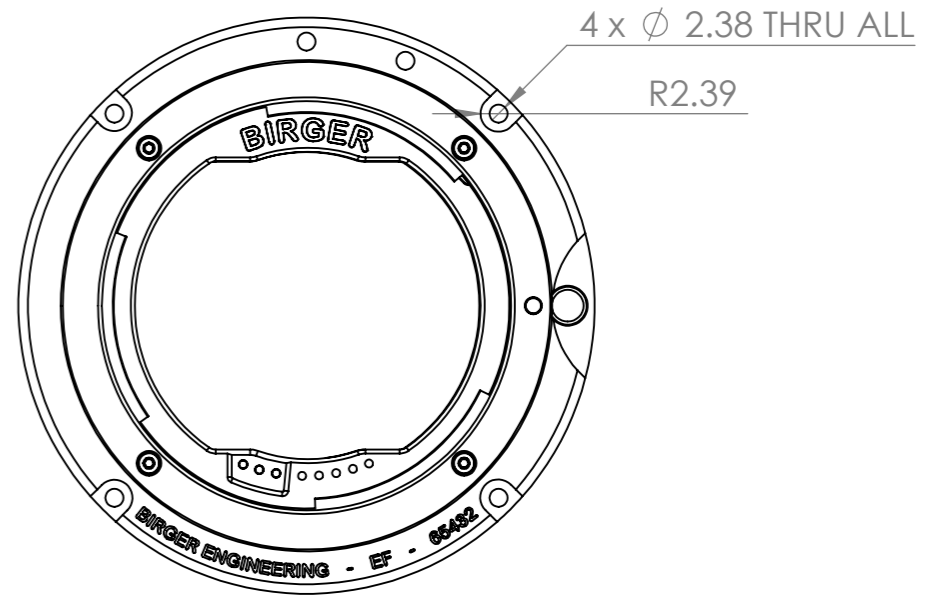
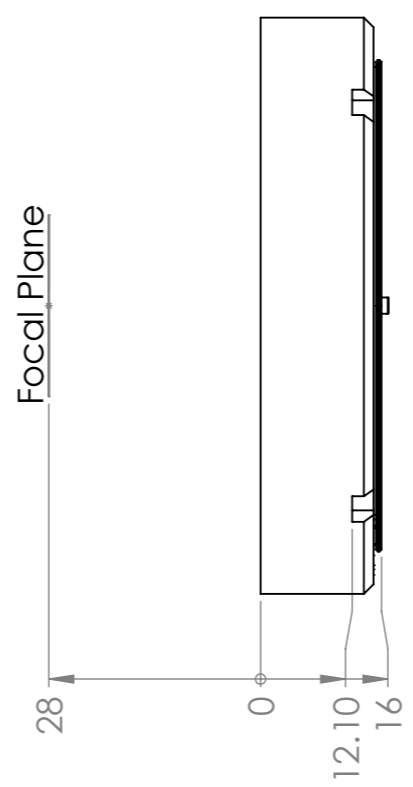
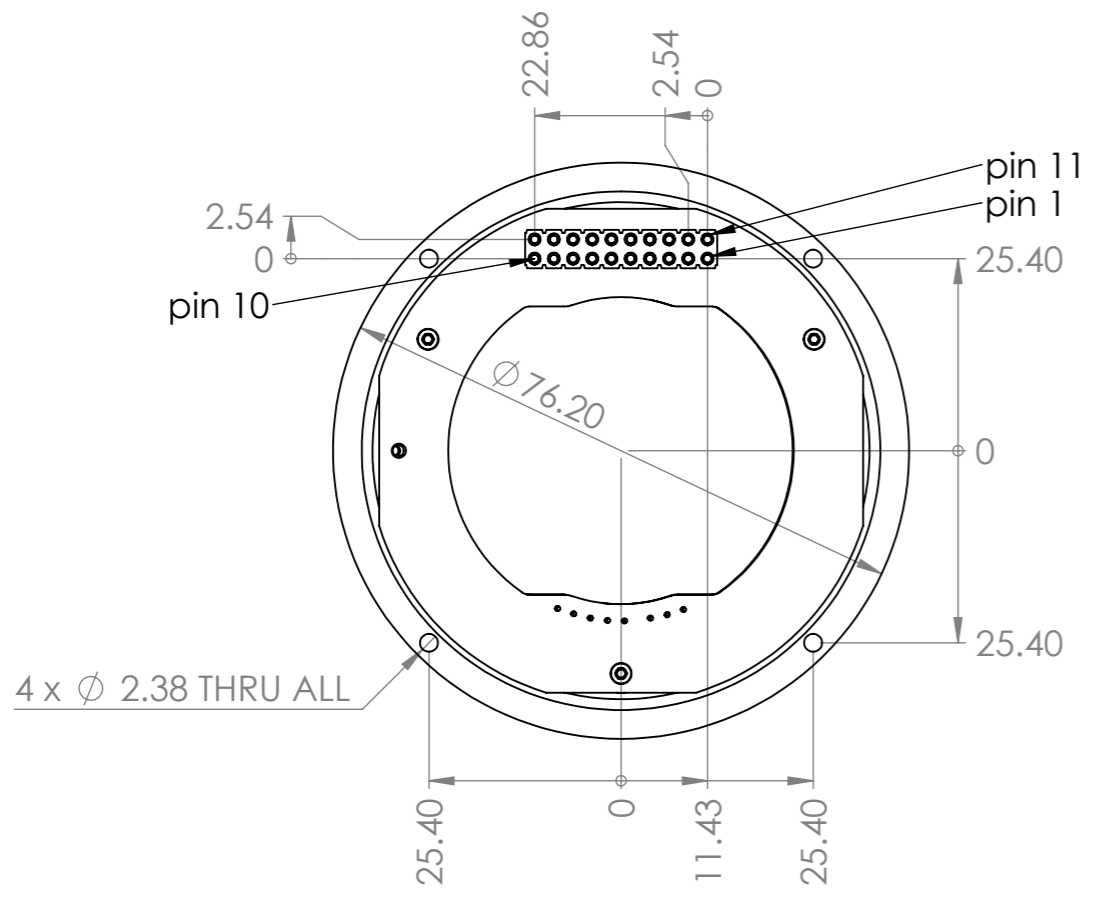


