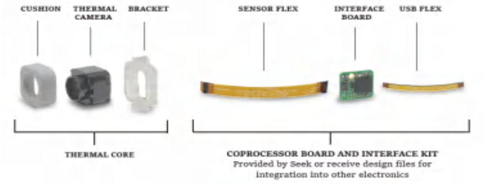
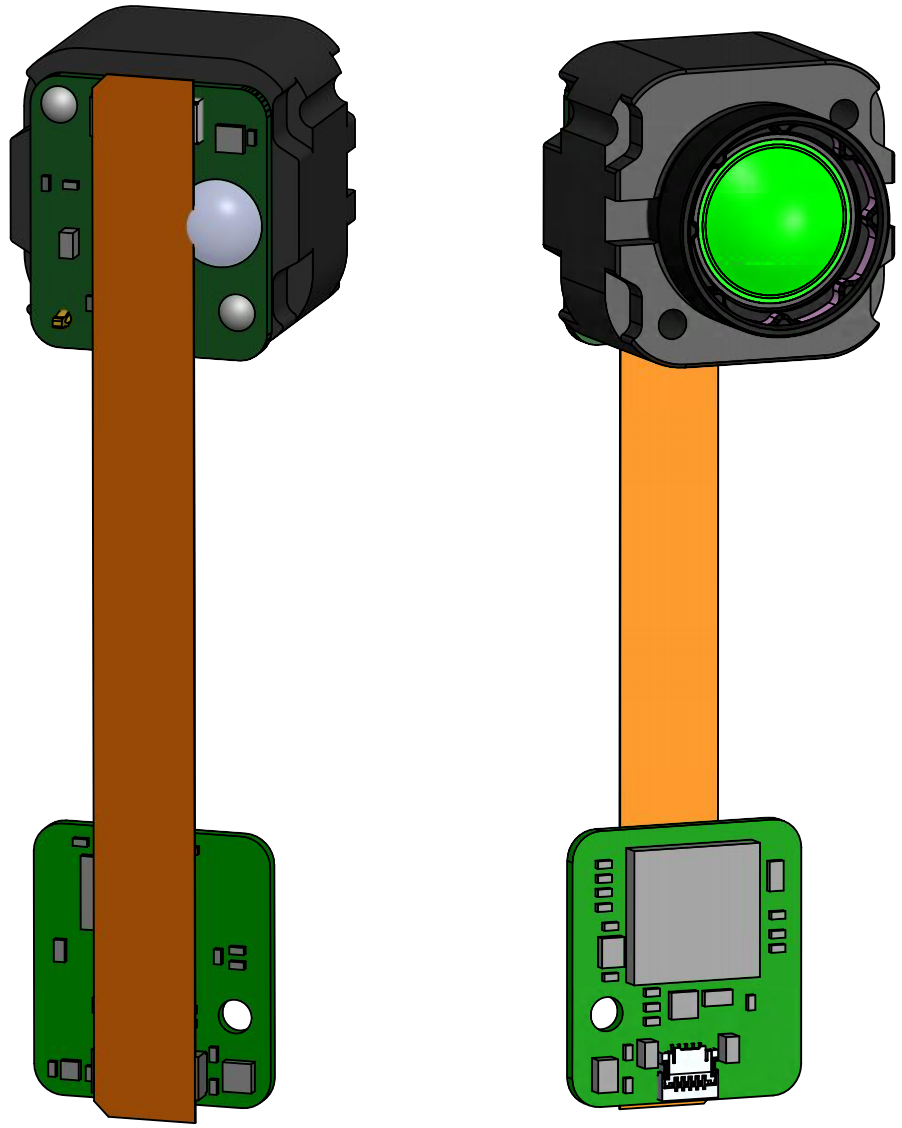
Mosaic Core Specification

Core Number: C209SP	**Starter Kit Number: S209SP**	**Mktg 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	Slow Frame - <9Hz	
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	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 20mmx 21mm	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 data.
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	
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.

