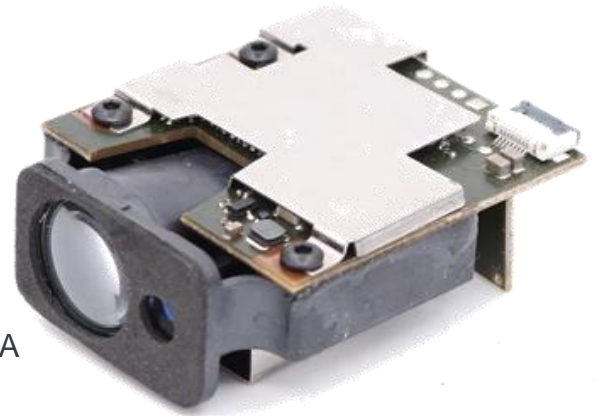


# Laser Rangefinder module V2

## Parameters & Communication protocol

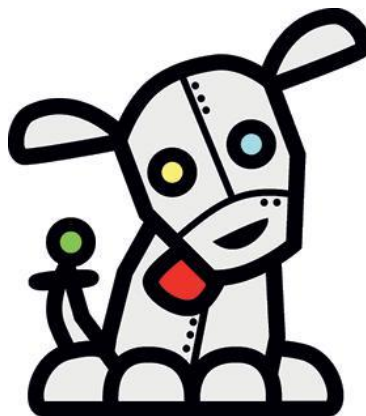


### Parameters:

- Power Supply Voltage & Current: DC3V ~ 3.3V / 100mA
- Measuring Range: 0.0001 ~ 80 m
- Resolution options: 0.1 mm / 1 mm
- Measurement Speed: 2Hz / 5Hz / 10Hz / 20Hz (0.05~1 seconds)
- Measurement modes: Single / Continuous Mode
- Distance Unit: m
- Laser Type: 620-690nm
- Laser Class: class ii, <1mW
- Spot Diameter at the distance m: 6mm@10m, 30mm@50m
- Protection Level: IP40
- Operating Temperature: -20°C ~ +50°C
- Storage Temperature: -20°C ~ +80°C
- Weight: 60g
- Dimensions: 46.47mm(L) x 37mm(W) x 16.5mm(H)

### Remarks:

Please note that this module can show some errors during measurement when it is exposed to an environment where lighting intensity is too large, the ambient temperature is too high or too low, the reflector is too weak or too strong, or the target of a rough surface, different measurement objectives and measurement environment may cause some error of the measurement range or measurement results.



This module is available on Tindie

<http://bit.ly/LRF-Sensor-V2>

## List of Instructions

Function	Command (Hex)	Module Feedback (Hex)	Description
<b>Read Device NO</b>	0xFA 0x06 0x04 0xFC	FA 06 84 "DATA1 DATA2...DATA16" CS	DATA <sub>n</sub> is in ASCII Format
<b>Set Range</b>	0xFA 0x04 0x09 0x05 0xF4 <b>5m</b>	FA 04 89 79	Success
	0xFA 0x04 0x09 0x0A 0xEF <b>10m</b>		
	0xFA 0x04 0x09 0x1E 0xDB <b>30m</b>	FA 84 89 01 F8	Operation failed
	0xFA 0x04 0x09 0x32 0xC7 <b>50m</b>		
	0xFA 0x04 0x09 0x50 0xA9 <b>80m</b>		
<b>Set Frequency</b>	0xFA 0x04 0x0A 0x00 0xF8 <b>2 Hz</b>	FA 04 8A 78	Success
	0xFA 0x04 0x0A 0x05 0xF3 <b>5 Hz</b>	FA 84 8A 01 F7	Operation failed
	0xFA 0x04 0x0A 0x0A 0xEE <b>10 Hz</b>		
	0xFA 0x04 0x0A 0x14 0xE4 <b>20 Hz</b>		
<b>Set Resolution</b>	0xFA 0x04 0x0C 0x01 0xF5 <b>1mm</b>	FA 04 8C 76	Success
	0xFA 0x04 0x0C 0x02 0xF4 <b>0.1mm</b>	FA 84 8C 01 F5	Operation failed
<b>Single measurement</b> (Result Saved in the Cache)	0xFA 0x06 0x06 0xFA	Don't return feedback	Result saved in Cache (Use <b>Read Cache</b> Function)
<b>Read Cache</b> (Read data saved in Cache)	0x80 0x06 0x07 0x73	80 06 82 3X 3X 3X 2E 3X 3X 3X CS	Result for <b>0.1mm</b> Resolution
		80 06 82 3X 3X 3X 2E 3X 3X 3X CS	Result for <b>1mm</b> Resolution
<b>Single Measurement</b> ( Without Cache option)	0x80 0x06 0x02 0x78	80 06 82 "3X 3X 3X 2E 3X 3X 3X" CS	Correct return (1mm)
		80 06 82 "3X 3X 3X 2E 3X 3X 3X 3X" CS	Correct return (0.1mm)
		80 06 82 45 52 52 2D 2D 31 35 4F	Error/Out of Range (1mm)
		80 06 82 45 52 52 2D 2D 2D 31 35 22	Error/Out of Range (0.1mm)
		Return the result directly without using the Cache function	
<b>Continuous Measurement</b>	0x80 0x06 0x03 0x77	80 06 83 "3X 3X 3X 2E 3X 3X 3X" CS	Correct return (1mm)
		80 06 83 "3X 3X 3X 2E 3X 3X 3X 3X" CS	Correct return (0.1mm)
		80 06 83 45 52 52 2D 2D 31 35 4E	Error/Out of Range (1mm)
		80 06 83 45 52 52 2D 2D 2D 31 35 21	Error/Out of Range (0.1mm)
<b>Control Laser Pointer</b>	0x80 0x06 0x05 0x01 0x74 <b>Open</b> 0x80 0x06 0x05 0x00 0x75 <b>Close</b>	80 06 85 01 F4	Success
<b>Shutdown device</b>	0x80 0x04 0x02 0x7A	80 04 82 FA	Success

