

## TECHNICAL SUMMARY

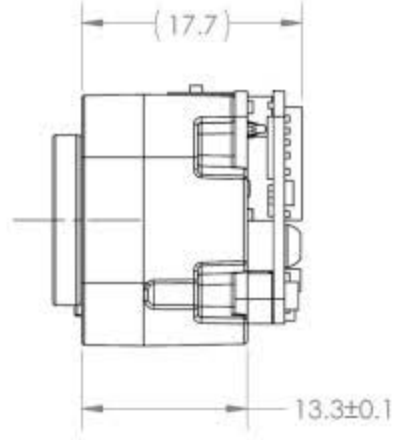
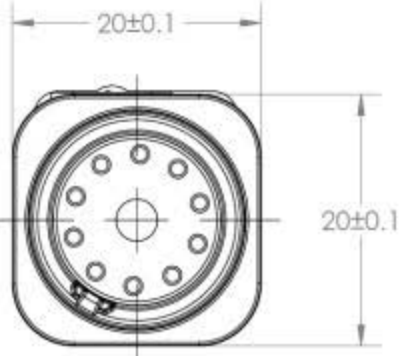
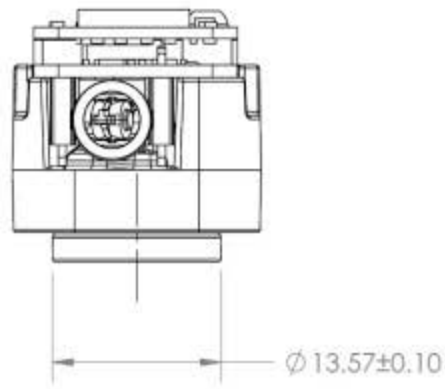
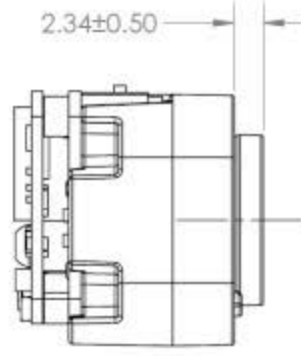
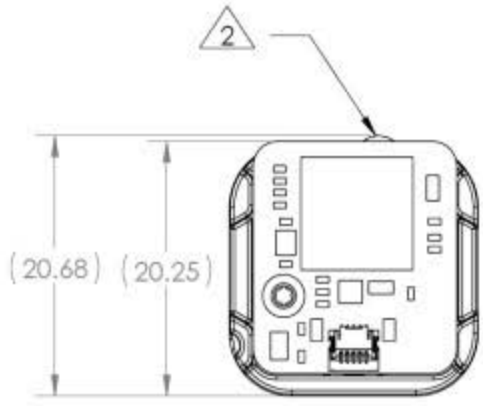
## 103 x 78 RESOLUTION