- pin#, name: description; range
- 1, RX2: Port2 Receive Data (RS232 compatible); min swing 0.8V/2.4V, max swing -25V/+25V
  - 2, TX2: Port2 Transmit Data (RS232 compatible); typical +5V
  - 3, GND: power return and ground reference (internal connection to #10)
  - 4, 6V: 6V power input (output 6V +/- 5%, if +12V is connected); 5.4V to 6.6V
  - 5, TX1: Port1 Transmit Data (RS232 compatible); typical +5V
  - 6, RX1: Port1 Receive Data (RS232 compatible); min swing 0.8V/2.4V, max swing -25V/+25V
  - 7, VUSB/P3E: (usb supported with limits), logic not power input, tie to GND to enable port3; 5.5V max
  - 8, USB\_D+/TX3: (usb supported with limits), port3 TX Data; low<0.4V, high>2.4V, max 3.6V
  - 9, USB\_D-/RX3: (usb supported with limits), port3 RX Data; low<0.8V, high>2.0V, max 5.5V
  - 10, GND: power return and ground reference (internal connection to #3)
  - 11, GPIO1; signal RA1 for sg command; input low<0.8V high>2.0V, output low <0.6V high>4.3V
  - 12, GPIO0; signal RA0 for sg command; input low<0.8V high>2.0V, output low <0.6V high>4.3V
  - 13, 3V: Logic Power Output; typical 3.3v to 3.6V, 25mA max
  - 14, 12V: High Voltage Power Input; 8V min, 16V max, typical <100mA idle with lens
  - 15, TX4: Port4 TX Data; low<0.4V, high>2.4V, max 3.6V
  - 16, RX4: Port4 RX Data (ttl levels); low<0.8V, high>2.0V, max 5.5V
  - 17, IO3: Input3, unused in library >22b; low<0.8V, high>2.0V, max 5.5V
  - 18, IO2: Input2, unused in library >22b; low<0.8V, high>2.0V, max 5.5V
  - 19, IO1: Input1, unused in library >22b; low<0.8V, high>2.0V, max 5.5V
  - 20, IO0: Input0, unused in library >22b; low<0.8V, high>2.0V, max 5.5V

