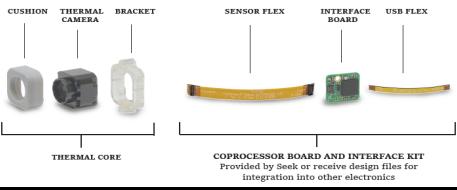
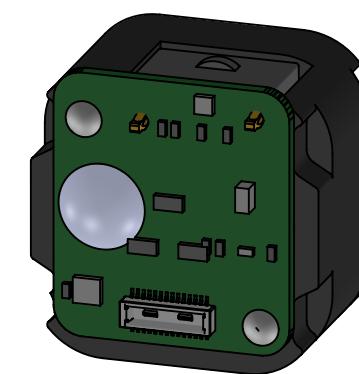


Mosaic Core Specification

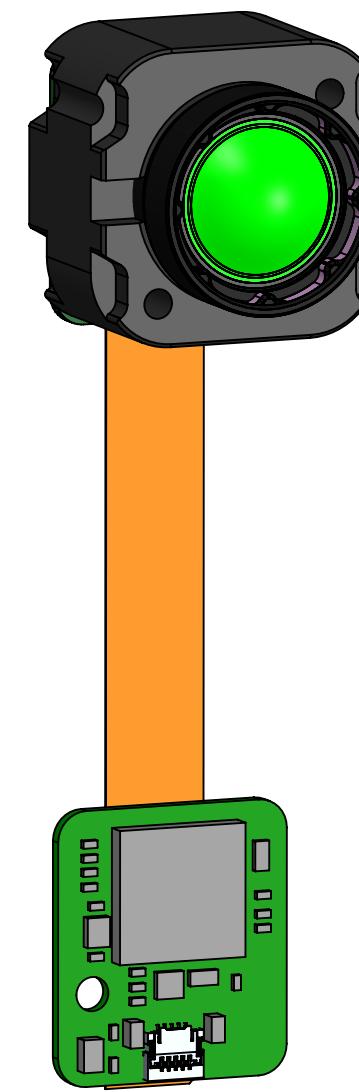
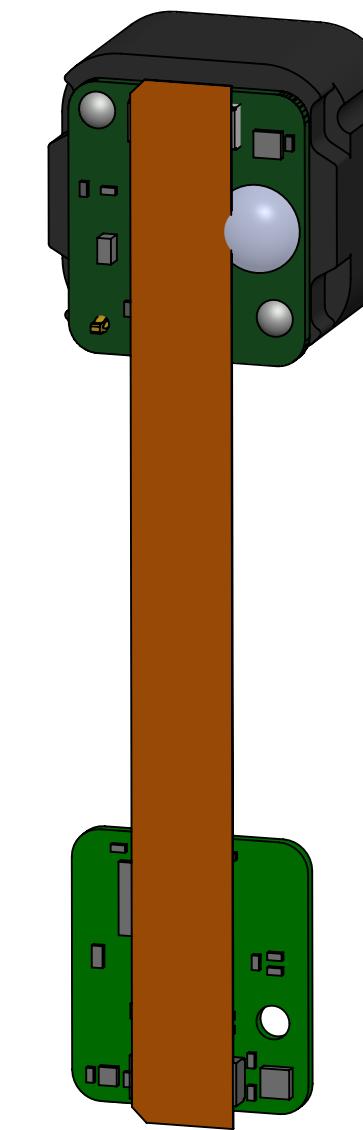
Core Number: C219SPX	Starter Kit Number: S219SPX	Rev. 3	11/05/2021		
Product Specifications:	Description				
Microbolometer	Uncooled Vanadium Oxide				
Pixel Pitch	12 Microns				
Spectral Response	7.8 - 14 Microns				
Sensor Resolution (Array Format)	200 (h) x 150 (v); 30,000 pixels				
Frame Rate	Fast Frame - up to <32Hz				
Non-Uniformity Correction (NUC)	Automatic NUC (with shutter)				
Video Output Interfaces	USB				
Power:					
Power Requirement	3.3-5.0V, <50mW (Core only), 300mW (Core + Coprocessor Board)				
Optical & Mechanical:					
Focal Length	9.1mm EFL				
F-number (Focal Length/aperture)	f/1.00				
Spatial Resolution (IFOV, center)	1.32				
Field of View (FOV)	15° Horizontal x 12° Vertical				
Detection Range	758m (based on Johnson Criteria)				
Recognition Range	190m (based on Johnson Criteria)				
Identification Range	108m (based on Johnson Criteria)				
Distance to Spot Ratio	126:1				
Core Size/ Core Weight	20mm x 20mm x 21mm	Core Weight: 12 g			
Seek Software Development Kit:					
Supported Platforms	USB: Seek Linux, Windows, & Android SDK				
Output Formats (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 temperature				
Thermography Accuracy	Center spot temperature greater of $\pm 5^\circ\text{C}$ or 5% between 5°C to 140°C				
	Center spot temperature greater of $\pm 10^\circ\text{C}$ 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	 THERMAL CORE			
Bracket	Yes				
Sensor Flex	Yes				
Coprocessor Board	Yes				
USB Flex	Yes				
Customer Responsibilities:					
IP Rating	IP67				
Shock/Vibe	Customer responsibility with proper integration into final product housing				

THIS DRAWING COVERS
THE FOLLOWING SKUS:
C2*9*
C3*9*
S2*9*
S3*9*

NO COPROCESSOR BOARD



"P" OPTION WITH COPROCESSOR BOARD



NOTES:

1. SEE 3D CAD FILE FOR FULL GEOMETRY.
2. KEEPOUT FOR SHUTTER CLEARANCE.
3. LENS ADHESIVE DOES NOT EXTEND ABOVE FRONT FACE.
2. THIS DESIGN IS CAPABLE OF BEING IP67 WHEN USED WITH APPROPRIATE SEALING DESIGN. SEE MOSAIC DATASHEET.
5. ADHESIVE BUMP PRESENT ON <9Hz CORES.
3. COPROCESSOR BOARD AND FLEX INCLUDED WITH "P" OPTION CORES.

MATERIAL	SEE NOTES	DRAWN	DLM	27MAR2019
FINISH	SEE NOTES	APPR.		
UNLESS OTHERWISE SPECIFIED:		THIRD		
DIMENSIONS ARE IN MM [IN]	ANGLE	ANGLE		
IN ACCORDANCE WITH	PROJECTION	PROJECTION		
ASME Y14.5-2009				
GENERAL TOLERANCES				
0.5 TO 6 ±0.1 [.004]				
> 6 TO 30 ±0.2 [.008]				
> 30 TO 120 ±0.2 [.008]				
>120 TO 400 ±0.3 [.012]				
ANGLES ±1°				

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Seek™		
thermal		
TITLE: DOC, INTERFACE CONTROL DRAWING, MECH, 9.1MM MOSAIC		
SIZE	DWG. NO.	REV
B	DOC_247	3
SCALE: 2:1	SHEET 1 OF 2	

8 7 6 5 4 3 2 1

