 User-Defined Temperature Points

Specifications

	Features	Units	XMS6451-OH : 23° / 33° / 8°
Thermal Image	Horizontal Resolution	Pixel	640
	Vertical Resolution	Pixel	512
	Pixel Pitch	μm	12
	Horizontal Angle of viewing	Degree	23° - 19mm / 33° - 13mm / 8° - 55mm
	Vertical Angle of viewing	Degree	18.4° - 19mm / 23° - 13mm / 6.4° - 55mm
	Frame Rate	Hz	≤ 25Hz
	Spectral Range	μm	8 ~ 14, LWIR
	Temperature Sensitivity	mK	≤ 50mK@F#1.0
	Temperature Range	°C	Low Gain : +100~+550 High Gain : -20~+120
	Overlay(CMOS+Thermal)		Not Support : Only Thermal
	Overlay/Thermal Resolutions	Pixel	1920x1080,1280x720,640x480 : Only Thermal
CMOS	Image Sensor	Inch	No Support
	Effective Pixels	Pixel	No Support
	Frame Rates	FPS	No Support
	Viewing Angle	Degree	No Support
	Resolutions(HxV)	Pixel	No Support
NETWORK	Ethernet		Ethernet 10/100 base-T(RJ-45)
	Video Compression Format		H.264 / MJPEG
	Bitrates Control Method		H.264:VBR,CBR / MJPEG:VBR
	Streaming Capability		Primary, Secondary
	Max.User Access		8persons(RTSP Streaming)
	Application Program		EVMS / EOC API SDK
	Webpage Language		English / Korean
Generals	Power Supply		PoE(802.3.af), Min DC12V/1A
	Power Consumption	Watt	Max. 5W
	Operating condition		-15°C ~ +60°C / Less than 80% RH
	Storage condition		-50°C ~ +60°C / Less than 90% RH
	Dimensions	mm	142x128x322
	Weight	g	1.96Kg

Video Display Mode



Thermal & CMOS X30 IP PTZ Camera

NEW

EN6451-DPT

EN3225-DPT



Features

- FLIR Boson Thermal Sensor IP Camera
(thermal resolution: 320 X 256 or 640 x 512)
- Various Lens sizes available up to 55mm
(with 55mm lens, detection distance can cover more than 1.5 km)
- PT Driver included
- Zoom X30 on Visual Sensor
- ONVIF Compliant : Compatible with 3rd party Software & NVR
- Monitoring S/W : EVMS provided
- Picture to Picture Display (visual and thermal image)
- Non-Chinese SoC (Korean ENIX)

Specifications

		Units	EN3225-DPT	EN6451-DPT
Thermal Image	Thermal Resolution	Pixel	320 x 256	640 x 512
	Pixel Pitch	μm	12	12
	HFOV	Degrees	50° 4.3mm / 34° 6.3mm / 24° 9.1mm / 16° 14mm / 6° 36mm / 8° 55mm	32° 14mm / 24° 18mm / 18° 24mm / 12° 36mm / 8° 55mm
	Frame Rates	Hz	30Hz	30Hz
	Spectral Range	μm	8 to 14 μm	8 to 14 μm
	NETD	mK	≤50mk@f#1.0	≤50mk@f#1.0
	Temperature Range	°C	High Gain : -10 °C ~ 140 °C, Low Gain : -10 °C ~ 500 °C	High Gain : -10 °C ~ 140 °C, Low Gain : -10 °C ~ 500 °C
	Overlay (Visual+Thermal)		Picture in Picture type	
CMOS Image	Image Sensor	Inch	1/2.8" Sony Progressive Scan	
	Effective Pixel		2.13 Mega pixels	
	Zoom Ratio		Optical x30	
	Focal Length		F=4.6mm ~ 136.0mm	
	Frame Rates	Fps	30 fps	
Network	Ethernet		Ethernet 10/100 base-T(RJ-45)	Ethernet 10/100 base-T(RJ-45)
	Video Compression		H.264 / MJPEG	H.264 / MJPEG
	Bitrates Control		H.264: VBR, CBR / MJPEG:VBR	H.264: VBR, CBR / MJPEG:VBR
	Streaming Capability		Primary, Secondary	Primary, Secondary (Not support)
	Max. User Access		8 persons (RTSP streaming)	8 persons (RTSP streaming)
	Application Program		EVMS / EOC API SDK	EVMS / EOC API SDK
	Webpage Language		English / Korean	English / Korean
Generals	Power Supply		DC24V	DC24V
	Power Consumption	W	75W	100W
	Operating condition	°C	-40 °C ~ 60 °C / Up to 90%RH	-40 °C ~ 60 °C / Up to 90%RH
	Housing		Weather Proof	Weather Proof
	Dimension	Mm	233 x 433 x 360mm	250 x 472 x 360mm
	Weight	kg	20 kgs	20 kgs

