ACX | DESIGN INNOVATIONS

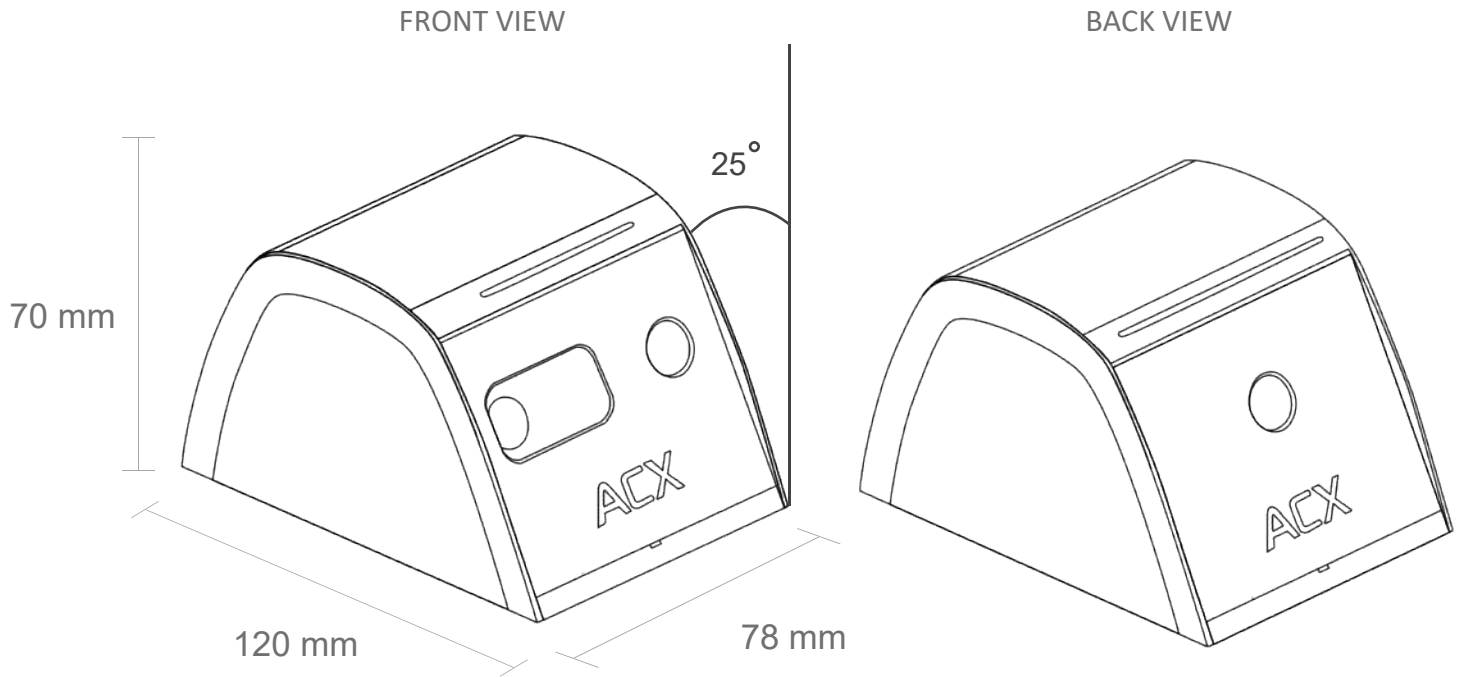## 2098 Thermal Camera

INTRODUCTION

ACX 2098 is a middle range Thermal Camera with an effective scan range of 3 meters. Black body is already built in the camera which lead to an increase in the accuracy level (+/-0.3°C). The camera was designed with a tiny and streamlined enclosure without any display. It can automatically check whether passengers are wearing mask and having normal temperature without physical contact. The whole process is fast and efficient which just takes 1 second for 10,000 users. After checking, passengers can access with facial recognition technology.

The 2098 also has the rear facial camera, it can solve the lighting problem which the facial camera installed underneath the turnstile glass cover.

FEATURES

• The reader surface is 65 degrees to ground which suitable for 1.2M to 1.8M length turnstile

• The thermal camera scan range cover people tall from 1.2M to 1.9M stand in front of the edge of the turnstile

• Superior low-light performance

• Latest 3.0μm pixel with ON Semiconductor DR-PixTM technology with Dual Conversion Gain

• Full HD support at up to 1080P 60fps for superior video performance

• Linear or high dynamic range capture

• Auto black level calibration

• Temperature sensor

• Facial Recognition Access

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DIMENSION

25°

70 mm

120 mm

78 mm

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SPECIFICATION

Thermal Sensor	
Sensor Type	CMOS, Uncooled Amorphous Silicon(a-Si) Micro bolometer
Input Power	DC 12V DC, 300mA
Working Temperature	-20~50℃
Spectrum Range	8um~15um
Scan Range	84° (H) x 64° (V)
Scan Distance	50cm to 3 meters
Frame Rate	Up to 30 fps
Resolution	80 x 60 pixels
Temperature Measurement Time	100ms
Accuracy	+/- 0.3°C

SPECIFICATION

Facial Camera	
Optical Format	1/2.7-inch (6.6mm)
Active Pixels	1928(H) x 1099(V) (16:9 mode)
Pixel Size	3.0μm x 3.0μm
Color Filter Array	RGB Bayer
Responsivity	4.0 V/lux-sec
SNRMAX	41 dB
Max Dynamic Range	Up to 96 dB
Operating Temperature	-30℃ to +85℃ ambient
Facial Recognition	
Facial Recognition Engine	Face ++ / SenseTime
Minimum Face Detection Size	20x20 pixels
Minimum Face Size (Recognition)	50x50 pixels (disable liveness) ; 80x80 pixels (liveness)
Face Posture (Recognition)	Yaw: +/- 35° ; Pitch: +/- 35° ; Roll : +/- 35°
Number of Face Enrollment	100k (max) ; 10k (typical)
Facial Recognition Accuracy	≥ 99% @ 0.5% error rate
Facial Recognition Time	10,000 photos < 300ms ; 20,000 photos < 500ms
Liveness Detection	Support
Mask Detection	Support various color mask ; Support black color mask
Mask Detection Accuracy	≥ 99%
Facial Recognition with Mask	Support
Facial Recognition Accuracy (With Mask)	≥ 90% @ 5% error rate (estimate)
Camera	1920x1080