| Specifications                      |  | Description                                       |
|-------------------------------------|--|---|
| Microbolometer                      | Uncooled Vanadium Oxide  |   |
| Pixel Pitch                         | 12 Microns   |   |
| Spectral Response                   | 7.8 - 14 Microns   |   |
| Sensor Resolution (Array Format)    | 103 (h) x 78 (v); 8,034 pixels   |   |
| Frame Rate                          | <9 Hz  |   |
| Imaging Range <sup>1</sup>          | -40°C to 330°C   |   |
| Sensor Sensitivity                  | 65 mK (typical), <100 mK (max) @ 25°C  |   |
| Non-Uniformity Correction (NUC)     | Automatic NUC (with shutter)   |   |
| Video Output Interfaces             | USB  |   |
| Supply Voltage                      | 3.3V to 5.0V   |   |
| Power: Core Only                    | <50mW  |   |
| Power: Core + Interface Board       | 300mW  |   |
| Output Frame Formats                |  |   |
| Supported OS                        | Linux / Windows SDK  | Android SDK                                       |
| Paritally Processed                 | 16-bit corrected or pre AGC  | 16-bit filtered pre AGC                           |
| Colorized Display                   | ARGB888, RGB565, AYUV, or YUY2   | 32-bit ARGB post colorization in the Bitmap image |
| B/W Display                         | 8-bit Greyscale  | NA  |
| Temperature                         | 32-bit floating point or 16-bit fixed point thermography   | 16-bit fixed point thermography                   |
| Optics & Mechanical                 |  |   |
| Focal Length                        | 4.0mm  |   |
| F-number (focal length/aperture)    | f/1.2  |   |
| Spatial Resolution (IFOV, center)   | 3.0  |   |
| HFOV <sup>4</sup>                   | 35°  |   |
| VFOV <sup>4</sup>                   | 26°  |   |
| Detection Range <sup>2</sup>        | 333m   |   |
| Recognition Range <sup>2</sup>      | 83m  |   |
| Identification Range <sup>2</sup>   | 48m  |   |
| Distance to Spot Ratio              | 56:1   |   |
| Ingress Protection                  | NA   |   |
| Core Dimensions (L x W x H)         | 20 x 20 x 21mm   |   |
| Core Weight                         | 12 g   |   |
| Focus                               | Fixed  |   |
| Lens Material                       | Chalcogenide   |   |
| Thermography                        |  |   |
| Temperature Calibration             | Calibrated Output in °C, °F, K   |   |
| Temperature Accuracy <sup>1,3</sup> | The greater of ±5°C or 5% between 5°C to 140°C scene temperatures<br>Typical performance of ±10% between 140°C to 330°C scene temperatures Contact your sales rep for higher temperature accuracy up to 330°C and beyond |   |
| Environmental                       |  |   |
| Operating Temperature Range         | -10°C to 60°C<br>Contact your sales rep for higher operating temperature ranges  |   |
| Storage Temperature Range           | -40°C to 80°C  |   |
| Solar Protection                    | Yes  |   |
| Humidity                            | 10%~95%RH, non-condensing  |   |
| Regulatory                          | ROHS, WEEE, REACH  |   |


- Specified at nominal 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.  
Contact Seek Thermal for performance at other nominal operating temperatures and measurement distances.
- Based on Johnson Criteria.
- Factory default emissivity is set to 0.97. Emissivity is adjustable using the SDK. See data sheet for more information.

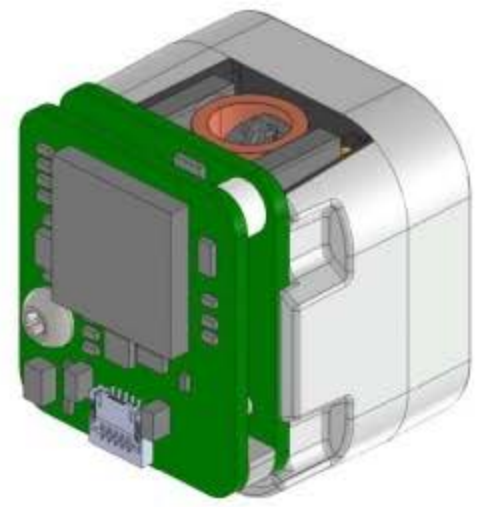
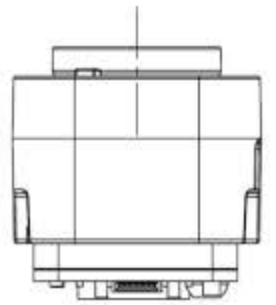
# C104SP 4.0mm Lens, 103 x 78, 9Hz

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NOTES:

1. SEE 3D CAD FILE FOR FULL GEOMETRY.
2.  KEEPOUT FOR SHUTTER CLEARANCE.
3. THIS DESIGN IS NOT IPxx RATED

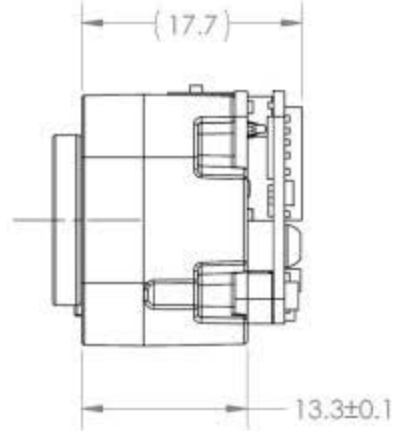
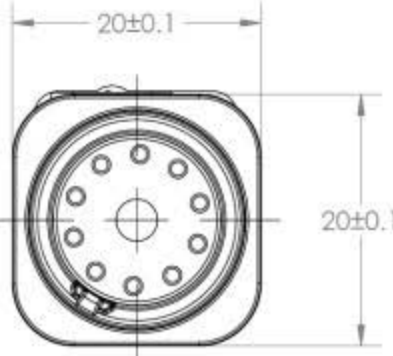
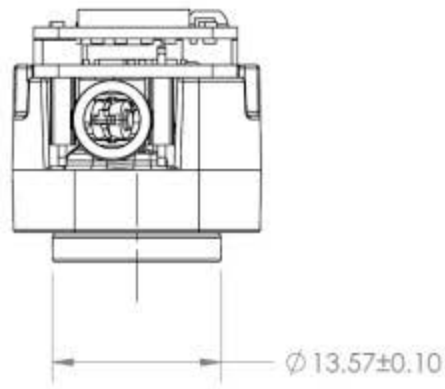
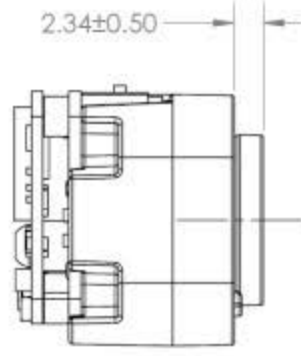
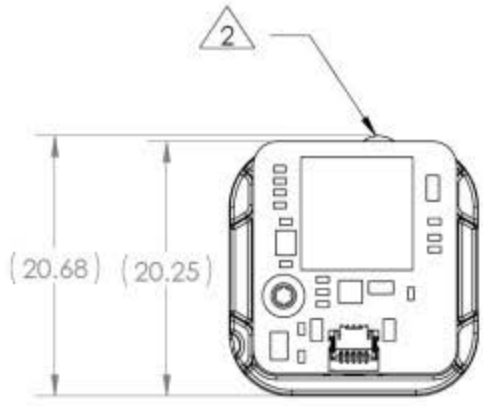


NOTE:  
1. The Cx04H core includes the coprocessor mounted on the core, it is not available in a remote coprocessor configuration.

|   |              |       |         |                        |          |
|---|--------------|-------|---------|------------------------|----------|
|  |              | SIZE  | DOC NO  | TITLE                  | REV      |
| DRAWN   | Matt Buckley | T     | DOC_165 | C2x/C3x Core Datasheet | 5        |
| DATE  | 9/12/2019    | SCALE | NONE    | SHEET                  | 11 OF 15 |

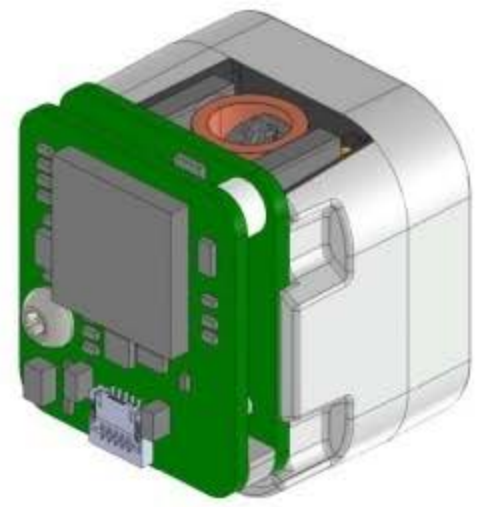
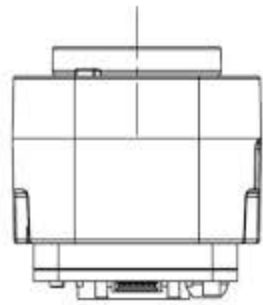
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