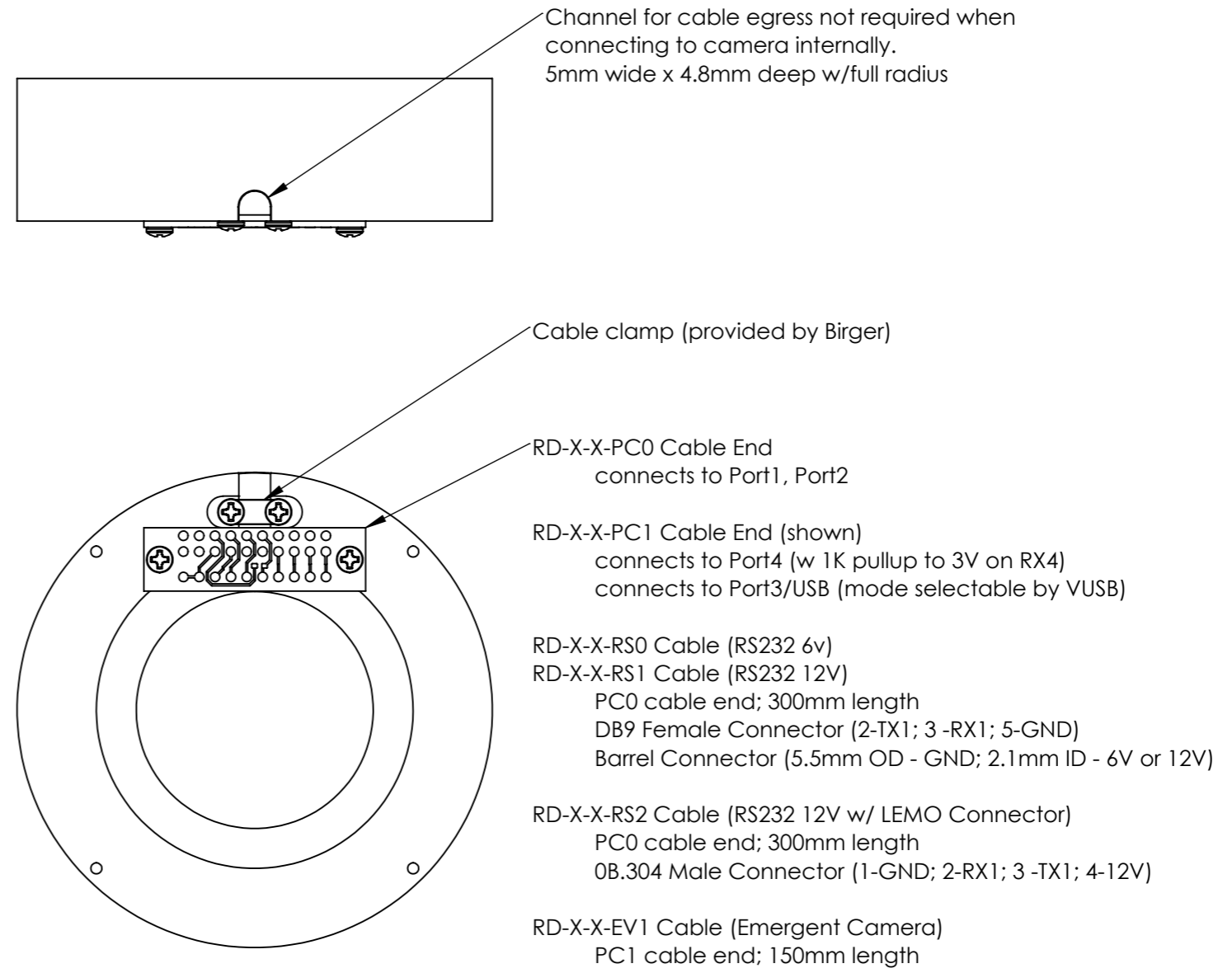
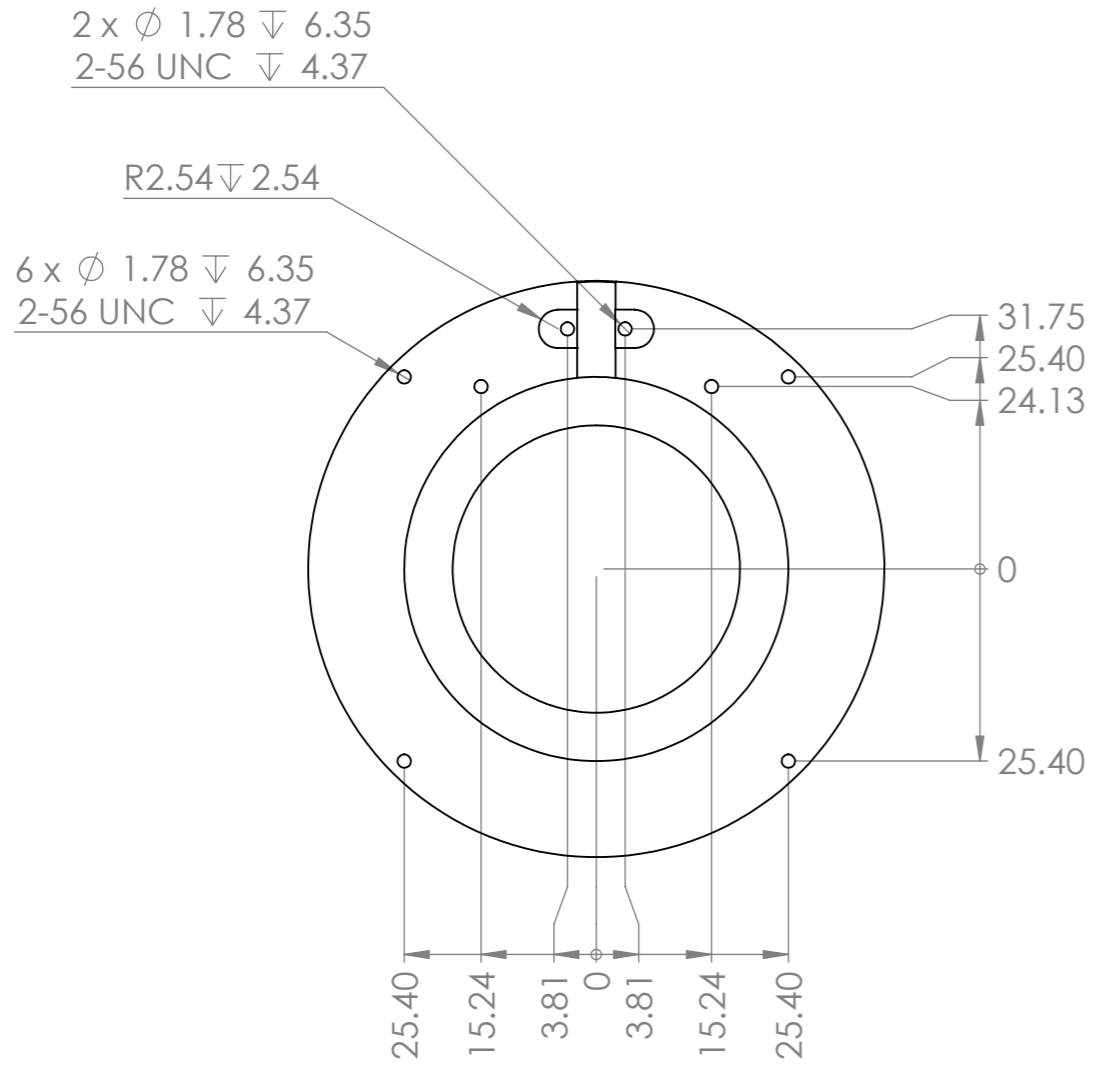


