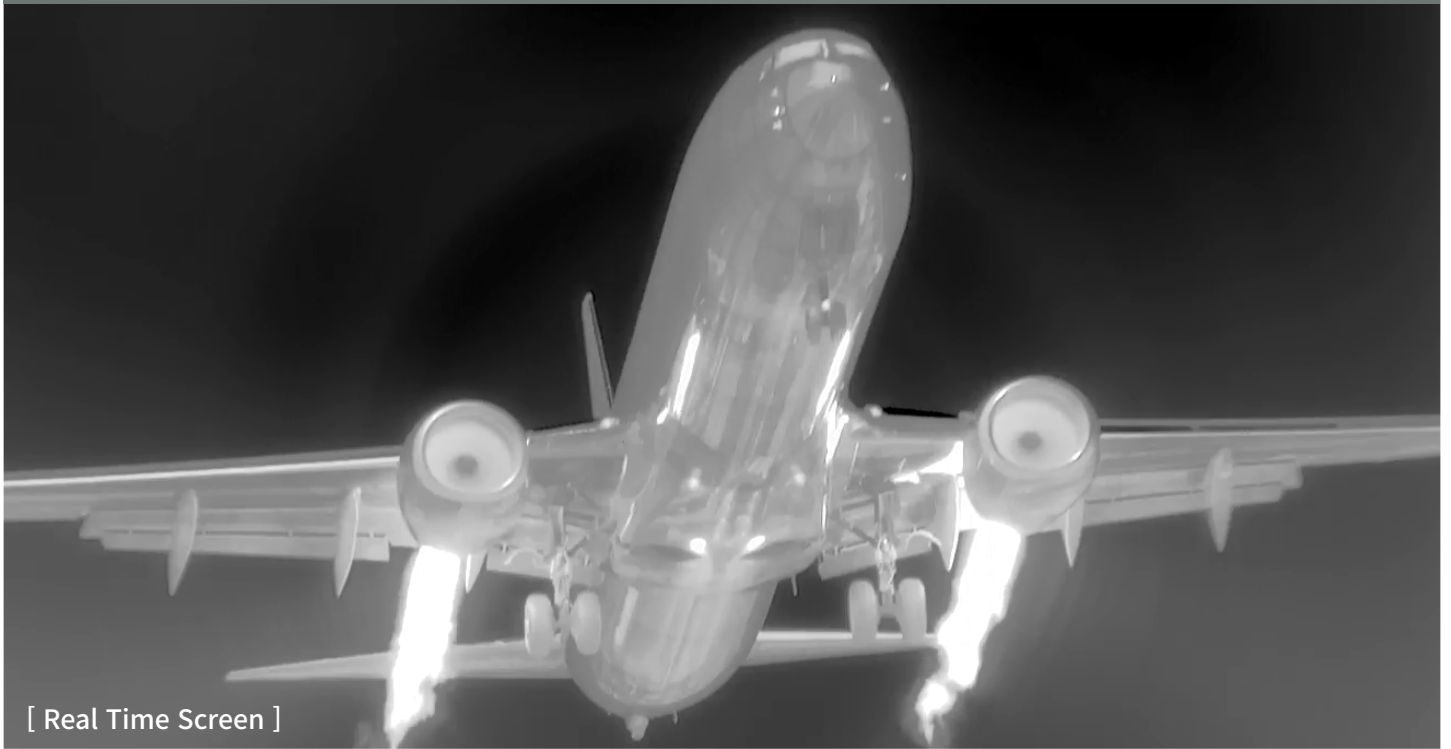




# NYX Series

## Cooled Thermal Imaging Camera Module



The NyX series is a completely redesigned thermal imaging camera platform designed to deliver unsurpassed performance with state-of-the-art technology, which can always provide good thermal imaging in dark and bright areas without user adjustment. NyX technology enables you to experience improved situational awareness.

## LAE (Local Area Enhancement)

Increase context awareness by improving image contrast for very dark or very bright areas with local processing.



