

Overview:

Mosaic cores store unit-specific calibration data on the sensor head itself. This feature allows for easier system integration, improved thermal performance due to remote locating the processor, and reduced cost and size by allowing the user to integrate the coprocessor circuit into other electronics elsewhere in the system.

Seek Thermal's Mosaic cores must interface to a coprocessor that communicates with the Seek image processing pipeline in the SDK. There are two main options for integrating the coprocessor into a system.

Option 1:

Mosaic core part numbers that end in "P" or "PX" comes with a coprocessor board from Seek and have a simple USB interface for connecting to the customer's host processor running the SDK.

Option 2:

Mosaic core part numbers that end in "S" or "SX" require the customer to integrate the coprocessor into their own circuit design. Seek provides engineering documentation and reference designs to aid the customer in this design process.

For Option 2, Seek provides:

- 1) Schematic for coprocessor circuit
- 2) BOM for coprocessor circuit
- 3) Compiled binary file(s) for the coprocessor code.
- 4) Interface details for connecting the core to the coprocessor circuit on the system main board
- 5) Optional flex cables, if the user prefers to use the Seek design.
- 6) Seek SDK for implementation on user's Host Processor

For Option 2, the user will:

- Design the system main board around one of the coprocessor options (USB or SPI)
- Optionally design the flex connections if the Seek flex solutions are not appropriate.

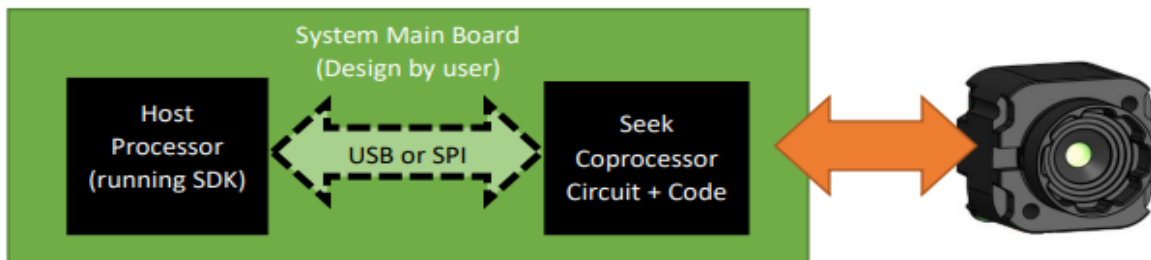


Figure 2: Coprocessor Option 2 Block Diagram

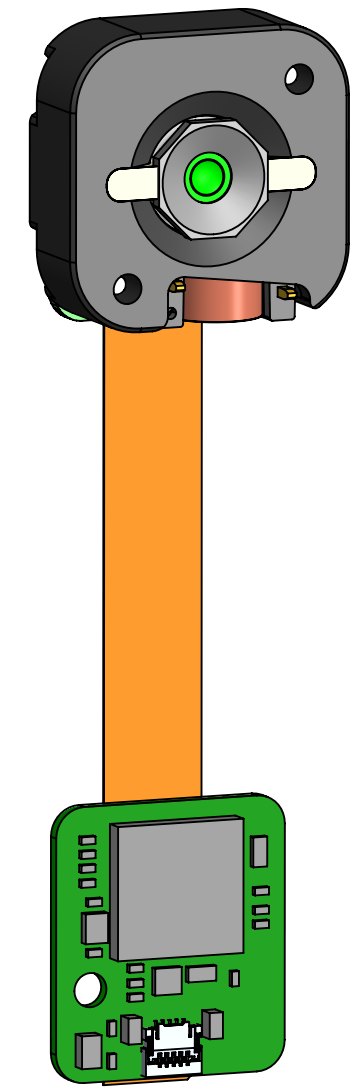
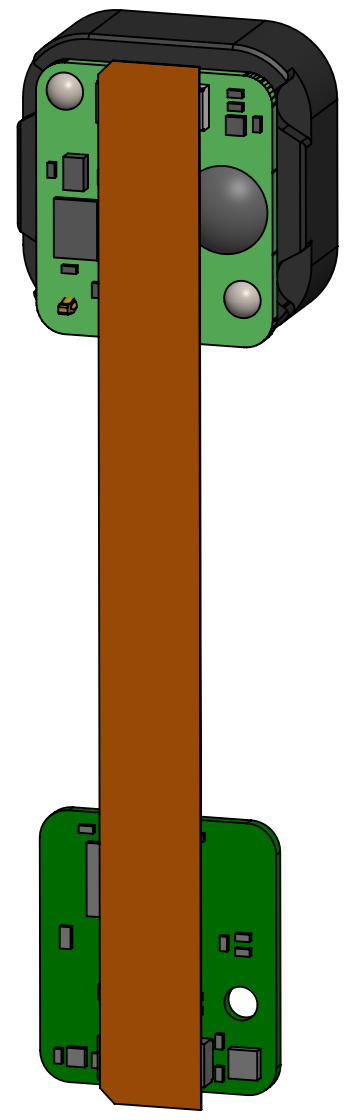
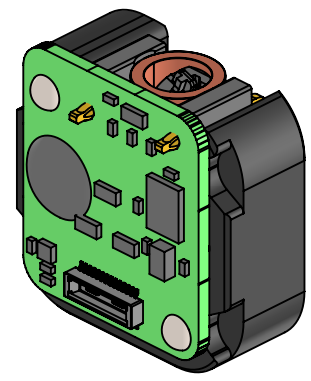
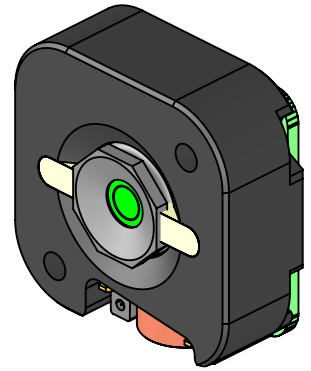
This document is not intended as a standalone comprehensive source of information required to design a system around the Mosaic cores. Please **consult Seek Thermal** and refer to **Mosaic Core Engineering Datasheet** for full design support.