**notes**  
 Mating contact pads should be +1mm forward from mounting surface (away from focal plane).  
 Ports 1-2 are standard UART with RS232 levels, using an ISL4223EIRZ interface.  
 Ports 3-4 are standard UART with TTL levels.  
 Default communications are 115200-8N1 (115200 baud, 8 data, no parity 1 stop).  
 Power draw is very lens dependant, plan for typical power draw of <1W idle w/lens attached and initialized, and <6W peak while moving motors.  
 Current draw (on either the 6V or 12V input) can max out at >1.2A for <10 microseconds, on lens attach and power up.  
 Contact Birger before utilizing USB interface on this generation of product.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH:		DEBURR AND BREAK SHARP EDGES			
SURFACE FINISH:							
TOLERANCES:						TITLE: Canon EF Lens Controller	
LINEAR:						Uncontrolled: 20 October 2017	
ANGULAR:						DWG NO. rd-ef1-x-x	
DRAWN		NAME		SIGNATURE		DATE	
CHK'D							
APP'VD							
MFG							
Q.A						MATERIAL:	
						WEIGHT:	
						SCALE:1:1	
						SHEET 1 OF 2	

notes

1. Standard delivery for all models, includes: 4x 2-56 x 5/8in Socket Cap Screw; 4x 2-56 x 1/4in; 1x cable clamp.
2. Birger cables are made from Mogami 2948 MIDI Cable, with 5mm OD.
3. Standard wire colors: Black - Ground; Red - Power; White - TX; Green - RX.



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:			FINISH:		DEBURR AND BREAK SHARP EDGES				
DRAWN		NAME		SIGNATURE		DATE			
CHK'D								TITLE: <b>Canon EF Lens Controller Mounting &amp; Cables</b> Uncontrolled: 20 October 2017	
APPV'D									
MFG									
Q.A									
						MATERIAL:		DWG NO.	
						WEIGHT:		SCALE:1:1	
								SHEET 2 OF 2	

rd-ef1-x-x

A3