VGA Resolution Thermal IP PT Camera

NEW

EN6451-PT (640 X 512 Thermal)

EN3225-PT (320 x 256 Thermal)

ONVIF Compliant



Features

- FLIR Boson Thermal Sensor IP Camera
(thermal resolution: 320 X 256 or 640 x 512)
- Various Lens sizes available up to 55mm
(with 55mm lens, detection distance can cover more than 1.5 km)
- PT Driver included
- ONVIF Compliant : Compatible with 3rd party Software & NVR
- Monitoring S/W : EVMS provided
- Non-Chinese SoC (Korean ENIX)

Specifications

		Units	EN3225-PT	EN6451-PT
Thermal Image	Thermal Resolution	Pixel	320 x 256	640 x 512
	Pixel Pitch	μm	12	12
	HFOV	Degrees	50° 4.3mm / 34° 6.3mm / 24° 9.1mm / 16° 14mm / 6° 36mm / 8° 55mm	32° 14mm / 24° 18mm / 18° 24mm / 12° 36mm / 8° 55mm
	Frame Rates	Hz	30Hz	30Hz
	Spectral Range	μm	8 to 14 μm	8 to 14 μm
	NETD	mK	≤50mk@f#1.0	≤50mk@f#1.0
	Temperature Range	°C	High Gain : -10 °C ~ 140 °C, Low Gain : -10 °C ~ 500 °C	High Gain : -10 °C ~ 140 °C, Low Gain : -10 °C ~ 500 °C
Network	Overlay (Visual+Thermal)		N/A	
	Ethernet		Ethernet 10/100 base-T(RJ-45)	Ethernet 10/100 base-T(RJ-45)
	Video Compression		H.264 / MJPEG	H.264 / MJPEG
	Bitrates Control		H.264: VBR, CBR / MJPEG:VBR	H.264: VBR, CBR / MJPEG:VBR
	Streaming Capability		Primary, Secondary	Primary, Secondary (Not support)
	Max. User Access		8 persons (RTSP streaming)	8 persons (RTSP streaming)
	Application Program		EVMS / EOC API SDK	EVMS / EOC API SDK
Generals	Webpage Language		English / Korean	English / Korean
	Power Supply		DC24V	DC24V
	Power Consumption	W	75W	100W
	Operating condition	°C	-40 °C ~ 60 °C / Up to 90%RH	-40 °C ~ 60 °C / Up to 90%RH
	Housing		Weather Proof	Weather Proof
	Dimension	Mm	233 x 433 x 360mm	250 x 472 x 360mm
	Weight	kg	20 kgs	20 kgs

Video Display Mode



Thermal Camera Compatible NVR

NEW FN-5004

NEW FN-5008

NEW FN-5016



**Plug
& Play**

Real-time

**HD
1080p**

Features

- Plug and Play PoE embedded (up to 16 channels)
- IEEE 802.3 at : Automatic power distribution for each PoE port (Up to 30w/PoE ports)
- Dual (Main & Sub) Streaming Save/Live Screen
- ONVIF Compatibility & Automatic IP Camera Discovery / Registration
- System, camera bandwidth network monitoring support
- P2P features that do not require port forwarding
- iSCSI function : Network external HDD linkage
- Smart Search : Simultaneous split search by hour and minute units
- Link Local (Zero Configuration) support
- H.264 I-Reference support

