

Mosaic Core Specification

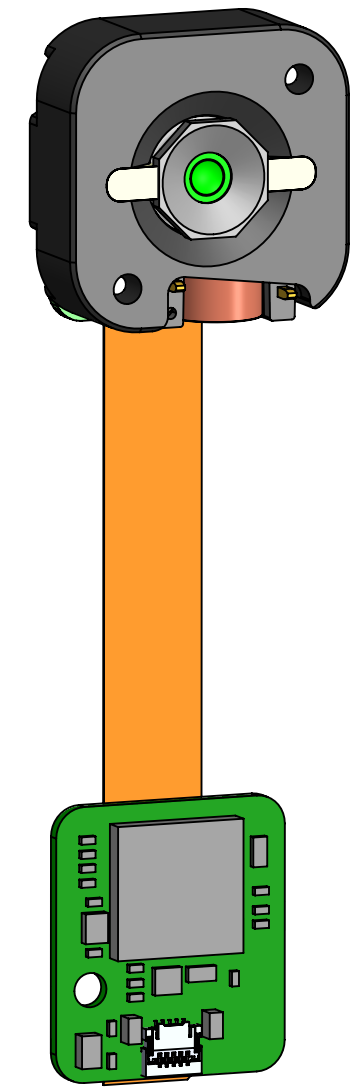
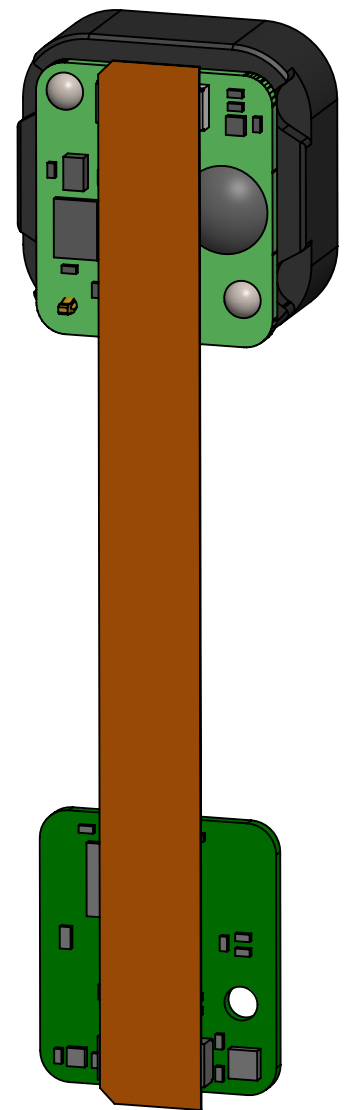
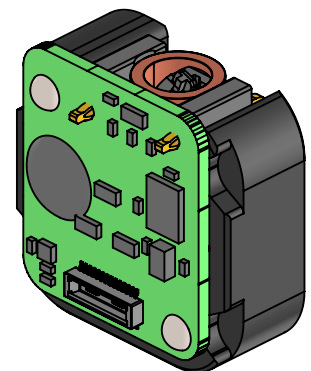
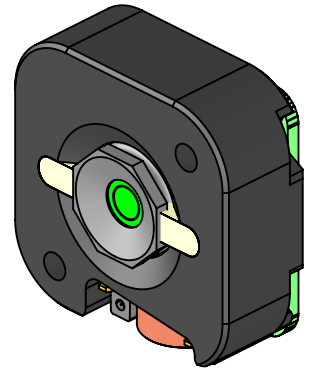
Core Number: C202SP		Starter Kit Number: S202SP		Mktg Rev. 3		11/05/2021	
Product Specifications:		Description					
Microbolometer		Uncooled Vanadium Oxide					
Pixel Pitch		12 Microns					
Spectral Response		7.8 - 14 Microns					
Sensor Resolution (Array Format)		200 (h) x 150 (v); 30,000 pixels					
Frame Rate		Slow Frame - <9Hz					
Non-Uniformity Correction (NUC)		Automatic NUC (with shutter)					
Video Output Interfaces		USB					
Power:							
Power 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 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		<p>The diagram shows two main accessory groups. The first group, labeled 'THERMAL CORE', includes a grey cushion, a black thermal camera, and a white bracket. The second group, labeled 'COPROCESSOR BOARD AND INTERFACE KIT', includes a yellow sensor flex cable, a green interface board, and a yellow USB flex cable. Below the diagram, text reads: 'Provided by Seek or receive design files for integration into other electronics'.</p>			
Bracket		Yes					
Sensor Flex		Yes					
Coprocessor Board		Yes					
USB Flex		Yes					
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. THIS DESIGN IS NOT IPxx RATED.
 3. COPROCESSOR BOARD AND FLEX INCLUDED WITH "P" OPTION CORES.
- 2. KEEPOUT FOR SHUTTER CLEARANCE.
 - 3. LENS ADHESIVE DOES NOT EXTEND ABOVE FRONT FACE.
 - 5. ADHESIVE BUMP PRESENT ON <9Hz 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