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. KEYPPOINT FOR SHUTTER CLEARANCE.
3. LENS ADHESIVE DOES NOT EXTEND ABOVE FRONT FACE.
4. THIS DESIGN IS NOT IPxx RATED.
5. ADHESIVE BUMP PRESENT ON <9Hz CORES.
6. PROCESSOR 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°		PROPRIETARY AND CONFIDENTIAL 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.		

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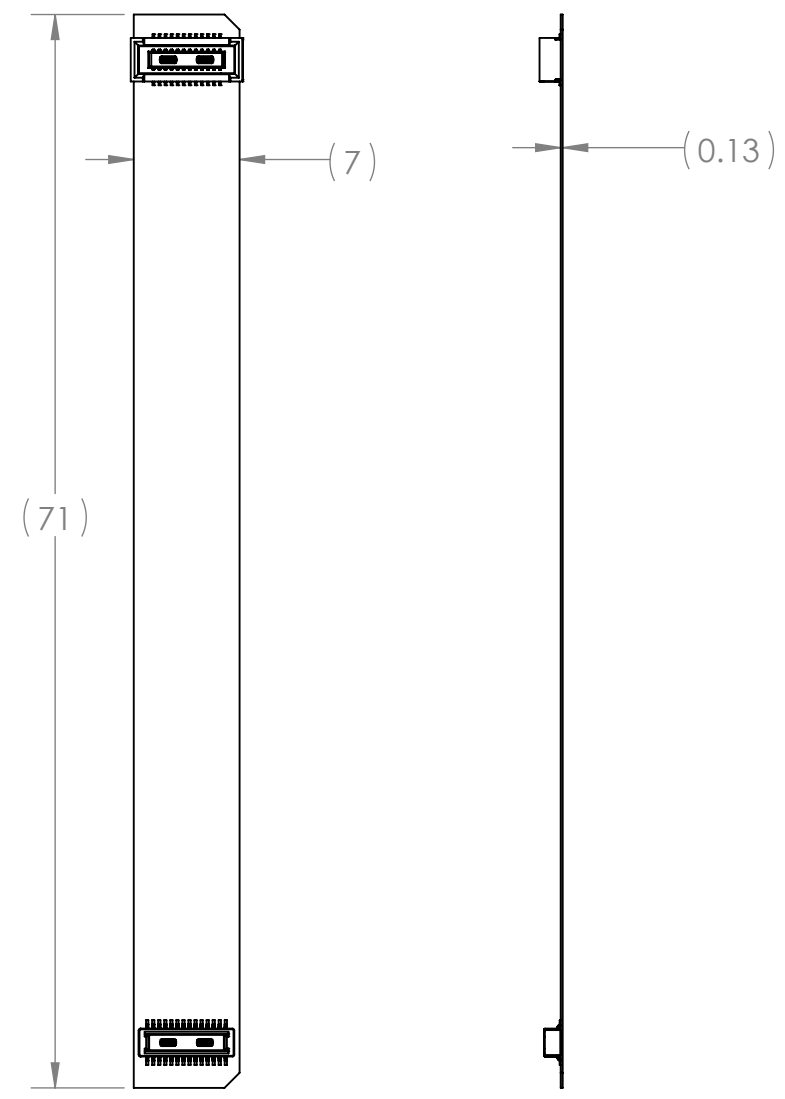
TITLE: DOC, INTERFACE CONTROL
DRAWING, MECH, 2.2MM MOSAIC