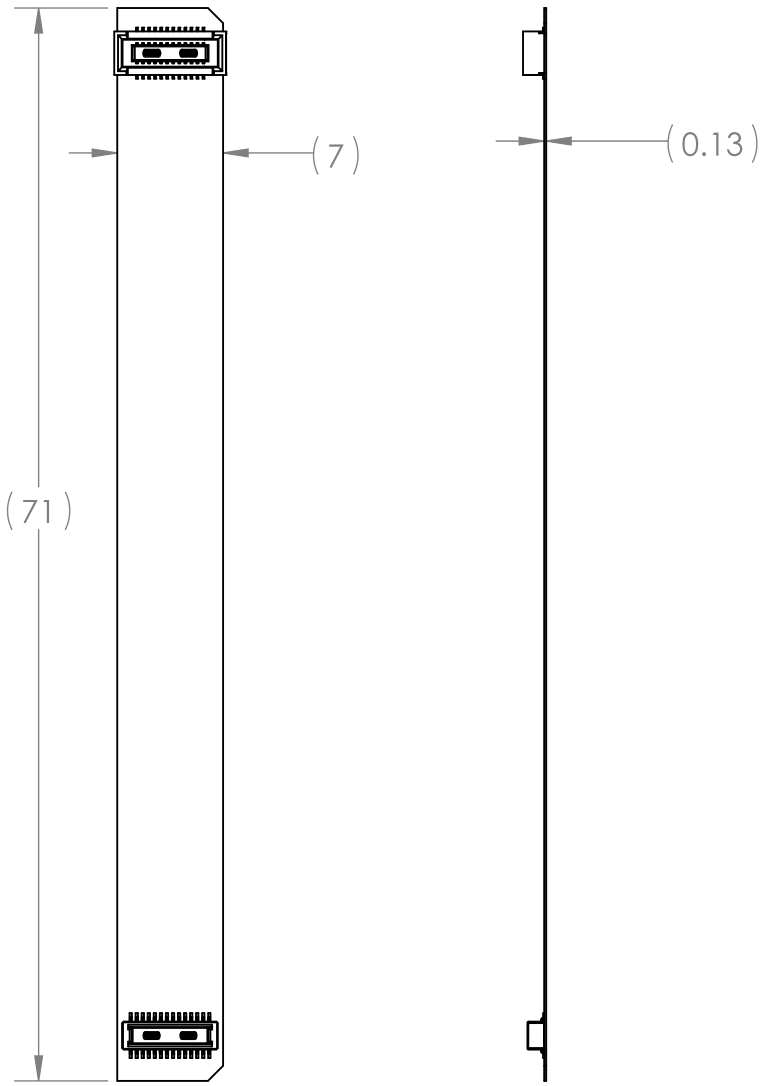
MATERIAL	SEE NOTES	DRAWN	DLM 27MAR2019
FINISH	SEE NOTES	APPR.	
UNLESS OTHERWISE SPECIFIED:		THIRD ANGLE PROJECTION	
DIMENSIONS ARE IN MM [IN] IN ACCORDANCE WITH ASME Y14.5-2009			
GENERAL TOLERANCES 0.5 TO 6 ±0.1 [.004] > 6 TO 30 ±0.2 [.008] > 30 TO 120 ±0.2 [.008] >120 TO 400 ±0.3 [.012] ANGLES ±1°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