Specifications

MODEL		FN-5004(4CH)	FN-5008(8CH)	FN-5016(16CH)
Internal storage		1 x SATA HDD	2 x SATA HDD	2 x SATA HDD
System		Embedded Linux		
IP Camera	Channel	4Channel	8Channel + 1Channel(Add)	16Channel
	Protocol	FOCUS, ONVIF		
	PoE Channel	4Channel	8Channel	16Channel
	PoE Standard	100Mbps, 802.3at		
Display Speed/Mode		120fps / 1, 4	270fps / 1, 4 & 9	400fps / 1, 4, 9 & 16
Video input		IP Camera (Up to 4K UHD)		
Video Out	Monitor out	HDMI & VGA (Simultaneous output)		
	Frame Rate	HDMI : 1024*768, 1280*1024, 1280*720, 1920*1080, 2560*1600, 3840x2160 VGA : 1024*768, 1280*1024, 1280*720, 1920*1080 (Select)		
Recording speed	CIF ~ 1080P	120fps	270fps	480fps
	1920P	120fps	270fps	480fps
	2160P	-	270fps	480fps
Recording Resolution		Main Stream (up to 4K) & Sub Stream		
Network bandwidth (maximum)		40Mbps	80Mbps	80Mbps
Recording Mode		Continuous, Motion, Sensor, Continuous+Motion, Continuous+Sensor, Motion+Sensor Recording Schedule recording, pre & post alarm recording, emergency recording		
Replay & Search	Speed	x1, x2, x4, x8, x16, x32, x64, x99		
	Channel & Resolution	1 & 4 : Main Stream, 9 & 16 : Sub Stream		
	Function	Intelli-Search by Time Bar, Calendar (Date & Time) and Event Search		
Audio input/output		1 Channel / 1 Channel		
Alarm input / Sensor output		4 Channel / 1 Channel		
P/T/Z control		ONVIF		
Network interface		1EA Gigabit ethernet (RJ45) - Fixation IP, DHCP & DDNS		
Compatible protocols		IPV4, TCP/IP, DHCP, HTTP, RTSP, STMP, FTP, Zero Configuration, NTP, DDNS		
Network function		1) Dual Stream (Local Storage & Network Transmission) 2) NTP server time synchronization 3) Real-time monitoring, remote playback and file backup 4) Send email, reboot remote system 5) Dual recording (real-time screen / search) 6) No need for P2P network port forwarding		
Remote management	Software	CMS & MMS (MV3000)		
	Web (IE)	Live Monitoring, Search & System Settings		
Back up		2EA USB local backup, CMS network backup, FTP server upload backup		
System recovery after power failure		Auto-Reboot and Journaling File System		
Advanced features		1) Smart Search 2) Easy installation, multi-language support, help function 3) Specify the recording period with easy setting 4) Support for upgrade via USB/CMS network 5) Warning alarm when system internal temperature rises 6) Import and export of settings 7) Digital zoom possible 8) HDD SMART smart information (capacity, bad sector, period of use)		
Power		48V 1.36A D/C	110~240V A/C (180W)	110 ~240V A/C (280W)
Operating temperature/humidity		5~40 °C / 20~90% RH		
Size (WxDxH)		315×240×48 mm(1U)	385×315×52 mm(1U)	385×315×52 mm(1U)
Certification		CE & FCC & KCC & WEEE, RoHS		

Thermal Camera Compatible NVR

NEW FN-5104

NEW FN-5108

NEW FN-5116



**Plug
& Play**

Real-time

**HD
1080p**

Features

- Plug and Play PoE embedded (up to 16 channels)
- IEEE 802.3 at : Automatic power distribution for each PoE port (Up to 30w/PoE ports)
- ONVIF Compatibility & Automatic IP Camera Discovery / Registration
- Dual (Main & Sub) Streaming Save/Live Screen
- System, camera bandwidth network monitoring support
- P2P features that do not require port forwarding
- iSCSI function : Network external HDD linkage
- Smart Search : Simultaneous split search by hour and minute units
- Link Local (Zero Configuration) support
- H.264 I-Reference support

