

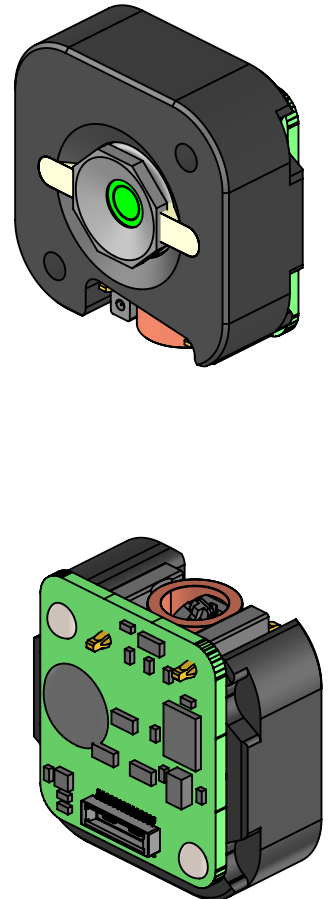
Mosaic Core Specification

Core Number: C212SPX		Starter Kit Number: S212SPX		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	2.2mm EFL				
F-number (Focal Length/aperture)	f/1.05				
Spatial Resolution (IFOV, center)	5.23				
Field of View (FOV)	61° Horizontal x 45° Vertical				
Detection Range	186m (based on Johnson Criteria)				
Recognition Range	46m (based on Johnson Criteria)				
Identification Range	27m (based on Johnson Criteria)				
Distance to Spot Ratio	31:1				
Core Size/ Core Weight	10mm x 20mm x 21mm			Core Weight: 8 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 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.				
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				
Coprocessor Board	Yes				
USB Flex	Yes				
<p>The diagram illustrates the accessories provided with the kit. On the left, the 'THERMAL CORE' includes a 'CUSHION' (a grey ring), a 'THERMAL CAMERA' (a black cube), and a 'BRACKET' (a white ring). On the right, the 'COPROCESSOR BOARD AND INTERFACE KIT' includes a 'SENSOR FLEX' (a yellow curved strip), an 'INTERFACE BOARD' (a green PCB), and a 'USB FLEX' (a yellow curved strip). Below the interface board, a note states: 'Provided by seek or receive design files for integration into other electronics'.</p>					
Customer Responsibilities:					
IP Rating	N/A				
Shock/Vibe	Customer responsibility with proper integration into final product housing				

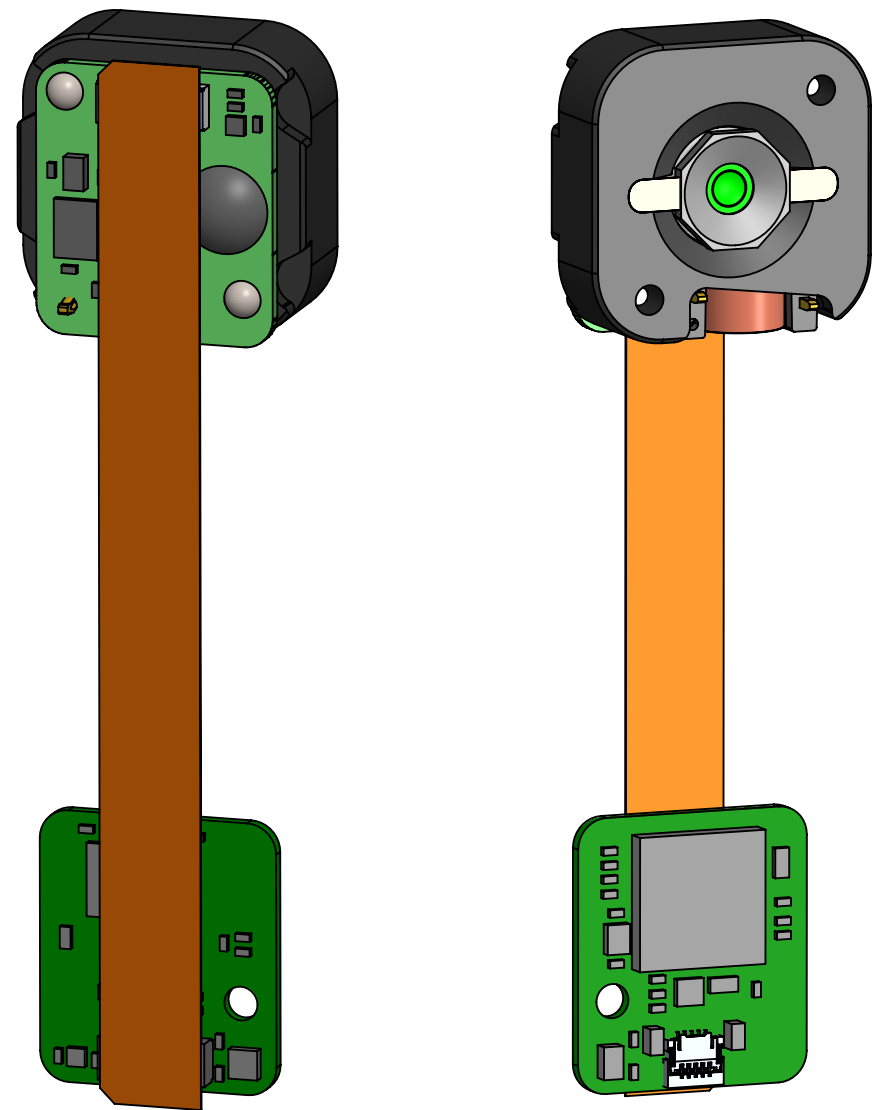
THIS DRAWING COVERS
THE FOLLOWING SKUS:

