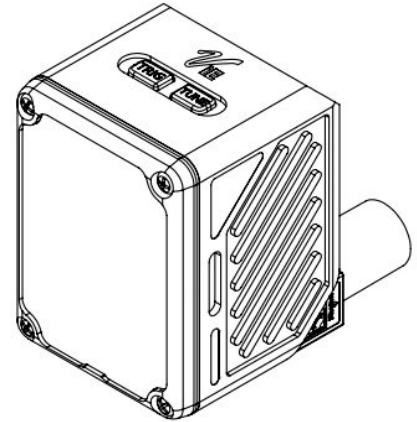


DESCRIPTION

The XS-120 smart code reader is a high-performance device designed to effortlessly handle a wide array of 1D and 2D codes. With an impressive maximum reading speed of 90 codes per second, it excels at quickly and accurately decoding various code types. Its outstanding performance is the result of utilising a cutting-edge deep learning algorithm, ensuring consistent and dependable image processing, and enabling the recognition of multiple codes with precision.

FEATURES

- Built-in deep learning model enables accurate code reading
- Exhibits excellent environmental adaptability, compatible with illuminating systems
- Features a modularized light source design
- Offers one-key auto adjustment for effortless operation
- Utilises a CMOS global shutter sensor to deliver high-quality images
- Equipped with IO interfaces with input and output signals for better flexibility to integrate with other system



SPECIFICATION

General Specifications

Product ID	9808-112~123
Model	XS-120
Model Description	Industrial Code Reader - XS-120 Series 3.1MP
Dimension (L x W x H)	Perpendicular Angle: 65.4 mm (L) x 43 mm (W) x 58.5 mm (H) (2.5748" x 1.6929" x 2.3031") Horizontal Angle: 44.3 mm (L) x 43 mm (W) x 80.1 mm (H) (1.7440" x 1.6929" x 3.1535")
Weight	195 g $\pm$ 10 g (0.4299 lb. $\pm$ 0.0220 lb.)
Power Consumption	6 W @ 24 VDC
Compliance	CE, UL, Mexico NOM
Country of Origin	Malaysia
Manufacturer	ViE Technologies Sdn. Bhd.

Technical Specifications

Type		XS-120
Receiver	Sensor	CMOS (Mono, Global Shutter)
	Resolution	2048 $\times$ 1536
	Lens Mounting	M12-Mount
	Focus	Mechanical Auto Focus
	Maximum Frame Rate (FPS)	60
	Focal Length	Standard Range: 8 mm (0.3149") Long Range: 12 mm (0.4724") Extended Long Range: 25 mm (0.9842")
	Pixel Size	3.45 μ m $\times$ 3.45 μ m
	Sensor Size	1/1.8"

The product details are subject to change without further notice.

SPECIFICATION

Type			XS-120
Receiver	Exposure Time		6 μ s to 30000 μ s
	Gain		0 dB to 24 dB
Emitter	Illumination Light Source Option		High Intensity Red / White / Blue / Infrared LED * ¹
	Diffuse Light Source		White
	Pointer Light Source		Orange LED * ¹
Reading Specification	Supported Symbols	2D Codes	QR Code, Data Matrix, Micro QR and PDF417
		Barcodes	Code 39, Code 93, Code 128, CodaBar, EAN8, EAN13, ITF25, ITF14, MATRIX25, UPCA, UPCE, MSI, CODE11, INDUSTRIAL25, CHINAPOST and PHARMACODE
	Minimum Resolution	2D Codes	0.033 mm (0.0012")
		Barcodes	0.011 mm (0.0004")
	Reading Distance		Standard Range: 25-2000 mm (0.9842"-78.7401") Long Range: 60-2000 mm (2.3622"-78.7401") Extended Long Range: 230-2000 mm (9.0551"-78.7401")
	Reading Field of View (working distance at 300 mm (11.8110"))		Standard Range: 267.1 mm x 200.8 mm (10.5157" x 7.9055") Long Range: 177.7 mm x 133.0 mm (6.9960" x 5.2362") Extended Long Range: 84.3 mm x 63.1 mm (3.3188" x 2.4842")
	Maximum Reading Speed		90 codes/sec
I/O Specifications	Control Input	Number of Inputs	3
		Input Type	Isolated Input
	Control Output	Number of Outputs	3
		Output Type	Isolated Output
	Ethernet	Communication Standard	IEEE 802.3u Compliant, 100BASE-TX
		Supported Protocol	SmartSDK, TCP Client, Serial, FTP, TCP Server and UDP
	Serial Communication	Communication Standard	RS-232C Compliant
		Transmission Speed	4800, 9600, 19200, 38400, 57600, 115200 bps
Environment Resistance	Enclosure Rating		IP67 * ²
	Surrounding Temperature		0 to +45 °C (32 to 113 °F)
	Ambient Storage Temperature		-30 to +70 °C (-22 to 158 °F)