Specifications

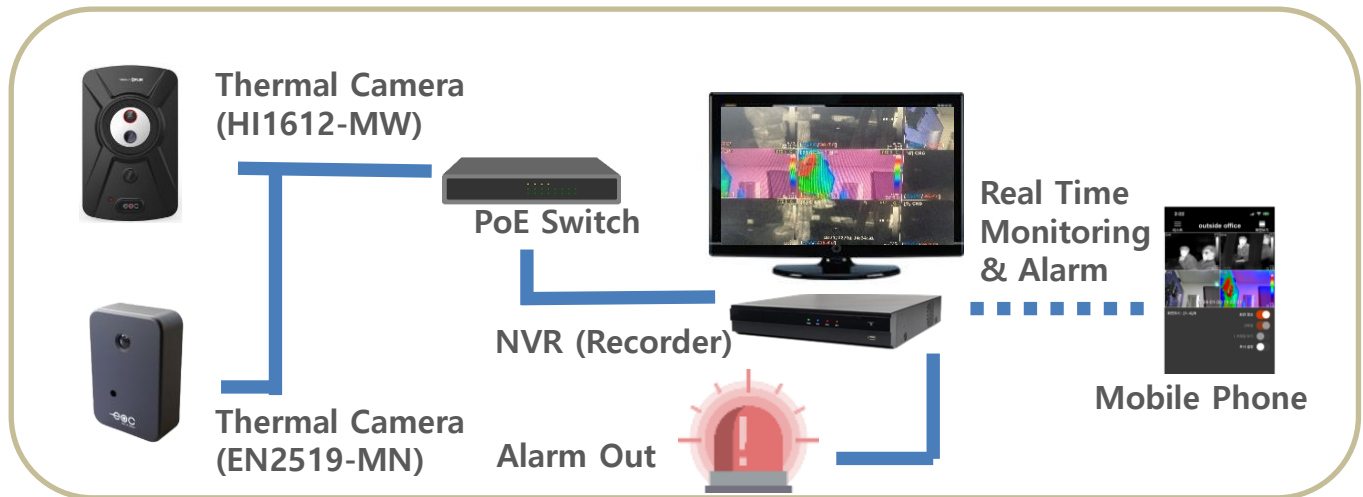
MODEL		FN-5104(4CH)	FN-5108(8CH)	FN-5116(16CH)
Internal storage		2 x SATA HDD	4 x SATA HDD	4 x SATA HDD
System		Embedded Linux		
IP Camera	Channel	4Channel + 5Channel(Add)	8Channel + 1Channel(Add)	16Channel
	Protocol	FOCUS, ONVIF		
	PoE Channel	4Channel	8Channel	16Channel
	PoE Standard	100Mbps, 802.3at		
Display Speed/Mode		120fps / 1, 4 & 9	270fps / 1, 4 & 9	400fps / 1, 4, 9 & 16
Video input		IP Camera (Up to 4K UHD)		
Video Out	Monitor out	HDMI & VGA (Simultaneous output)		
	Frame Rate	HDMI : 1024*768, 1280*1024, 1280*720, 1920*1080, 2560*1600, 3840x2160 (4K) VGA : 1024*768, 1280*1024, 1280*720, 1920*1080 (Select)		
Recording speed	CIF ~ 1080P	270fps	270fps	480fps
	1920P	270fps	270fps	480fps
	2160P	270fps	270fps	480fps
Recording Resolution		Main Stream (up to 4K) & Sub Stream		
Network bandwidth (maximum)		80Mbps	80Mbps	160Mbps
Recording Mode		Continuous, Motion, Sensor, Continuous+Motion, Continuous+Sensor, Motion+Sensor Recording Schedule recording, pre & post alarm recording, emergency recording		
Replay & Search	Speed	x1, x2, x4, x8, x16, x32, x64, x99		
	Channel & Resolution	1 & 4 : Main Stream, 9 & 16 : Sub Stream		
	Function	Intelli-Search by Time Bar, Calendar (Date & Time) and Event Search		
Audio input/output		1 Channel / 1 Channel		
Alarm input / Sensor output		4 Channel / 1 Channel	8 Channel / 1 Channel	16 Channel / 4 Channel
P/T/Z control		ONVIF		
Network interface		1EA Gigabit ethernet (RJ45) - Fixation IP, DHCP & DDNS		
Compatible protocols		IPV4, TCP/IP, DHCP, HTTP, RTSP, STMP, FTP, Zero Configuration, NTP, DDNS		
Network function		1) Dual Stream (Local Storage & Network Transmission) 2) Dual recording (real-time screen / search) 3) Real-time monitoring, remote playback and file backup (Triplex-on-Remote) 4) NTP server time synchronization 5) Send email, Remote system reboot, Remote PTZ 6) P2P Function – No network port forwarding required		
Remote management	Software	CMS & MMS (MV3000)		
	Web (IE)	Live Monitoring, Search & System Settings		
Back up		2EA USB local backup, CMS network backup, FTP server upload backup		
System recovery after power failure		Auto-Reboot and Journaling File System		
Advanced features		1) Support for upgrade via USB/CMS network 2) Import and export of settings 3) Specify the recording period with easy setting 4) Easy installation, multi-language support, help function 5) Smart Search 6) HDD SMART smart information (capacity, bad sector, period of use) 7) Digital zoom possible 8) Warning alarm when system internal temperature rises		
POS		Text-in Based (USB to Serial support, TCP/IP Network)		
System Operation		IR remote control, USB mouse		
Power		48V 1.36A D/C	110~240V A/C (180W)	110 ~240V A/C (280W)
Operating temperature/humidity		5~40 °C / 20~90% RH		
Size (WxDxH)		315×240×48 mm(1U)	385×315×52 mm(1U)	385×315×52 mm(1U)
Certification		CE & FCC & KCC & WEEE, RoHS		

* Specifications are subject to change without notice.

