Mosaic Core Specification

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Core Number: C214SPX	Starter Kit Number: S214SPX	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)	200 (h) x 150 (v); 30,000 pixels				
Frame Rate	Fast Frame - up to <32Hz				
Non-Uniformity Correction (NUC)	Automatic NUC (with shutter)				
Video Output Interfaces	USB				
Power:					
Power Requirment	3.3-5.0V, <50mW (Core only), 300mW (Core + Coprocessor Board)				
Optical & Mechanical:					
Focal Length	4.0mm EFL				
F-number (Focal Length/aperture)	f/1.00				
Spatial Resolution (IFOV, center)	3.00				
Field of View (FOV)	35° Horizontal x 26° Vertical				
Detection Range	333m (based on Johnson Criteria)				
Recognition Range	83m (based on Johnson Criteria)				
Identification Range	48m (based on Johnson Criteria)				
Distance to Spot Ratio	56:1				
Core Size / Core Weight	20mm x 20mm x 21mm	Core Weight: 12 g			
Seek Software Development Kit:		core weight. 12 g			
-	LICD: Cook Linux Windows & Android CDK				
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 5°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.				
		are, 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. Emissivi	ity 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		DR FLEX INTERACE USB FLEX			
Cushion	Yes cushion thermal bracket sense	DR FLEX INTERFACE USB FLEX BOARD			
Cushion Bracket	Yes CUSHION THERMAL BRACKET SENSE Yes	DR FLEX INTERFACE USB FLEX BOARD			
Cushion Bracket Sensor Flex	Yes CUSHION THERMAL BRACKET SENSE Yes Diagonal Contraction of the sense Yes Diagonal Contraction of the sense				
Cushion Bracket Sensor Flex Coprocessor Board	Yes Yes Yes Yes	EESSOR BOARD AND INTERFACE KIT			
Cushion Bracket Sensor Flex Coprocessor Board USB Flex	Yes CUSHION THERMAL BRACKET SENSU Yes Comment of Commen				
Cushion Bracket Sensor Flex Coprocessor Board USB Flex Customer Responsibilities:	Yes Yes Yes Yes Yes Yes	ESSOR BOARD AND INTERFACE KIT d by Seek or receive design files for			
Cushion Bracket Sensor Flex Coprocessor Board USB Flex	Yes CUSHION THERMAL BRACKET SENSU Yes Comment of Commen	ESSOB BARD AND INTERFACE KIT and y Sokker or An - Halp file for argration into other electronics			

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Specifications are subject to change without notice.

	THIS DRAWING COVERS THE FOLLOWING SKUS: C2*4* C3*4* S2*4*	NO COPROCESSOR BOARD	"P" OPTION WITH COF
D	\$2*4* \$3*4*		
С			
В	NOTES:		
	 SEE 3D CAD FILE FOR FULL GEOMETRY. KEEPOUT FOR SHUTTER CLEARANCE. LENS ADHESIVE DOES NOT EXTEND ABC 		
A	2. THIS DESIGN IS CAPABLE OF BEING IP67 WE SEALING DESIGN. SEE MOSAIC DATASHEE 5. ADHESIVE BUMP PRESENT ON <9Hz COF	HEN USED WITH APPROPRIATE [. RES.	MATERIAL SEE NOTES DRAWN FINISH SEE NOTES APPR. THIRD UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MM [IN] IN ACCORDANCE WITH ASME Y14,5-2009 GENERAL TOLERANCES THE IN
	3. COPROCESSOR BOARD AND FLEX INCLUD	ED WITH "P" OPTION CORES.	0.5 TO 6 ±0.1 [.004] IN TH > 6 TO 30 ±0.2 [.008] PRO > 30 TO 120 ±0.2 [.008] ANY RI > 120 TO 400 ±0.3 [.012] AS A ' ANGLES ±1° PER