The product details are subject to change without further notice.

SPECIFICATION

Type		XS-120
Environment Resistance	Relative Humidity	20% to 95% RH (No Condensation)
	Ambient Storage Humidity	20% to 95% RH (No Condensation)
	Operating Environment	No Corrosive Chemical or Gas Present
Rating	Power Consumption	6 W
	Power Supply Voltage	24 VDC
	Current Consumption	0.25 A
Weight		Approx. 195 g (0.4299 lb.)
Dimension		Perpendicular Angle: 65.4 mm (L) x 43 mm (W) x 58.5 mm (H) (2.5748" x 1.6929" x 2.3031") Horizontal Angle: 44.3 mm (L) x 43 mm (W) x 80.1 mm (H) (1.7440" x 1.6929" x 3.1535")
VisionCodeX	Supported Operating System	Windows 7 Professional or later, 32 bit / 64bit Windows 8 Professional or later, 32 bit / 64bit (Except for Windows RT) Windows 10 Professional or later, 32 bit / 64 bit Windows 11 Professional or later, 32 bit / 64 bit
	Minimum Running Environment Requirement	Processor: 2.0 GHz and above (minimum 2 cores 32-bit or 64-bit) RAM: 8 GigaByte (GB) Storage: Required free space on hard disk 2 GB (for VisionCodeX Installation) Display: High definition (720p) display, 8 bits per colour channel
	Recommended Running Environment Requirement	Processor: 2.4 GHz and above (minimum 4 cores 32-bit or 64-bit) RAM: 16 GigaByte (GB) Storage: Required free space on hard disk 20 GB (for VisionCodeX Installation and data storage) Display: Full High definition (1080p) display, 8 bits per colour channel Graphics: Compatible with DirectX 12 or later with WDDM 2.0 Driver

Note:

*¹ LEDs are classified according to IEC 62471 (JIS C 7550).

Exempt group: Objects that do not cause any photobiological damage.

Risk group 1 (low risk): Objects that do not cause damage that make constraints on normal actions necessary.

Risk Group 2 (moderate risk): Objects that do not cause damage accompanied by unpleasant feelings and thermal discomfort.

Risk Group 3 (high risk): Objects that cause damage even due to temporary or short-term exposure.

*² Tested against dust over an extended time, protection against contact with objects greater than 1 mm (0.0393") in diameter, such as wire or a small tool. Protected against short periods of immersion in water while under pressure up to 1 m (39.3701").

The product details are subject to change without further notice.