NVR Diagram

Product overview

EOC NVR is an optimized recording device for monitoring thermal images & temperature information. Real time monitoring and alarm setting can be set and specific area can be selected for focused-monitoring.



Product Features

- Save Thermal Image IP Camera Video
- Intuitive thermal imaging temperature monitoring dashboard support
- Image-based thermal monitoring
- Thermal image multi-view (image/temperature data/event)

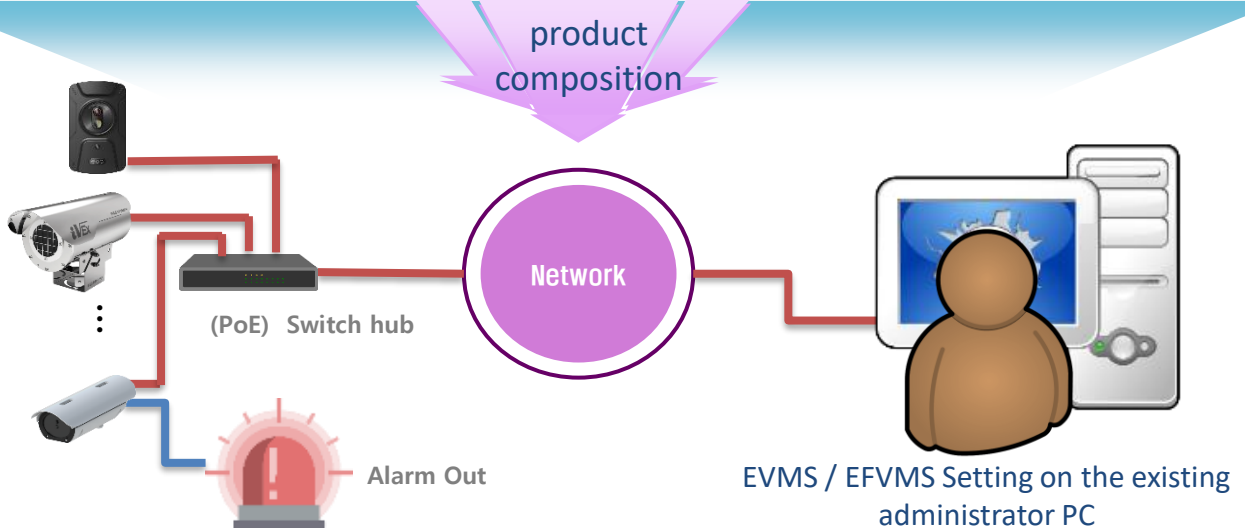
- Support for thermal imaging event detection/search/reportation
- Video monitoring and editing function for user convenience
- Camera ROI Zone support
- Connecting to Mobile Phone

* Specifications are subject to change without notice.

EVMS : Monitoring Software

Product overview

EVMS is an optimized Software for monitoring that can be installed on PC. Thermal images & temperature information are transmitted real time and alarm setting on specific area can be done.



Product Features

- **Save Thermal Image IP Camera Video**

- **Intuitive thermal imaging temperature monitoring dashboard support**

- **Image-based thermal monitoring**

- **Thermal image multi-view (image/temperature data/event)**

- **Support for thermal imaging event detection/search/reportation**

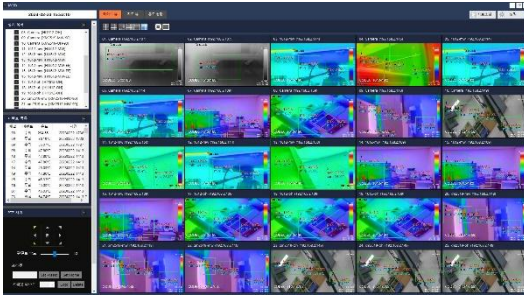
- **Video monitoring and editing function for user convenience**

- **Camera ROI Zone support**

- **Face temperature recognition**

* Specifications are subject to change without notice.