- C2*2*
- C3*2*
- S2*2*
- S3*2*

NO COPROCESSOR BOARD



"P" OPTION WITH COPROCESSOR BOARD



NOTES:

1. SEE 3D CAD FILE FOR FULL GEOMETRY.
2. KEEP-OUT FOR SHUTTER CLEARANCE.
3. LENS ADHESIVE DOES NOT EXTEND ABOVE FRONT FACE.
2. THIS DESIGN IS NOT IPxx RATED.
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: DIMENSIONS ARE IN MM (IN) IN ACCORDANCE WITH ASME Y14.5-2009		THIRD ANGLE PROJECTION		
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°		THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SEEK THERMAL. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT WRITTEN PERMISSION IS PROHIBITED.		

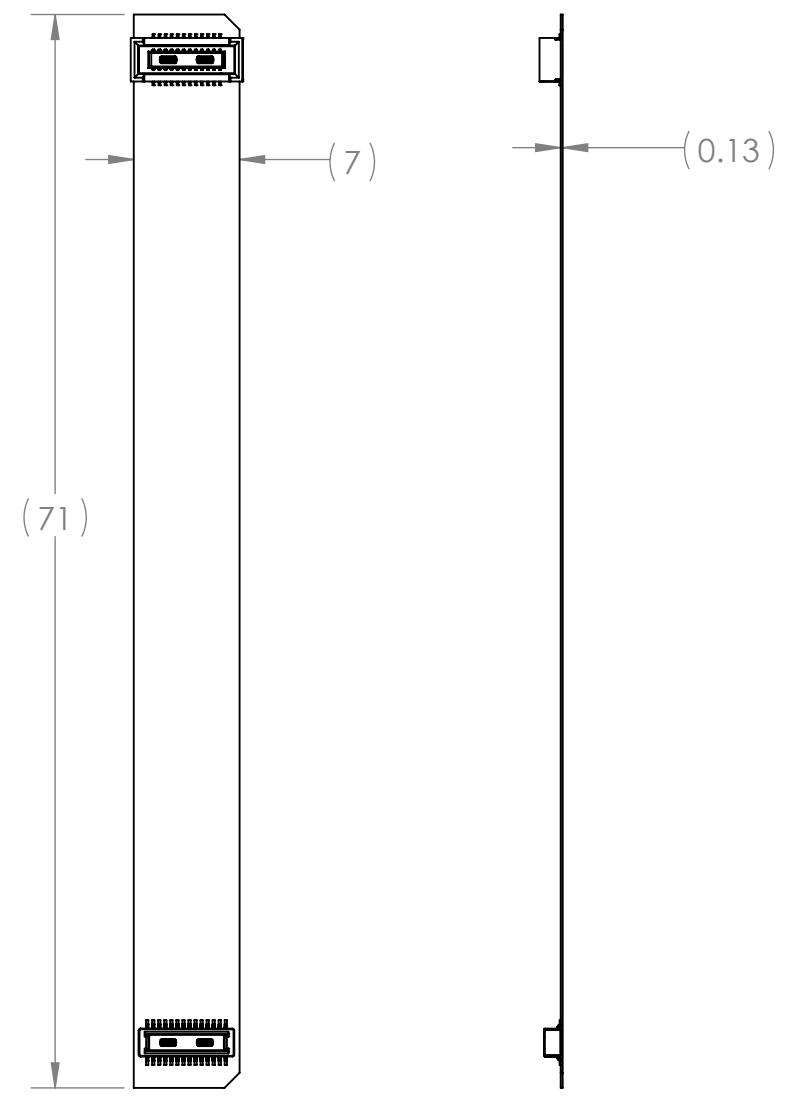
Seek[™]
thermal

TITLE: DOC, INTERFACE CONTROL
DRAWING, MECH, 2.2MM MOSAIC

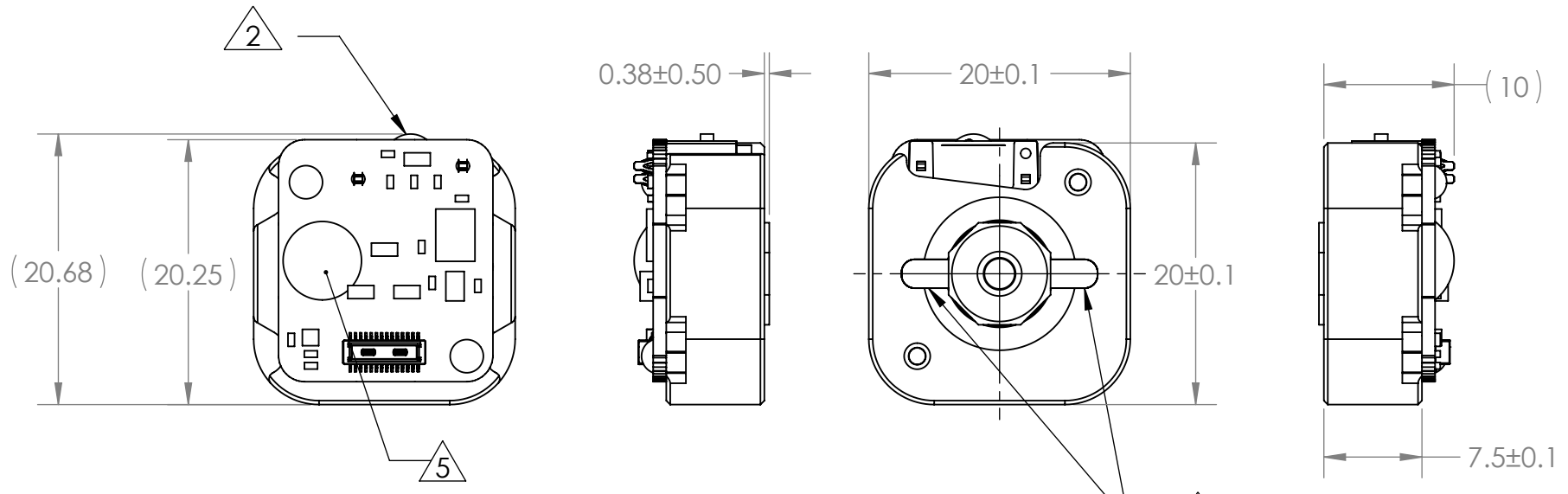
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B	DOC_233	4
SCALE: 2:1		SHEET 1 OF 2

8 7 6 5 4 3 2 1

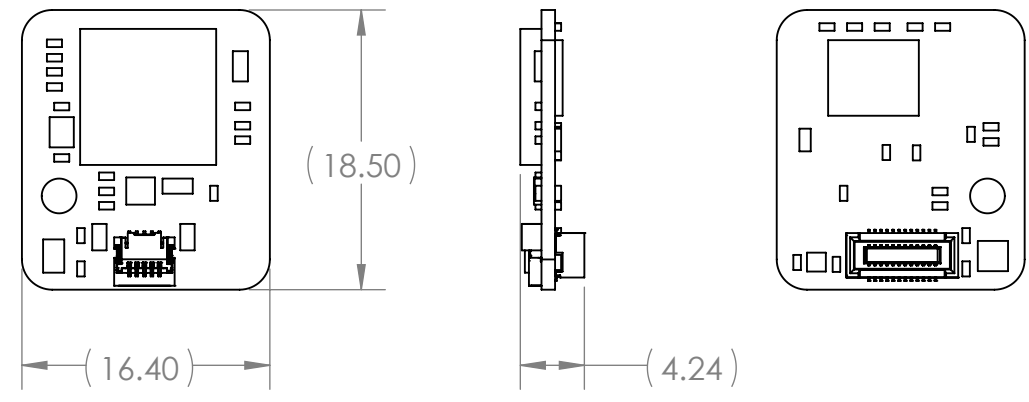
D
C
B
A



FLEX CABLE



THERMAL IMAGING CORE



COPROCESSOR BOARD

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