[ LAE Off ]

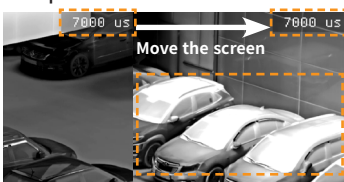


[ LAE On ]

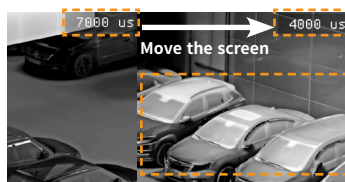
## Automatic Integration Time

It is a function that optimizes image quality by detecting rapid temperature changes in the operating environment and adjusting the integration time in real time.

There is no hassle of adjusting the integration time according to weather conditions such as summer, winter, and high daily temperature differences.



[ Before ]



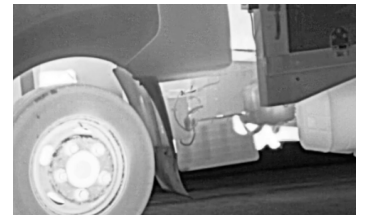
[ After ]

## DDE (Digital Detail Enhancement)

Improves detailed description of objects by enhancing low contrast targets in high dynamic ranges.



[ DDE Off ]



[ DDE On ]

## ROI User Settings



It is a function that processes images only in certain areas.

Only the set area can be processed separately by setting a specific area by the user himself.

## Adaptive HEQ (Adaptive Histogram Equalization)

Special imaging processing that highlights complex (high entropy) areas in a scene improves object details except for backgrounds such as sky, sea, etc

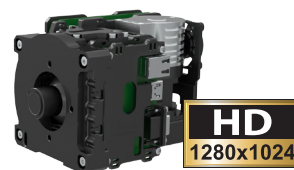
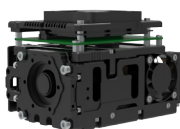


[ HEQ Off ]



[ HEQ On ]

# SPECSHEET



DETECTOR	NYX-SC640C	NYX-SC640R	NYX-SC1280R
Detector Type	Cooled InSb		
Pixel Pitch	15μm	15μm	10μm
Array Format	640 x 512	640 x 512	1280 x 1024
Spectral Response	3.7μm ~ 5μm	3.7μm ~ 5μm	3μm ~ 5μm
F/#	F/#5.5	F/#4.0	F/#4.0
NETD	<20mK typical (without lens)	<20mK typical (without lens)	<25mK typical (without lens)
COOLER			
Cooler Type	Stirling Cooler, MTTF : 10,000Hours	Stirling Cooler, MTTF : 15,000Hours	Stirling Cooler, MTTF : 12,000Hours (Option : 17,000Hours)
Cool-down Time	<7Minute (@23°C) (Max)		
VIDEO			
Output Frequency	30Hz		
Video Output	HDMI		
Resolution	1280 x 720, Option (1920x1080 / 1280x1024 / 720x576)	1280 x 720, Option (1920x1080 / 1280x1024 / 720x576)	1920x1080, Option (1280x1024 / 1280x720 / 720x576)
LENS			
Continuous Zoom LENS	20-275mm(28.0° ~ 1.9°), 50-700mm(11.4°~0.8°), 80-1200mm(7.1°~0.5°)	15-300mm(35.1°~1.8°), 21-420mm(25.1°~1.3°), 35-690mm(15.2° ~ 0.9°), 45-900mm(11.4° ~ 0.6°), 60-1200mm(8.6° to 0.5°)	15-300mm(44.9° ~ 2.4°), 33-420mm(20.0° ~ 1.7°), 60-690mm(13.5° ~ 1.0°), 72-900mm(9.3° ~ 0.8°), 100-1200mm(6.8° to 0.6°)
FUNCTION			
Calibration	Manual /Interval(min) Mode Selectable		
Image Translation	FLIP(Vertical, Horizontal), Inverse		
Image Enhance	AGC, Adaptive HEQ, LAE, DDE, DNR, Gamma, Sharpness, Auto Integral Time		
Image Utility	Auto Focus, Digital Zoom (x8)		
Pseudo Color	WhiteHot / Rainbow / Twilight / TwilightShifted / Turbo / Iron / Plasma		
OSD	Full Functions Menu Available		
MECHANICAL			
Dimensions (WxHxD)	99.7mm x 88.4mm x 130.9mm	118.2mm x 108.7mm x 150.7mm	117mm x 110mm x 158mm
Weight	1.14kg	1.74kg	1.74kg
ELECTRICAL			
Power Supply	DC24V / 1.40A[33.79W] (Max)	DC24V / 1.37A[32.88W] (Max)	DC24V / 1.76A[42.24W] (Max)
ETC			
Ext-Interface	RS-232, RS-422 ( 9600 / 19200 / 38400 / 57600 / 115200bps )		
Operating Temperature	-32°C ~ +55°C		
Storage Temperature	-40°C ~ +65°C		

