

iBoost X SWIR Camera



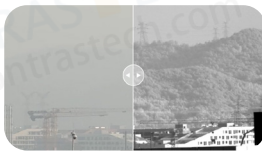
Key Features

This high-performance industrial camera features a 3/4" InGaAs sensor with a 900-1700nm spectral range (optional 1030-1800nm filter), delivering 1000fps@640x512 high-speed imaging. Equipped with a global shutter, 14-bit dynamic range, and -30° C~60° C operational stability.

TYPICAL APPLICATIONS



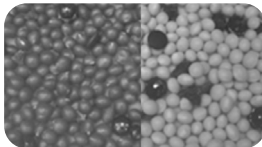
Fruit Spoilage Detection



Fog Penetration



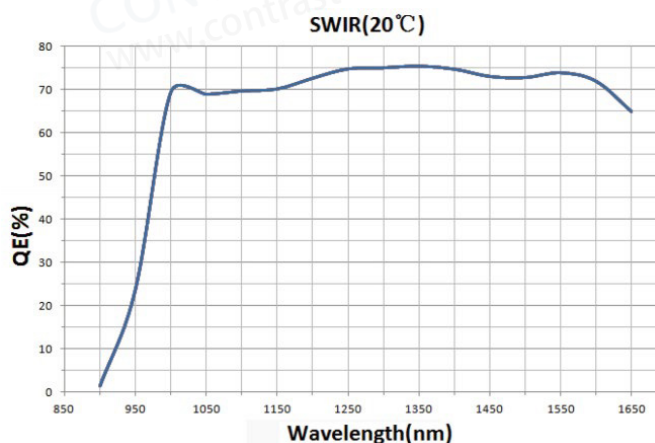
Inspection of Contents In Packaging



Sorting Materials

- Spectral Range: 900-1700nm
- Up to 1000fps@640x512 (14-bit) and 14-bit high dynamic range
- Global shutter, USB 3.0、GigE、10GigE、CameraLink interface
- This camera employs Active Thermoelectric Cooling (TEC) technology to stabilize the sensor temperature at 25° C below ambient

► Spectral Response Curve



QE Curve

iBoost X SWIR Camera



Model	iBX-SWC640A-1000	iBX-SWC640A-724	iBX-SWC640A-517
Sensor Technology	InGaAs CMOS Image Sensor		
Spectral Range	900nm–1700nm		
Pixel Size	15 μm x 15 μm		
Sensor Size	3/4"		
ADC Bit	14-bit		
Resolution	640 x 512		
FPS	1000fps	724fps	517fps
Hardware Image Cache	512MB		
QE	75%@1350nm		
Interface	CameraLink Full		
Cooling	40° C below ambient temperature		
Size	68*68*90.3mm (485g) – (Dimensions C)		
Data Format	Mono 12 / Mono 14		
Conversion Gain	970.01e-/DN(LG), 18.02e-/DN(MG), 3.31e-/DN (HG)		
Dynamic Range	69.2dB(LG), 63.2dB(MG), 57.4dB(HG) *		
Read Noise	1.3DN(LG), 2.7DN(MG), 5.0DN(HG)		
Full Well Capacity	3.5Me(LG), 70Ke(MG), 12Ke(HG) *		
SNR	65.4dB(LG), 48.5dB(MG), 40.7dB(HG)		
Dark Current	30fa@0.1V&18°C		
Exposure Time	16us~1s		
Shutter	Global		
Digital I/O	1 opto-isolated input, 1 opto-isolated output		
Power Supply	DC 12V		
Power Consumption	8.4W (TEC OFF) / <16W (TEC ON)		
Temperature	–40~85 °C (Storage), –30~60° C (Working)		
Humidity	20%–80% RH, non-condensing		
Lens Mount	C-Mount		
Software	Full SDK Package / iBoostX		

*: LG: CDS-OFF, DeNoise-ON; MG: CDS-ON, DeNoise-OFF; HG: CDS-ON, DeNoise-OFF.