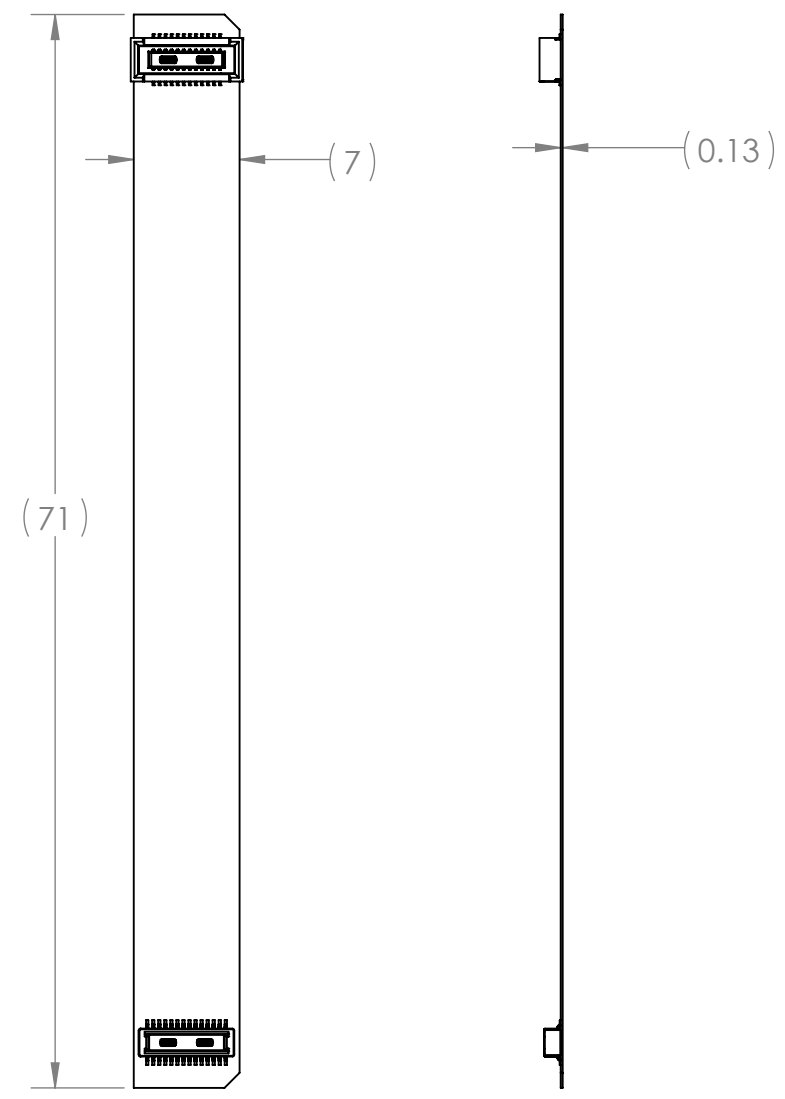
SIZE	DWG. NO.	REV
B	DOC_233	4

SCALE: 2:1 SHEET 1 OF 2

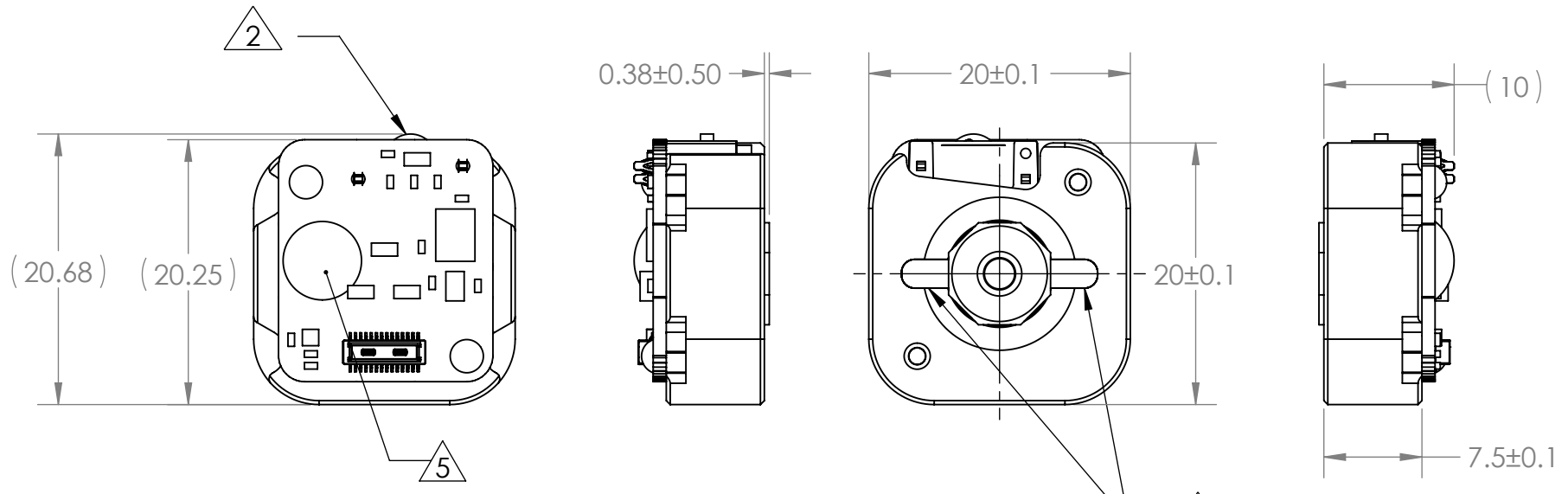
8 7 6 5 4 3 2 1

D
C
B
A

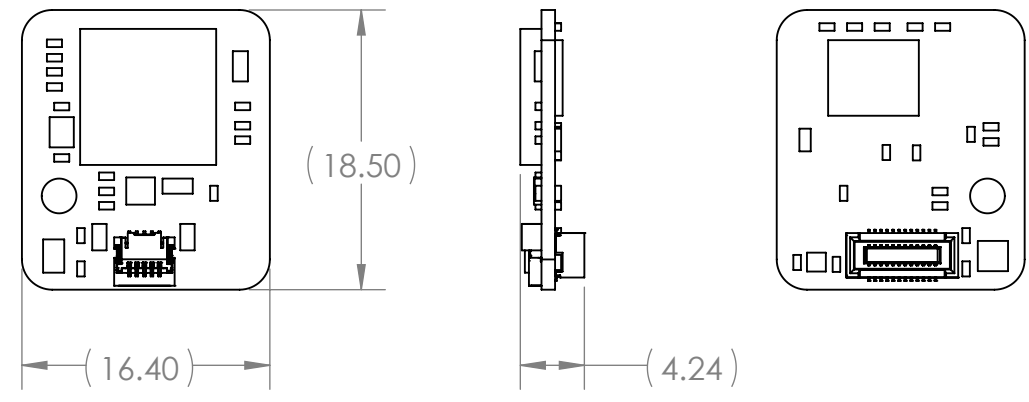
D
C
B
A



FLEX CABLE



THERMAL IMAGING CORE



COPROCESSOR BOARD

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

SIZE	DWG. NO.	REV
B	DOC_233	4
SCALE: 2:1		SHEET 2 OF 2

8 7 6 5 4 3 2 1