EVMS Main function



Basic 4 Channel (upto 25)



EVMS Intuitive temperature monitoring



Alarm & Pop-up Window



ROI Settings (Specific Area Temperature)



Temperature Graph

적외선 열화상분포 측정기록표

측정장비			
측정대상	Camera	사용권한	

1. 판정기준(3상 비교법)

wow	최소온도	주의온도	위험온도
	0.00	35.00	45.00

측정부위	측정온도	비고
1. 1차	35.00	정상
2. 2차	35.00	정상
3. 3차	35.00	정상
4. 4차	35.00	정상
5. 5차	35.00	정상
6. 6차	35.00	정상
7. 7차	35.00	정상
8. 8차	35.00	정상
9. 9차	35.00	정상
10. 10차	35.00	정상
11. 11차	35.00	정상
12. 12차	35.00	정상
13. 13차	35.00	정상
14. 14차	35.00	정상
15. 15차	35.00	정상
16. 16차	35.00	정상
17. 17차	35.00	정상
18. 18차	35.00	정상
19. 19차	35.00	정상
20. 20차	35.00	정상
21. 21차	35.00	정상
22. 22차	35.00	정상
23. 23차	35.00	정상
24. 24차	35.00	정상
25. 25차	35.00	정상
26. 26차	35.00	정상
27. 27차	35.00	정상
28. 28차	35.00	정상
29. 29차	35.00	정상
30. 30차	35.00	정상
31. 31차	35.00	정상
32. 32차	35.00	정상
33. 33차	35.00	정상
34. 34차	35.00	정상
35. 35차	35.00	정상
36. 36차	35.00	정상
37. 37차	35.00	정상
38. 38차	35.00	정상
39. 39차	35.00	정상
40. 40차	35.00	정상
41. 41차	35.00	정상
42. 42차	35.00	정상
43. 43차	35.00	정상
44. 44차	35.00	정상
45. 45차	35.00	정상
46. 46차	35.00	정상
47. 47차	35.00	정상
48. 48차	35.00	정상
49. 49차	35.00	정상
50. 50차	35.00	정상
51. 51차	35.00	정상
52. 52차	35.00	정상
53. 53차	35.00	정상
54. 54차	35.00	정상
55. 55차	35.00	정상
56. 56차	35.00	정상
57. 57차	35.00	정상
58. 58차	35.00	정상
59. 59차	35.00	정상
60. 60차	35.00	정상
61. 61차	35.00	정상
62. 62차	35.00	정상
63. 63차	35.00	정상
64. 64차	35.00	정상
65. 65차	35.00	정상
66. 66차	35.00	정상
67. 67차	35.00	정상
68. 68차	35.00	정상
69. 69차	35.00	정상
70. 70차	35.00	정상
71. 71차	35.00	정상
72. 72차	35.00	정상
73. 73차	35.00	정상
74. 74차	35.00	정상
75. 75차	35.00	정상
76. 76차	35.00	정상
77. 77차	35.00	정상
78. 78차	35.00	정상
79. 79차	35.00	정상
80. 80차	35.00	정상
81. 81차	35.00	정상
82. 82차	35.00	정상
83. 83차	35.00	정상
84. 84차	35.00	정상
85. 85차	35.00	정상
86. 86차	35.00	정상
87. 87차	35.00	정상
88. 88차	35.00	정상
89. 89차	35.00	정상
90. 90차	35.00	정상
91. 91차	35.00	정상
92. 92차	35.00	정상
93. 93차	35.00	정상
94. 94차	35.00	정상
95. 95차	35.00	정상
96. 96차	35.00	정상
97. 97차	35.00	정상
98. 98차	35.00	정상
99. 99차	35.00	정상
100. 100차	35.00	정상

2. 부위별 측정온도

wow	측정부위	최소온도	최대온도
		20.38	51.43
	최소온도		
	최대온도		

Event Report in Excel file



Map Location View Monitoring

time	A	B	C	D
2023-01-31 11:47:18		roi	max temperature	
2023-01-31 11:47:18		0	0	
2023-01-31 11:47:18	1	wow	22.08	
2023-01-31 11:47:19		0	0	
2023-01-31 11:47:19	1	wow	22.1	
2023-01-31 11:47:20		0	0	
2023-01-31 11:47:20	1	wow	51.4	
2023-01-31 11:47:21		0	0	
2023-01-31 11:47:21	1	wow	62.82	

Temperature Data every second



Thank you.