

# ES4690i

Embedded Image Scanner with Built-in AI Chip



## Features

- Use self-developed AI Engine, fully upgrade scanning performance
- Best in motion tolerance up to 5 m/s
- Red and white auxiliary lighting easily cope with a variety of complex barcode reading scenes
- Compact design and plug-and-play interfaces allow easy integration into different host devices
- Support external and serial trigger modes

## ES4690i Specifications

Mechanical & Electrical Characteristics			
Dimensions (L × W × H)	43.5 mm × 41.0 mm 19.0 mm		
Weight	89 g (Without Cable)		
Case Material	Zinc Alloy		
Cable	Straight 2.0 m		
Interfaces	RS-232 (3.3 V TTL-level), USB Keyboard, USB Virtual COM, Level		
Indicator	Beeper		
Scan Window Material	Tempered glass		
Operating Mode	Handheld, Auto-detect, Command		
Programming Method	Manual (reading special barcode)		
Firmware Upgrade	Online		
Electrical			
Input Voltage	5.0 ± 0.25 VDC		
Current	Scanning: 400 mA, Standby: 160 mA		
Performance Characteristics			
Scan Pattern	Image		
Image size	1280 × 1024 pixels		
Light Source	Illumination: 5700 k, White LED Aiming: 525 nm peak wavelength, green LED		
Scanner Field of view	Horizontal: 40°, Vertical: 34°		
Motion Tolerance	5 m/s (197 in /s)		
Scanning Angles	± 70°, ± 72°, 360° (skew, pitch, roll)		
Print Contrast	20% minimum reflective difference		
Decoding Capability	All common 1D/2D barcodes		
Minimum Resolution	1D: 3mill		
Decoding depth		Standard range series (SR)	High density series (HD)
	3mil Code 39 (3 Chars)	80 – 110 mm	45–110mm
	5mil Code 128 (12 Chars)	60– 220 mm	30–150mm
	10mil Code 39 (3 Chars)	30– 370 mm	20–250mm
	13mil UPC (6 Chars)	30– 520 mm	30–320mm
	20mil Code 39 (1 Char)	60– 630 mm	60–410mm
	20mil QR (20 Chars)	25– 430 mm	25–300mm

Environmental Characteristics	
Temperature	Operating: -20°C to 50°C ( -4°F to 122° F); Storage: -40°C to 70°C ( -40°F to 158° F )
Humidity	5% to 95%(non-condensing)
Mechanical Vibration	IEC600682-6: Un-powered scanner withstands a random vibration along each of the X, and Y, and Z axes for a period of one hour per axis, define as follows: 20 Hz to 80 Hz Ramp up to 0.04 G2/Hz at the rate of 3 dB/oct 80 Hz to 350 Hz 0.04 G2/Hz 350Hz to 2000Hz Ramp down at the rate of 3 dB/oct
Mechanical Shock	IEC60068-2-27: Shock pulse: 0.5 ms, Maximal acceleration: 1500 G, Shock direction & time: ± X-axis, ± Y-axis, ± Z-axis, 3 times for each direction, total of 18 times.
Safety	EMC: EN55032, EN55035 Photobiological Safety: EN62471:2008 ESD Protection: contact discharge: ± 4 KV, air discharge: ± 8KV Sealing: IP52 RF Immunity: IEC61000-4-3,10 V/m Illumination: 0-100,000 lux Drop Resistance: Withstands multiple 1.5m (5ft) drop to concrete