SPECIFICATION

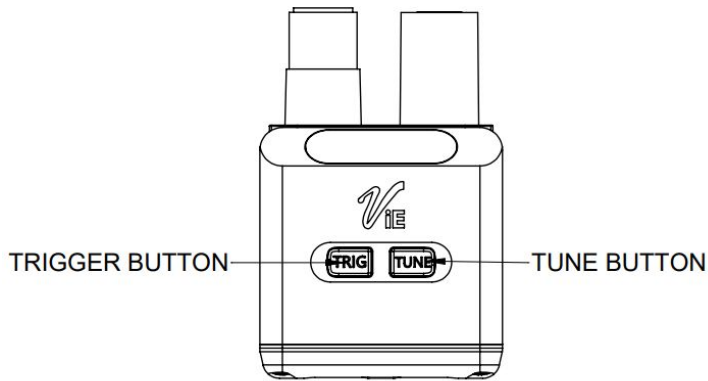
Distance		XS-120 (Standard Range)							
		MINIMUM RESOLUTION				FIELD OF VIEW			
		Barcode		2D Code		Horizontal		Vertical	
25 mm	0.9843"	0.011 mm	0.0004"	0.033 mm	0.0012"	22.30 mm	0.8780"	16.70 mm	0.6575"
100 mm	3.9370"	0.043 mm	0.0017"	0.131 mm	0.0052"	89.00 mm	3.5039"	66.90 mm	2.6339"
300 mm	11.8110"	0.130 mm	0.0051"	0.392 mm	0.0154"	267.10 mm	10.5157"	200.80 mm	7.9055"
600 mm	23.6220"	0.261 mm	0.0103"	0.784 mm	0.0309"	534.30 mm	21.0354"	401.50 mm	15.8071"
1000 mm	39.3701"	0.400 mm	0.0157"	1.300 mm	0.0512"	883.20 mm	34.7717"	662.40 mm	26.0787"
2000 mm	78.7402"	0.900 mm	0.0354"	2.600 mm	0.1024"	1766.40 mm	69.5433"	1324.80 mm	52.1575"

Distance		XS-120 (Long Range)							
		MINIMUM RESOLUTION				FIELD OF VIEW			
		Barcode		2D Code		Horizontal		Vertical	
60 mm	2.3622"	0.017 mm	0.0007"	0.052 mm	0.0020"	35.50 mm	1.3976"	26.60 mm	1.0472"
100 mm	3.9370"	0.029 mm	0.0011"	0.087 mm	0.0034"	59.20 mm	2.3307"	44.30 mm	1.7441"
300 mm	11.8110"	0.087 mm	0.0034"	0.260 mm	0.0102"	177.70 mm	6.9961"	133.00 mm	5.2362"
600 mm	23.6220"	0.173 mm	0.0068"	0.520 mm	0.0205"	355.50 mm	13.9961"	266.00 mm	10.4724"
1000 mm	39.3701"	0.300 mm	0.0118"	0.900 mm	0.0354"	592.40 mm	23.3228"	443.40 mm	17.4567"
2000 mm	78.7402"	0.600 mm	0.0236"	1.700 mm	0.0669"	1184.90 mm	46.6496"	886.80 mm	34.9134"

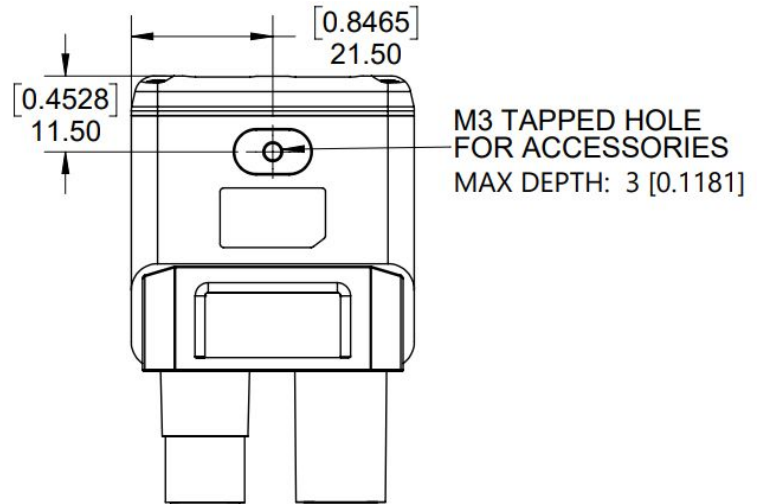
Distance		XS-120 (Extended Long Range)							
		MINIMUM RESOLUTION				FIELD OF VIEW			
		Barcode		2D Code		Horizontal		Vertical	
230 mm	9.0551"	0.032 mm	0.0013"	0.094 mm	0.0037"	64.60 mm	2.5433"	48.30 mm	1.9016"
300 mm	11.8110"	0.041 mm	0.0016"	0.123 mm	0.0048"	84.30 mm	3.3189"	63.10 mm	2.4843"
500 mm	19.6850"	0.069 mm	0.0027"	0.205 mm	0.0081"	140.50 mm	5.5315"	105.10 mm	4.1378"
1000 mm	39.3701"	0.100 mm	0.0039"	0.400 mm	0.0157"	281.10 mm	11.0669"	210.20 mm	8.2756"
2000 mm	78.7402"	0.300 mm	0.0118"	0.800 mm	0.0315"	562.20 mm	22.1339"	420.40 mm	16.5512"