# NYX-SC640C Series

## SPECIFICATIONS

\* Specifications are subject to change without notice.

DETECTOR	
Detector Type	Cooled InSb, 640(H) x 512(V)
Pixel Pitch	15μm
Spectral Response	3.7μm ~ 5μm (MWIR)
F/#	F/#5.5
NETD	<20mK typical (without lens)

COOLER	
Cooler Type	Stirling Cooler, MTTF : 10,000Hours
Cool-down Time	<7Minute (@23°C) (Max)

VIDEO	
Output Frequency	30Hz
Video Output	HDMI
Resolution	1280 x 720 , Option (1920 x 1080 / 1280 x 1024 / 720 x 576)

FUNCTION	
Calibration	Manual /Interval(min) Mode Selectable
Image Translation	FLIP(Vertical, Horizontal), Inverse
Image Enhance	AGC, Adaptive HEQ, LAE, DDE, DNR, Gamma, Sharpness, Auto Integral Time
Image Utility	Auto Focus, Digital Zoom (x8)
Pseudo Color	WhiteHot / Rainbow / Twilight / TwilightShifted / Turbo / Iron / Plasma

MECHANICAL	
Dimensions (WxHxD)	99.7mm x 88.4mm x 130.9mm
Weight	1.14kg

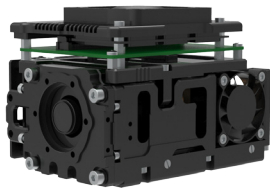
ELECTRICAL	
Power Supply	DC24V / 1.40A [33.79W] (Max)

ETC	
Ext-Interface	RS-232, RS-422 ( 9600 / 19200 / 38400 / 57600 / 115200bps )
Operating Temperature	-32°C ~ +55°C
Storage Temperature	-40°C ~ +65°C

LENS OPTION	D : Detection	R : Recognition	I : Identification	* Actual range may vary depending on camera setting, environmental conditions and type of monitor used.
Lens Focal length	20 to 275mm			50 to 700mm 80 to 1200mm
HFOV	28°~1.9°			11.4°~0.8° 7.1°~0.5°
F/#	F/#5.5			F/#5.5 F/#5.5
DRI Human 1.8 x 0.5 m	D : 8.4km R : 2.4km I : 1.5km			D : 16.7km R : 5.7km I : 3.7km D : 22km R : 9.1km I : 6.1km
DRI Vehicle 2.3 x 2.3 m	D : 14.9km R : 5.2km I : 3.4km			D : 22.5km R : 11.1km I : 7.8km D : 26.1km R : 15.7km I : 11.7km
Dimensions (Unit : mm, WxHxD)	99.7 x 88.4 x 195.1			156.2 x 156.2 x 304.7 268 x 268 x 453.5
Weight	1.4kg			2.78kg 8.54kg



[With 20-275mm Zoom Lens]



[Without Lens]

- Detector type : Cooled InSb 15μm (640 x 512)
- **NETD : <20mk typical (without lens)**
- **Continuous ZOOM LENS**
- **Compact Type**
- Continuous Digital Zoom x8
- Advanced image processing
  - Auto Gain Control (AGC)
  - Adaptive Histogram Equalization (Adaptive HEQ)
  - Local Area Enhancement (LAE)
  - Digital Detail Enhancement (DDE)
  - Denoise Reduction (DNR)
  - Sharpness
- MTTF(Mean Time To Failure) 10,000 hours
- Various color sets  
(WhiteHot / Rainbow / Twilight / TwilightShifted / Turbo / Iron / Plasma)

# NYX-SC640R Series

## SPECIFICATIONS

\* Specifications are subject to change without notice.