iBoost X SWIR Camera



Model	iBX-SWC640B-1000	iBX-SWC640B-724	iBX-SWC640B-517
Sensor Technology	InGaAs CMOS Image Sensor		
Spectral Range	900nm–1700nm		
Pixel Size	15 μm x 15 μm		
Sensor Size	3/4"		
ADC Bit	14-bit		
Resolution	640 x 512		
FPS	1000fps	724fps	517fps
Hardware Image Cache	512MB		
QE	75%@1350nm		
Interface	CameraLink Full		
Cooling	40° C below ambient temperature		
Size	68*68*90.3mm (485g) – (Dimensions C)		
Data Format	Mono 12 / Mono 14		
Conversion Gain	970.01e–/DN(LG), 18.02e–/DN(MG), 3.31e–/DN (HG)		
Dynamic Range	69.2dB(LG), 63.2dB(MG), 57.4dB(HG) *		
Read Noise	1.3DN(LG), 2.7DN(MG), 5.0DN(HG)		
Full Well Capacity	3.5Me(LG), 70Ke(MG), 12Ke(HG) *		
SNR	65.4dB(LG), 48.5dB(MG), 40.7dB(HG)		
Dark Current	30fa@0.1V&18°C		
Exposure Time	16us~1s		
Shutter	Global		
Digital I/O	1 opto-isolated input, 1 opto-isolated output		
Power Supply	DC 12V		
Power Consumption	8.4W (TEC OFF) / <16W (TEC ON)		
Temperature	–40~85 °C (Storage), –30~60° C (Working)		
Humidity	20%–80% RH, non-condensing		
Lens Mount	C-Mount		
Software	Full SDK Package / iBoostX		

*: LG: CDS-OFF, DeNoise-ON; MG: CDS-ON, DeNoise-OFF; HG: CDS-ON, DeNoise-OFF.

iBoost X SWIR Camera



Model	iBX-SWG640B-125		iBX-SWG640B-360		iBX-SWG640B-700		
Sensor Technology	InGaAs CMOS Image Sensor						
Spectral Range	900nm–1700nm						
Pixel Size	15 μm x 15 μm						
Sensor Size	3/4"						
Resolution	640x512		640x512		640x512		320x256
ADC Bit	8	14	8	14	8	14	8
FPS	125	125	360	145	360	180	700
Hardware Image Cache	512MB						
QE	75%@1350nm						
Interface	GigE						
Cooling	40° C below ambient temperature						
Size	68*68*90.3mm (485g) – (Dimensions B)						
Data Format	Mono 12 / Mono 14						
Conversion Gain	138.6e–/ADU(LG), 5.54e–/ADU(MG), 1.2e–/ADU (HG)						
Dynamic Range	70.59dB(LG), 67.96dB(MG), 47.98dB(HG) *						
Read Noise	586.82e(LG), 35.05e(MG), 68.44e(HG)						
Full Well Capacity	1986426.78e(LG), 87649.83Ke(MG), 17147.351e(HG) *						
SNR	62.98dB(LG), 49.43dB(MG), 42.34dB(HG)						
Dark Current	30fa@0.1V&18°C						
Exposure Time	25us~5s						
Shutter	Global						
Digital I/O	1 opto–isolated input, 1 opto–isolated output, 2 non–isolated input and output						
Power Supply	DC 12V						
Power Consumption	8.4W (TEC OFF) / <16W (TEC ON)						
Temperature	–40~85 ° C (Storage), –30~60° C (Working)						
Humidity	20%–80% RH, non–condensing						
Lens Mount	C–Mount						
Software	Full SDK Package / iBoostX						

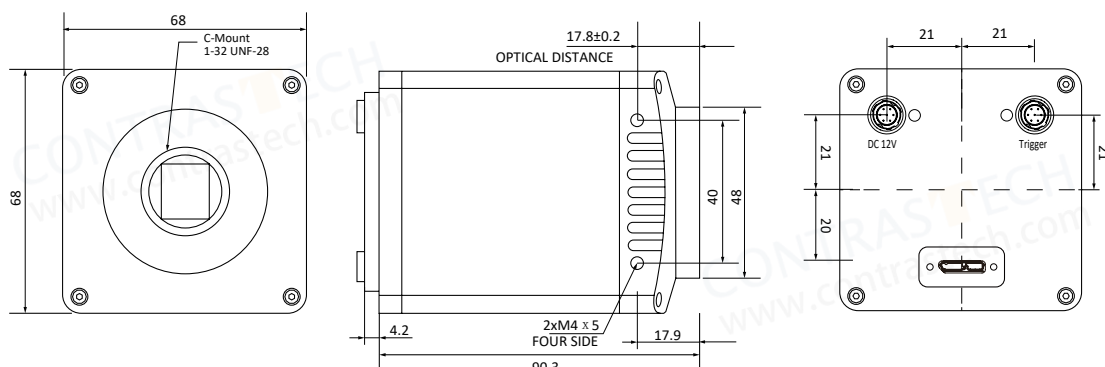
*: LG: CDS-OFF, DeNoise-ON; MG: CDS-ON, DeNoise-OFF; HG: CDS-ON, DeNoise-OFF.