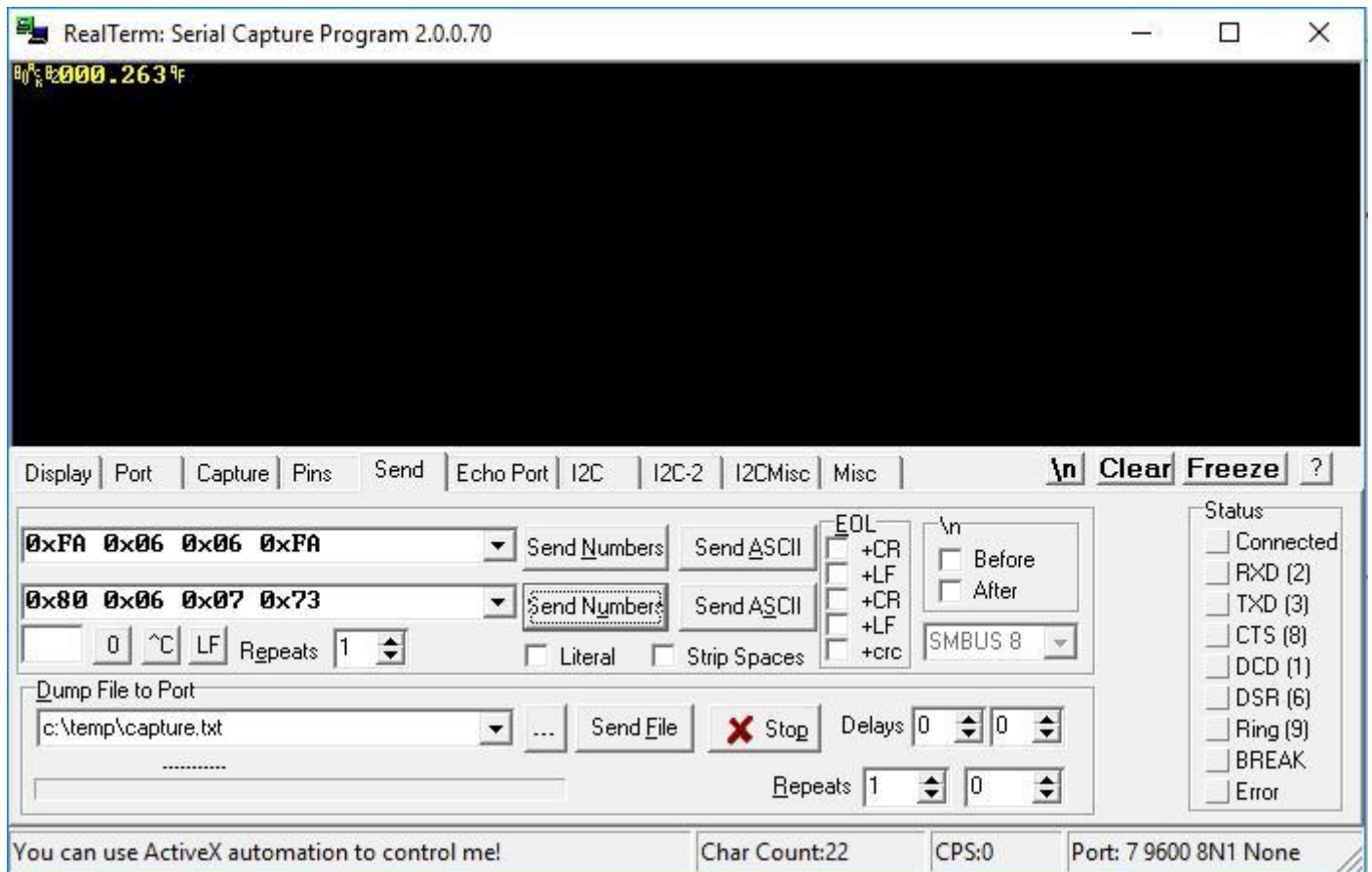
**CS** check byte, it sums all the bytes in front

**Feedback Format** is always in Hex (ex: **30 32 33 2E 34 35 36** => **023.456 m**)

## Serial Port Configuration

Baud rate: 9600bps / data bit: 8 bit / Start bit: 1 bit / Stop bit: 1 bit / Parity: none

You can test the instructions directly in the LRF module by using a USB-Serial converter & RealTerm Terminal



## Laser Rangefinder Pinouts & Dimensions