DETECTOR	
Detector Type	Cooled InSb, 640(H) x 512(V)
Pixel Pitch	15μm
Spectral Response	3.7μm ~ 5μm (MWIR)
F/#	F/#4.0
NETD	<20mK typical (without lens)

COOLER	
Cooler Type	Stirling Cooler, MTTF : 15,000Hours
Cool-down Time	<7Minute (@23°C) (Max)

VIDEO	
Output Frequency	30Hz
Video Output	HDMI
Resolution	1280 x 720 , Option (1920 x 1080 / 1280 x 1024 / 720 x 576)

FUNCTION	
Calibration	Manual /Interval(min) Mode Selectable
Image Translation	FLIP(Vertical, Horizontal), Inverse
Image Enhance	AGC, Adaptive HEQ, LAE, DDE, DNR, Gamma, Sharpness, Auto Integral Time
Image Utility	Auto Focus, Digital Zoom (x8)
Pseudo Color	WhiteHot / Rainbow / Twilight / TwilightShifted / Turbo / Iron / Plasma

MECHANICAL	
Dimensions (WxHxD)	118.2mm x 108.7mm x 150.7mm
Weight	1.74kg

ELECTRICAL	
Power Supply	DC24V / 1.37A [32.88W] (Max)

ETC	
Ext-Interface	RS-232, RS-422 ( 9600 / 19200 / 38400 / 57600 / 115200bps )
Operating Temperature	-32°C ~ +55°C
Storage Temperature	-40°C ~ +65°C

LENS OPTION	D : Detection	R : Recognition	I : Identification	* Actual range may vary depending on camera setting, environmental conditions and type of monitor used.		
	D : 15 to 300mm	R : 21 to 420mm	I : 35 to 690mm	45 to 900mm	60 to 1200mm	
HFOV	35.1° to 1.8°	25.1° to 1.3°	15.2° to 0.9°	11.4° to 0.6°	8.6° to 0.5°	
F/#	F/#4.0	F/#4.0	F/#4.0	F/#4.0	F/#4.0	
DRI Human 1.8 x 0.5 m	D : 10km R : 3km I : 1.9km	D : 12.9km R : 4.1km I : 2.6km	D : 17.6km R : 6.3km I : 4.2km	D : 20.2km R : 7.9km I : 5.3km	D : 22.8km R : 10km I : 6.8km	
DRI Vehicle 2.3 x 2.3 m	D : 16.5km R : 6.3km I : 4.2km	D : 19.3km R : 8.3km I : 5.6km	D : 23km R : 11.9km I : 8.4km	D : 24.7km R : 14.1km I : 10.7km	D : 26.4km R : 16.4km I : 12.5km	
Dimensions (Unit : mm, WxHxD)	118.2 x 111.4 x 265.5	132 x 132 x 336	210 x 210 x 399.5	286 x 286 x 423.2	388 x 388 x 559.9	
Weight	2.9kg	3.6kg	6.3kg	10kg	16.4kg	



[With 15-300mm Zoom Lens]



[Without Lens]

- Detector type : Cooled InSb 15μm (640 x 512)
- **NETD : <20mk typical (without lens)**
- **Continuous ZOOM LENS**
- Continuous Digital Zoom x8
- Advanced image processing
  - Auto Gain Control (AGC)
  - Adaptive Histogram Equalization (Adaptive HEQ)
  - Local Area Enhancement (LAE)
  - Digital Detail Enhancement (DDE)
  - Denoise Reduction (DNR)
  - Sharpness
- MTTF(Mean Time To Failure) 15,000 hours
- Various color sets  
(WhiteHot / Rainbow / Twilight / TwilightShifted / Turbo / Iron / Plasma)

# NYX-SC1280R Series



## SPECIFICATIONS

\* Specifications are subject to change without notice.