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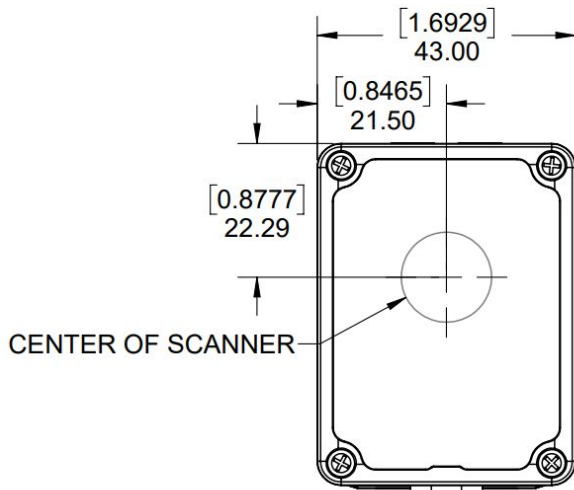
DRAWING (Unit in mm, [inches])



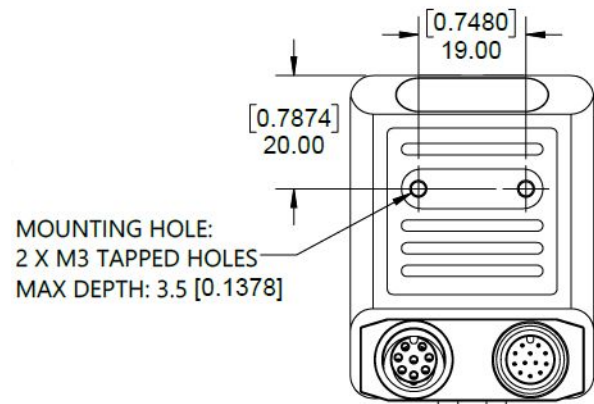
Top View



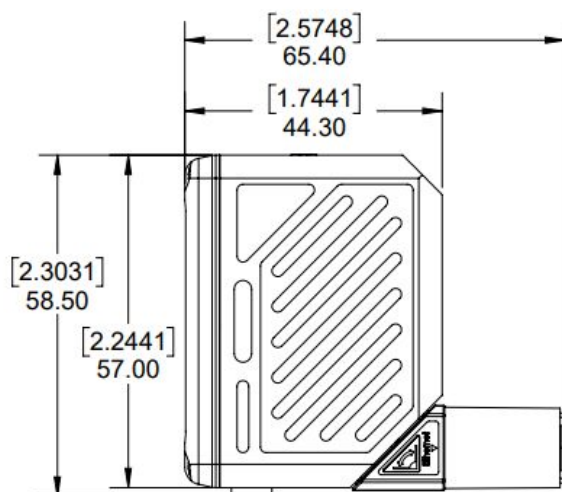
Bottom View



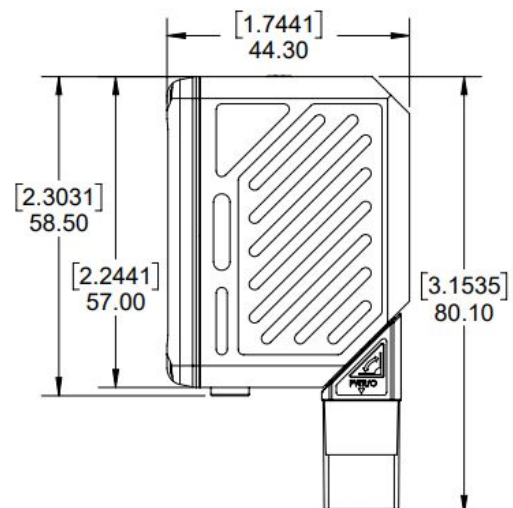
Front View



Back View



Perpendicular Angle



Horizontal Angle

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