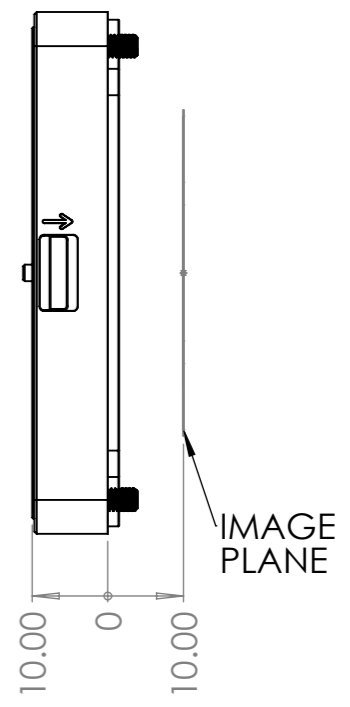
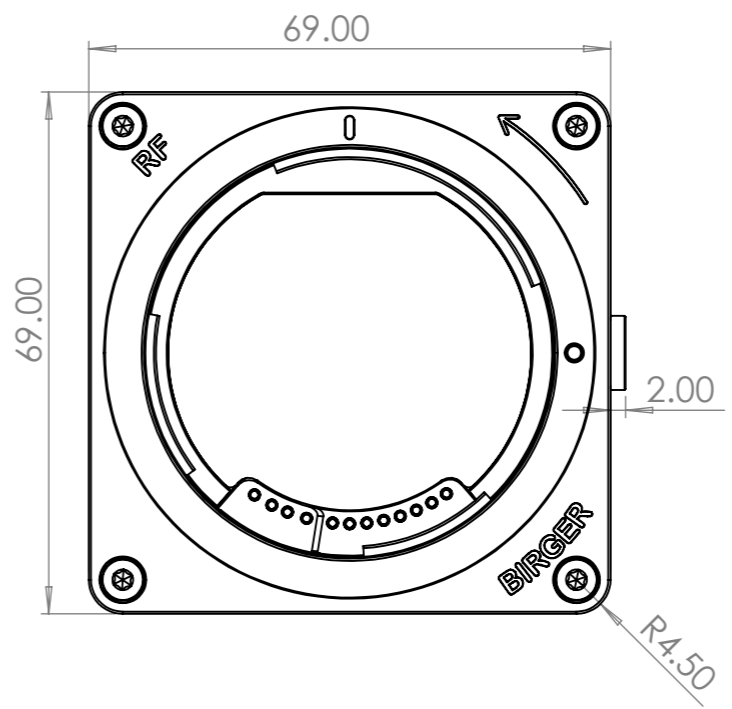
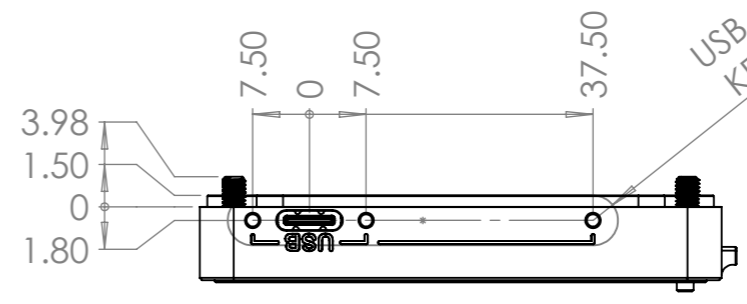


- #6 - POWER\_IN - 17.78
- #5 - SYNC\_OUT - 15.24
- #4 - SYNC\_IN - 12.70
- #3 - UART\_TX - 10.16
- #2 - UART\_RX - 7.62
- #1 - GROUND - 5.08



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:				FINISH:		DEBURR AND BREAK SHARP EDGES			
DRAWN		NAME		SIGNATURE		DATE			
CHK'D								DWG NO.	
APPV'D								BD-RF	
MFG								A3	
Q.A						MATERIAL:		SCALE:1:1	
						WEIGHT:		SHEET 1 OF 4	

Camera Interface Port (6x pogo pads):

Pogo pins on the face of the camera, pads on the Birger device.  
Pin pitch is 2.54mm (0.1 in)

pin#, name: description

1. GROUND: power return and ground reference.
2. UART\_RX: communication from camera to controller.
3. UART\_TX: communication from controller to camera.
4. SYNC\_IN: strobe from camera to controller.
5. SYNC\_OUT: strobe from controller to camera.
6. POWER\_IN: power from camera to controller.

Pins #2-#5 are protected for short to power, as long as the power input is less than 24V. The signalling is 3.3V TTL (verify threshold). Absolute max without damage is 24V. Over voltage protected above 4.7V.

POWER\_IN operating range is 5V nominal (4.2V minimum) to 24V nominal (overvoltage protection at 28V). Absolute max without damage is 42V. Input current is limited to approximately 100mA during boot up, and the maximum current draw is approximately 1.5A. Max power draw is less than 8W.