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

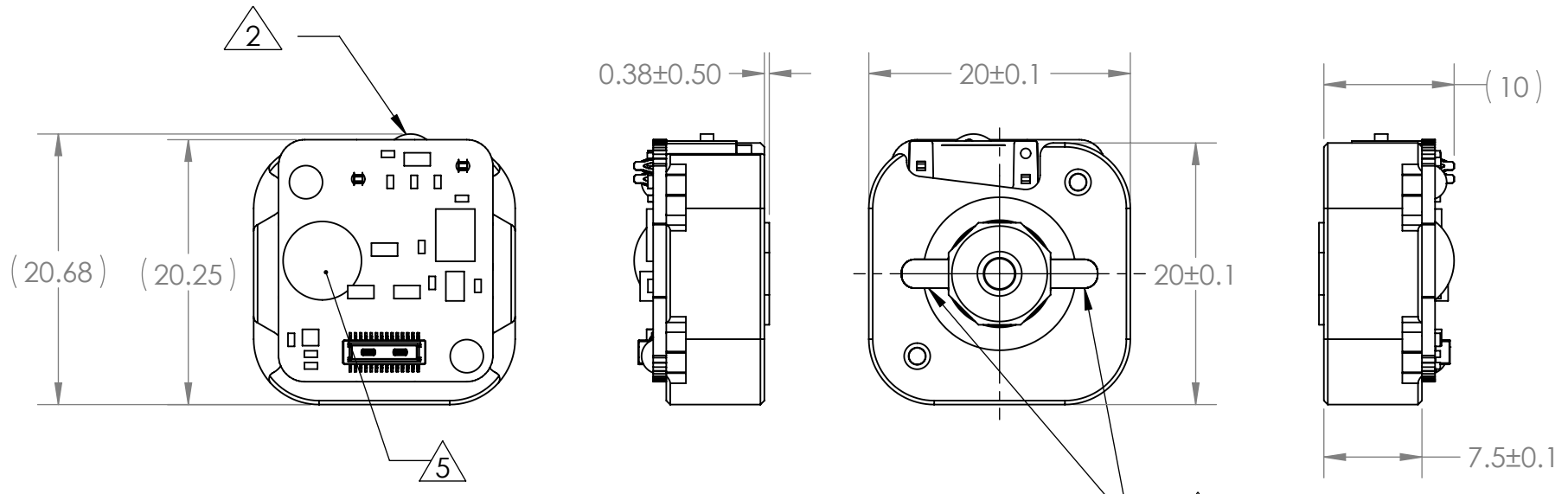
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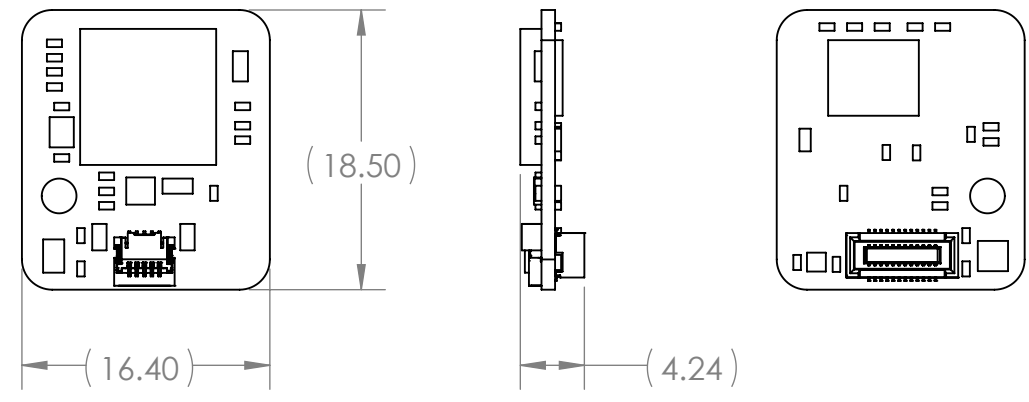
D
C
B
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FLEX CABLE



THERMAL IMAGING CORE



COPROCESSOR BOARD

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8 7 6 5 4 3 2 1