

Mosaic Core Specification

Core Number: C316SPX		Starter Kit Number: S316SPX		Rev. 3		11/05/2021	
Product Specifications:		Description					
Microbolometer		Uncooled Vanadium Oxide					
Pixel Pitch		12 Microns					
Spectral Response		7.8 - 14 Microns					
Sensor Resolution (Array Format)		320 (h) x 240 (v); 76,800 pixels					
Frame Rate		Fast Frame - up to <32Hz					
Non-Uniformity Correction (NUC)		Automatic NUC (with shutter)					
Video Output Interfaces		USB					
Power:							
Power Requirement		3.3-5.0V, <50mW (Core only), 300mW (Core + Coprocessor Board)					
Optical & Mechanical:							
Focal Length		6.6mm EFL					
F-number (Focal Length/aperture)		f/1.26					
Spatial Resolution (IFOV, center)		1.82					
Field of View (FOV)		34° Horizontal x 25° Vertical					
Detection Range		543m (based on Johnson Criteria)					
Recognition Range		136m (based on Johnson Criteria)					
Identification Range		78m (based on Johnson Criteria)					
Distance to Spot Ratio		91:1					
Core Size/ Core Weight		23mmx20mmx21mm				Core Weight: 12 g	
Seek Software Development Kit:							
Supported Platforms		USB: Seek Linux, Windows, & Android SDK					
Output Formates (User selectable)		Linux / Windows SDK			Android SDK		
		16-bit filtered pre AGC			16-bit filtered pre AGC		
		32-bit ARGB post colorization.			32-bit ARGB post colorization in the bitmap image.		
		32-bit floating point or 16-bit fixed point			32-bit floating point or 16-bit fixed point thermography		
Imaging Specifications:		Calibrated Output in °C, °F, K					
Imaging Range		-40°C to +330°C at ambient operating temprature					
Thermography Accuracy		Center spot temperature greater of ±5°C or 5% between -10°C to 140°C					
		Center spot temperature greater of ±10°C or 10% (typical) above 140°C					
		All measured at 25°C ambient operating temperature and nominal measurement distance of 12 inches.					
		Temperature reported is Center Spot temperature, which is an average of the center 36 pixels.					
Sensor Sensitivity		65 mK (typical), <100 mK (max) @ 25°C					
Emmissivity		Factory default emissivity is set to 0.97. Emissivity is adjustable using the SDK.					
Environmental Conditions:							
Operating Temperature Range		-10°C to +60°C (-14°F to 140°F)					
Storage Temperature Range		-40°C to +80°C (-40°F to 176°F)					
Solar Protection		Yes					
Humidity		10%~95%RH, non-condensing					
Regulatory		ROHS, WEEE, REACH					
Accessories:							
Cushion		Yes					
Bracket		Yes					
Sensor Flex		Yes					
Coprocesor Board		Yes					
USB Flex		Yes					
		<p style="text-align: center;"> <small>THERMAL CORE</small> <small>COPROCESSOR BOARD AND INTERFACE KIT</small> <small>Provided by Seek or receive design files for integration into other electronics</small> </p>					
Customer Responsibilities:							
IP Rating		IP67					
Shock/Vibe		Customer responsibility with proper integration into final product housing					

