

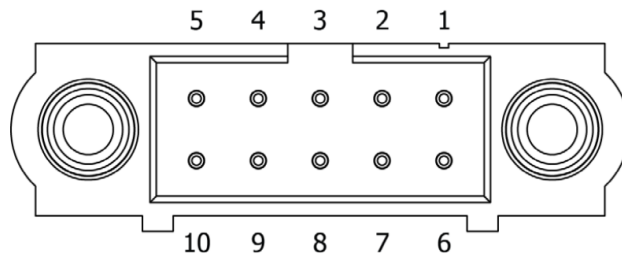
# IMU

## 2.2 VN-100 Rugged Electrical

VN-100 Rugged Pin Assignments

Pin	Pin Name	Description
1	VCC	+4.5V to +5.5V
2	TX1	RS-232 voltage levels data output from the sensor. (Serial UART #1)
3	RX1	RS-232 voltage levels data input to the sensor. (Serial UART #1)
4	SYNC_OUT	Output signal used for synchronization purposes. Software configurable to pulse when ADC, IMU, or attitude measurements are available.
5	GND	Ground
6	TARE/RESTORE	Input signal used to zero the attitude of the sensor. If high at reset, the device will restore to factory default state. Internally held low with 10k resistor.
7	SYNC_IN	Input signal for synchronization purposes. Software configurable to either synchronize the measurements or the output with an external device.
8	TX2_TTL	Serial UART #2 data output from the device at TTL voltage level (3V).
9	RX2_TTL	Serial UART #2 data into the device at TTL voltage level (3V).
10	RESV	This pin should be left unconnected.

VN-100 Rugged External Connector

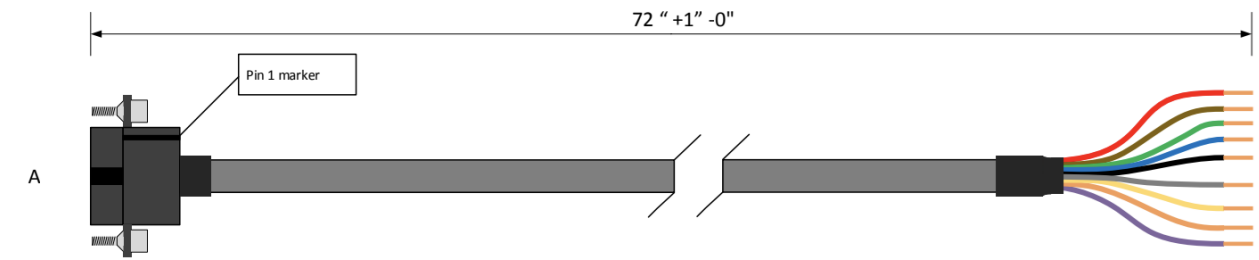


# IMU

- Digital Interface: Serial TTL, RS-232
- USB to TTL Serial Converter

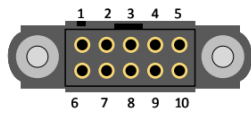



# IMU



**NOTE:** Pin 6 – RESTORE: Must be grounded if unused

A		
HARWIN PN: M80-4861005		
PIN #	WIRE COLOR	NAME
1	RED	VCC
2	BROWN	TX1
3	GREEN	RX1
4	BLUE	SYNC_OUT
5	BLACK	GND
6	GREY	RESTORE
7	YELLOW	SYNC_IN
8	ORANGE	TX2
9	PURPLE	RX2

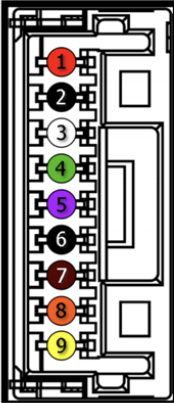


		VECTORNAV TECHNOLOGIES, LLC	
		TITLE:  VN-C100-0610	
DRAWN GORDON HAIN	10/30/2018	DRAWING NOT TO SCALE	SHEET 1 OF 2

# Camera

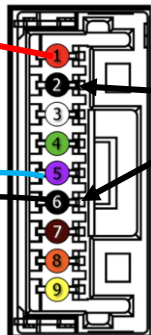
Manual p34 <https://www.ptgrey.com/support/downloads/10431/>

## 4.9.4 General Purpose Input/Output (GPIO)

Diagram	Color	Pin	Function	Description
	Red	1	$V_{EXT}$	Allows the camera to be powered externally 5 - 24 VDC
	Black	2	GND	Ground for Input/Output, $V_{EXT}$ , +3.3 V pins
	White	3	+3.3 V	Power external circuitry fused at 150 mA maximum
	Green	4	GPIO3 / Line3	Input/Output/Tx
	Purple	5	GPIO2 / Line2	Input/Output/Rx
	Black	6	GND	Ground for Input/Output, $V_{EXT}$ , +3.3 V pins
	Brown	7	OPTO_GND	Ground for opto-isolated IO pins
	Orange	8	OPTO_OUT / Line1	Opto-isolated output
	Yellow	9	OPTO_IN / Line0	Opto-isolated input

## CAMERA GPIO

External Power



Same GND

pin5  
pin6

IMU

## CAMERA GPIO

External Power



pin5

pin6

## IMU PINS

A		
HARWIN PN: M80-4861005		
PIN #	WIRE COLOR	NAME
1	RED	VCC
2	BROWN	TX1
3	GREEN	RX1
4	BLUE	SYNC_OUT
5	BLACK	GND
6	GREY	RESTORE
7	YELLOW	SYNC_IN
8	ORANGE	TX2
9	PURPLE	RX2

GND, RX, TX, VCC

Grounded

GND, TX, RX, VCC

TTL2USB

USB3