USB-C :

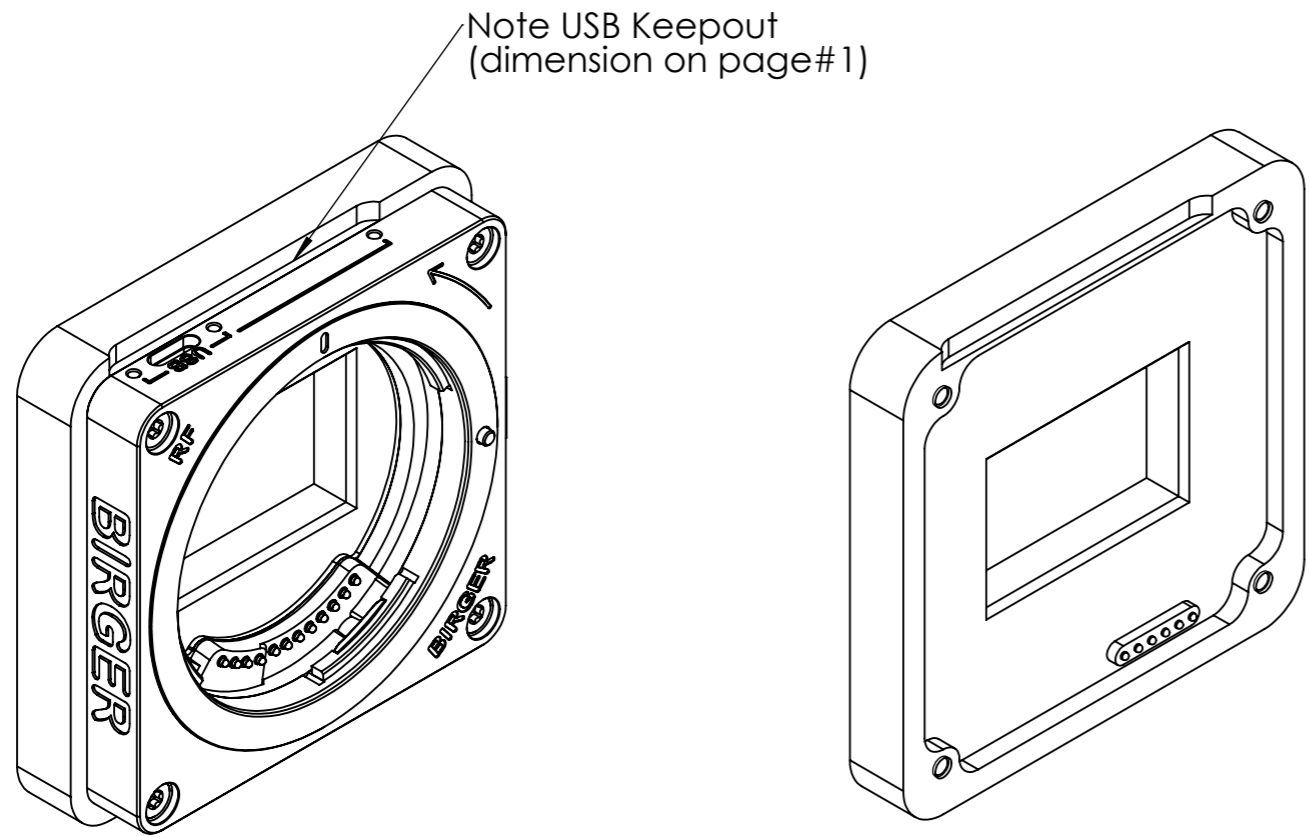
The USB-C port supports USB, and has additional Functionality on SBU (only accessible with an accessory module from Birger):

1. TTL UART
2. 10BASE-T1S ethernet
3. CAN
4. Timing synchronization

VBUS can operate with nominal VBUS voltage from 5V (4.2V minimum) to 20V (22V max).

(More detail to be added later.)

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SURFACE FINISH:							
TOLERANCES: LINEAR: ANGULAR:						TITLE:	
DRAWN	NAME	SIGNATURE	DATE				
CHK'D							
APPV'D							
MFG							
Q.A				MATERIAL:		DWG NO.	BD-RF
							A3
				WEIGHT:		SCALE:1:1	SHEET 2 OF 4