### DETECTOR

Detector Type	Cooled InSb, 1280(H) x 1024(V)
Pixel Pitch	10μm
Spectral Response	3μm ~ 5μm (MWIR)
F/#	F/#4.0
NETD	<25mK typical (without lens)

### COOLER

Cooler Type	Stirling Cooler, MTTF : 12,000Hours (Option : 17,000Hours)
Cool-down Time	<7Minute (@23°C) (Max)

### VIDEO

Output Frequency	30Hz
Video Output	HDMI
Resolution	1920 x 1080, Option (1280 x 1024 / 1280 x 720 / 720 x 576)

### FUNCTION

Calibration	Manual /Interval(min) Mode Selectable
Image Translation	FLIP(Vertical, Horizontal), Inverse
Image Enhance	AGC, Adaptive HEQ, LAE, DDE, DNR, Gamma, Sharpness, Auto Integral Time
Image Utility	Auto Focus, Digital Zoom (x8)
Pseudo Color	WhiteHot / Rainbow / Twilight / TwilightShifted / Turbo / Iron / Plasma

### MECHANICAL

Dimensions (WxHxD)	117mm x 110mm x 158mm
Weight	1.74kg

### ELECTRICAL

Power Supply	DC24V / 1.76A[42.24W] (Max)
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### ETC

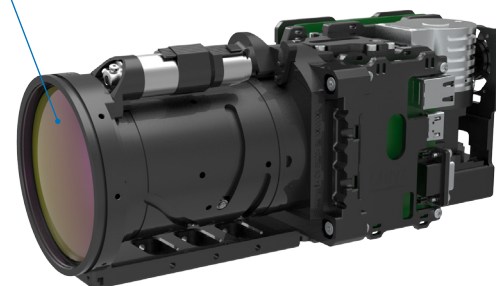
Ext-Interface	RS-232, RS-422 ( 9600 / 19200 / 38400 / 57600 / 115200bps )
Operating Temperature	-32°C ~ +55°C
Storage Temperature	-40°C ~ +65°C

### LENS OPTION

D : Detection   R : Recognition   I : Identification   \* Actual range may vary depending on camera setting, environmental conditions and type of monitor used.

	D : Detection	R : Recognition	I : Identification		
Lens Focal length	15 to 300mm	33 to 420mm	60 to 690mm	72 to 900mm	100 to 1200mm
HFOV	44.9° ~ 2.4°	20.0° ~ 1.7°	13.5° ~ 1.0°	9.3° to 0.8°	6.8° to 0.6°
F/#	F/4.0	F/4.0	F/4.0	F/4.0	F/4.0
DRI Human 1.8 x 0.5 m	D : 10.7km R : 3.2km I : 2km	D : 13.8km R : 4.3km I : 2.8km	D : 18.8km R : 6.8km I : 4.5km	D : 21.5km R : 8.5km I : 5.7km	D : 24.3km R : 10.7km I : 7.3km
DRI Vehicle 2.3 x 2.3 m	D : 17.7km R : 6.8km I : 4.5km	D : 20.6km R : 8.9km I : 6.1km	D : 24.5km R : 12.8km I : 9.1km	D : 26.3km R : 15.1km I : 11.1km	D : 28.1km R : 17.7km I : 13.6km
Dimensions (Unit : mm, WxHxD)	117 x 113.6 x 274	132 x 132 x 344.5	210 x 210 x 408	286 x 286 x 481.6	388 x 388 x 567.2
Weight	2.9kg	3.6kg	6.3kg	10kg	16.4kg

Continuous Zoom Lens



[With 15-300mm Zoom Lens]



[Without Lens]

- Detector type : Cooled InSb 10μm (1280 x 1024)
- **NETD : <25mk typical (without lens)**
- **Continuous ZOOM LENS**
- Continuous Digital Zoom x8
- Advanced image processing
  - Auto Gain Control (AGC)
  - Adaptive Histogram Equalization (Adaptive HEQ)
  - Local Area Enhancement (LAE)
  - Digital Detail Enhancement (DDE)
  - Denoise Reduction (DNR)
  - Sharpness
- MTTF(Mean Time To Failure)
  - 12,000 hours (Option : 17,000 hours)
- Various color sets  
(WhiteHot / Rainbow / Twilight / TwilightShifted / Turbo / Iron / Plasma)



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