iBoost X SWIR Camera

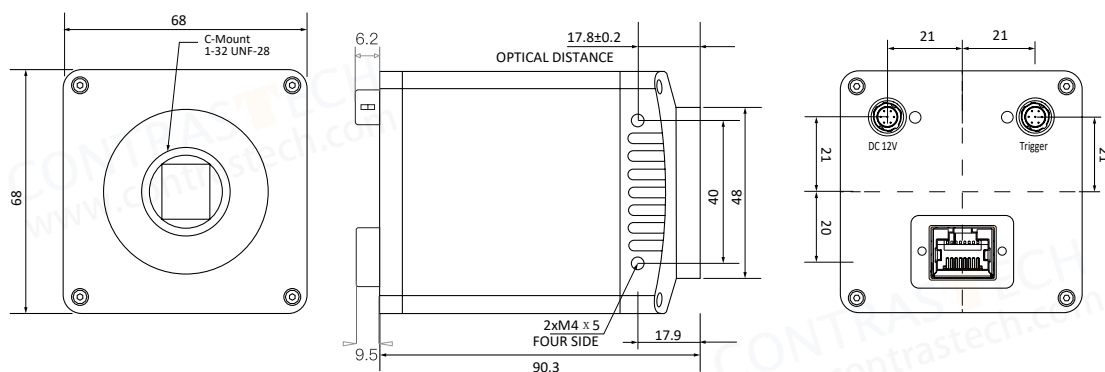
Model	iBoostX-724TGSW33M-HP			iBX-SWU640B-724	
Sensor Technology	InGaAs CMOS Image Sensor				
Spectral Range	900nm–1700nm				
Pixel Size	15 μm x 15 μm				
Sensor Size	3/4"				
Resolution	640x512				
ADC Bit	8	14	8	14	Packet12
FPS	724	724	724	579	724
Hardware Image Cache	512MB				
QE	75%@1350nm				
Interface	10GigE		USB3.0		
Cooling	40° C below ambient temperature				
Size	68*68*90.3mm (485g) – (Dimensions B)		68*68*90.3mm (485g) – (Dimensions A)		
Data Format	Mono 8 / Mono 14		Mono 8 / Mono 14 / Packet12		
Conversion Gain	138.6e–/ADU(LG), 5.54e–/ADU(MG), 1.2e–/ADU (HG)				
Dynamic Range	70.59dB(LG), 67.96dB(MG), 47.98dB(HG) *				
Read Noise	586.82e(LG), 35.05e(MG), 68.44e(HG)				
Full Well Capacity	1986426.78e(LG), 87649.83Ke(MG), 17147.351e(HG) *				
SNR	62.98dB(LG), 49.43dB(MG), 42.34dB(HG)				
Dark Current	30fa@0.1V&18°C				
Exposure Time	25us~5s		16us~1s		
Shutter	Global				
Digital I/O	1 opto–isolated input, 1 opto–isolated output, 2 non–isolated input and outputGlobal				
Power Supply	DC 12V				
Power Consumption	8.4W (TEC OFF) / <16W (TEC ON)				
Temperature	–40~85 ° C (Storage), –30~60° C (Working)				
Humidity	20%–80% RH, non–condensing				
Lens Mount	C–Mount				
Software	Full SDK Package / iBoostX				

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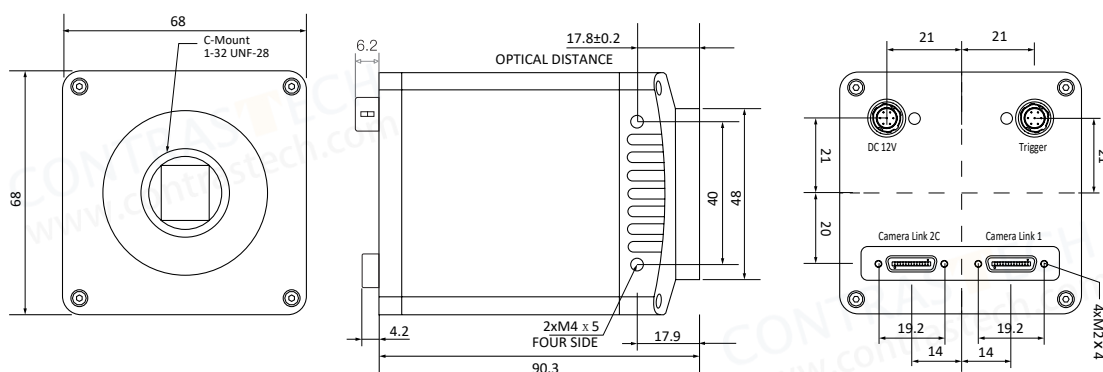
iBoost X SWIR Camera



Dimensions A



Dimensions B



Dimensions C

FOR MORE INFORMATION CONTACT



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