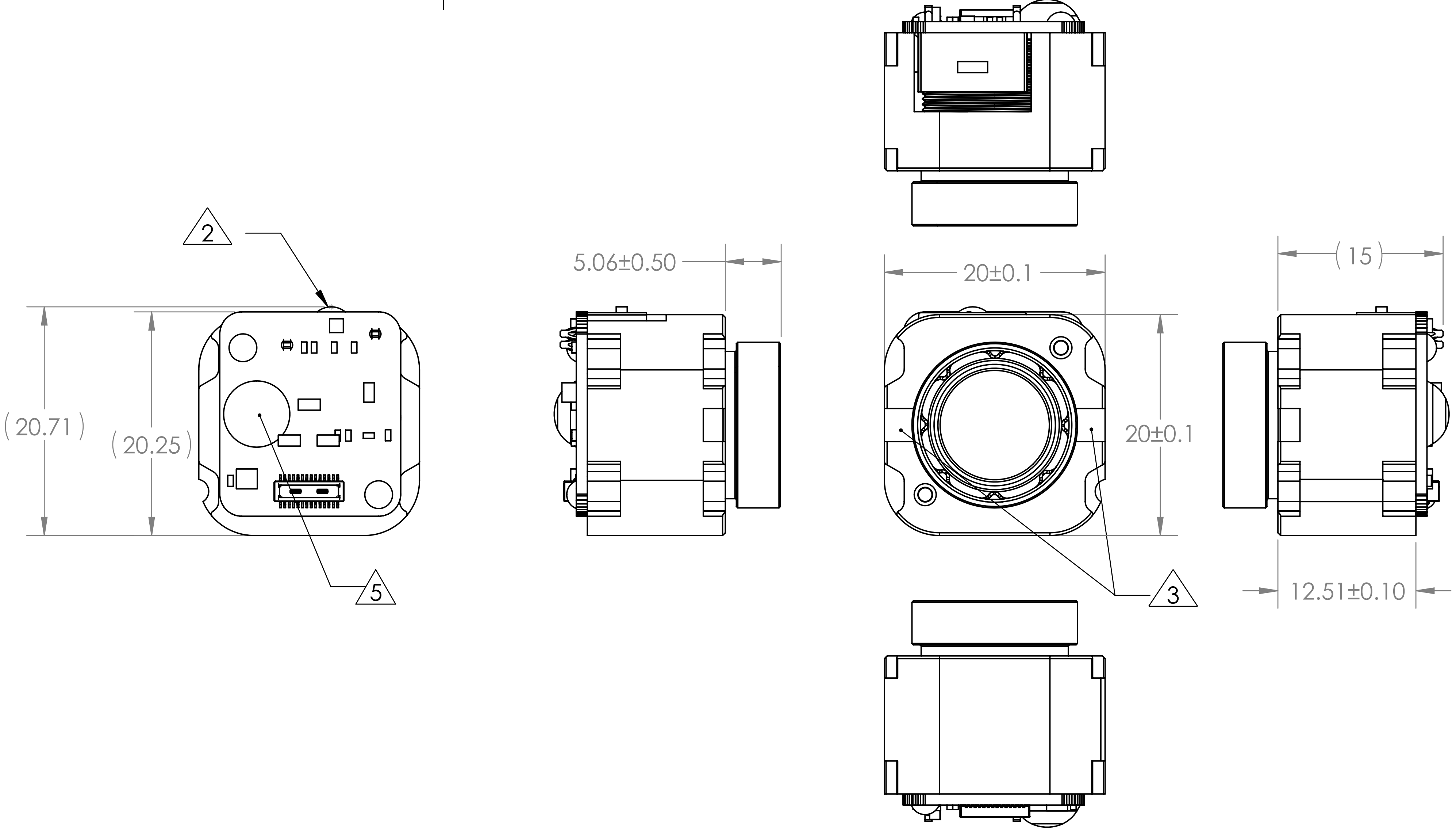
TITLE: DOC, INTERFACE CONTROL DRAWING, MECH, 9.1MM MOSAIC

SIZE	DWG. NO.	REV
B	DOC_247	3

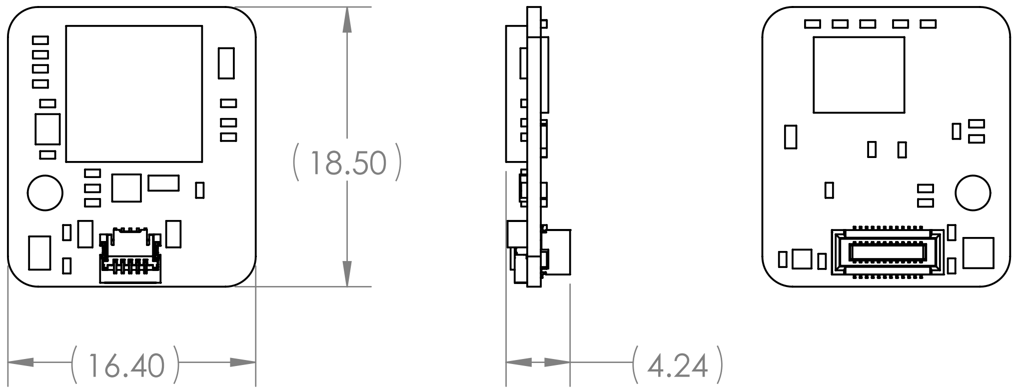
SCALE: 2:1
SHEET 1 OF 2



FLEX CABLE



THERMAL IMAGING CORE



COPROCESSOR BOARD

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SIZE	DWG. NO.	REV
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SCALE: 2:1	SHEET 2 OF 2	