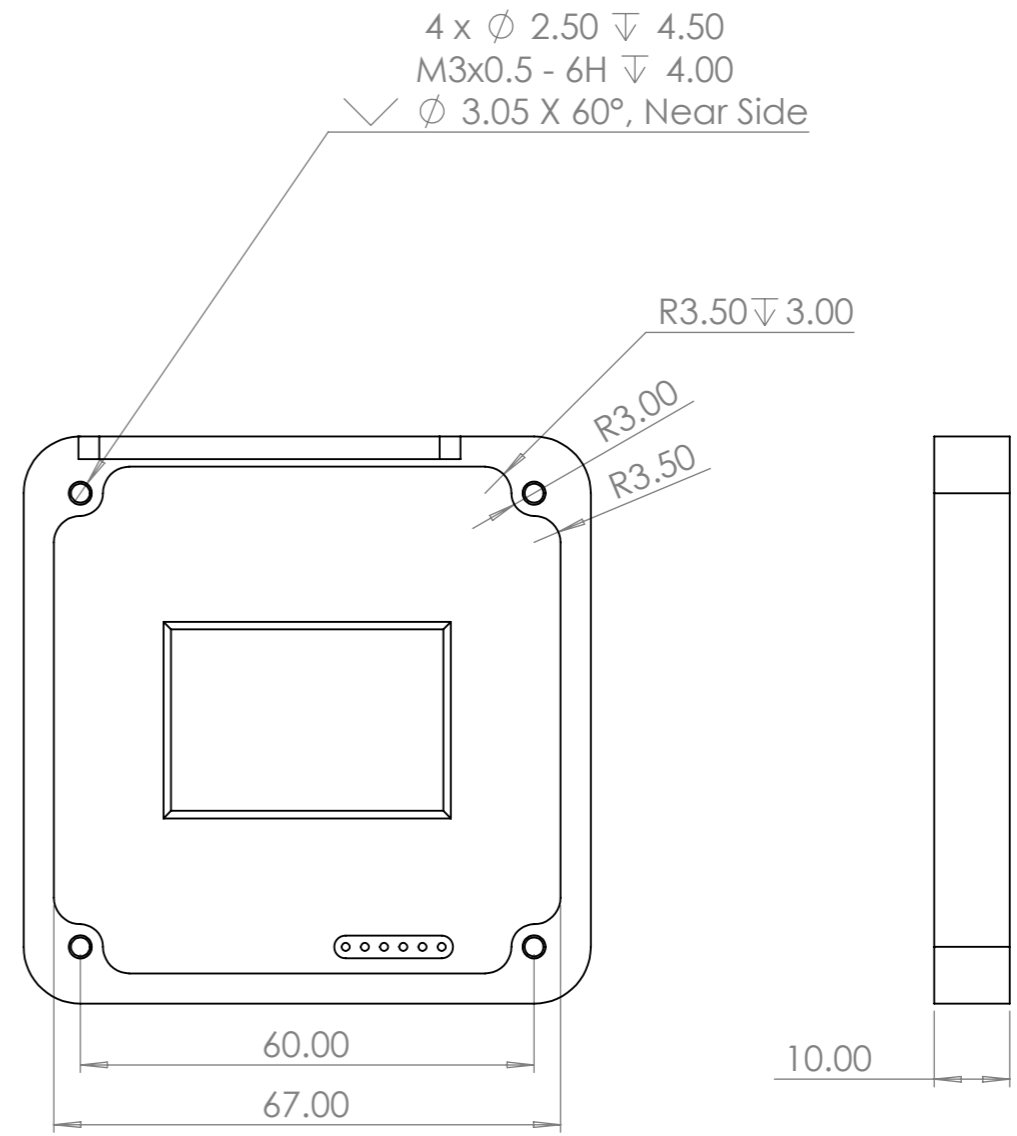
Birger\_BD\_Camera\_Critical\_Geometry.STEP:  
 (available for download from birger.com)

Contains the critical geometry for mating a Birger BD footprint lens controller with an image sensor. The back surface of the model is the image plane. The front surface of the model has the mating features for the Birger controller. This model represents a camera 72mm square front (3mm larger than the controller), to illustrate the necessary keepouts for the USB-C accessories and cables.

The pogo pin height is at the nominal height to mate with the lens controller PCB. The pins should extend (uncompressed at least an additional 0.5mm to account for the tolerances of the Birger assembly (+0.0mm, -0.3mm). Travel length of the pins should be at least 1.0mm if camera tolerances are sufficient that shim washers will not be used between to controller and the camera. If shim washers will be used, additional travel will be required.

The 67mm square pocket (3mm deep, w/ radiused clearances around the mounting holes), is specified at the nominal fit dimension. The pocket should have a slip fit tolerance on this hole. The part from Birger will have a fit class to be specified later. The current target is to be +0, minus 10 microns. The customer tolerance should be similar, or larger, to ensure a slip fit.

The 3mm depth specified for this pocket will allow for all BD-footprint controllers from Birger, to be utilized with a single camera design.



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SURFACE FINISH:							
TOLERANCES:						TITLE:	
LINEAR:							
ANGULAR:							
NAME	SIGNATURE	DATE					
DRAWN							
CHK'D							
APPV'D							
MFG							
Q.A				MATERIAL:		DWG NO.	A3
				WEIGHT:		SCALE:1:1	SHEET 3 OF 4
						<b>BD-RF</b>	

