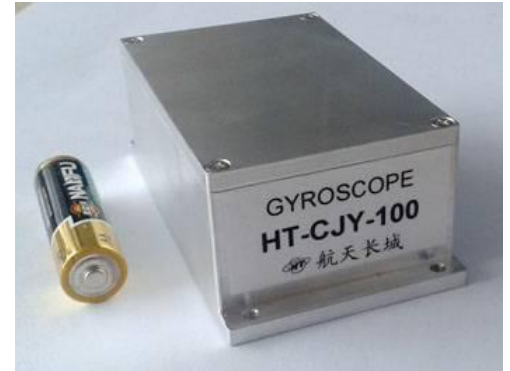


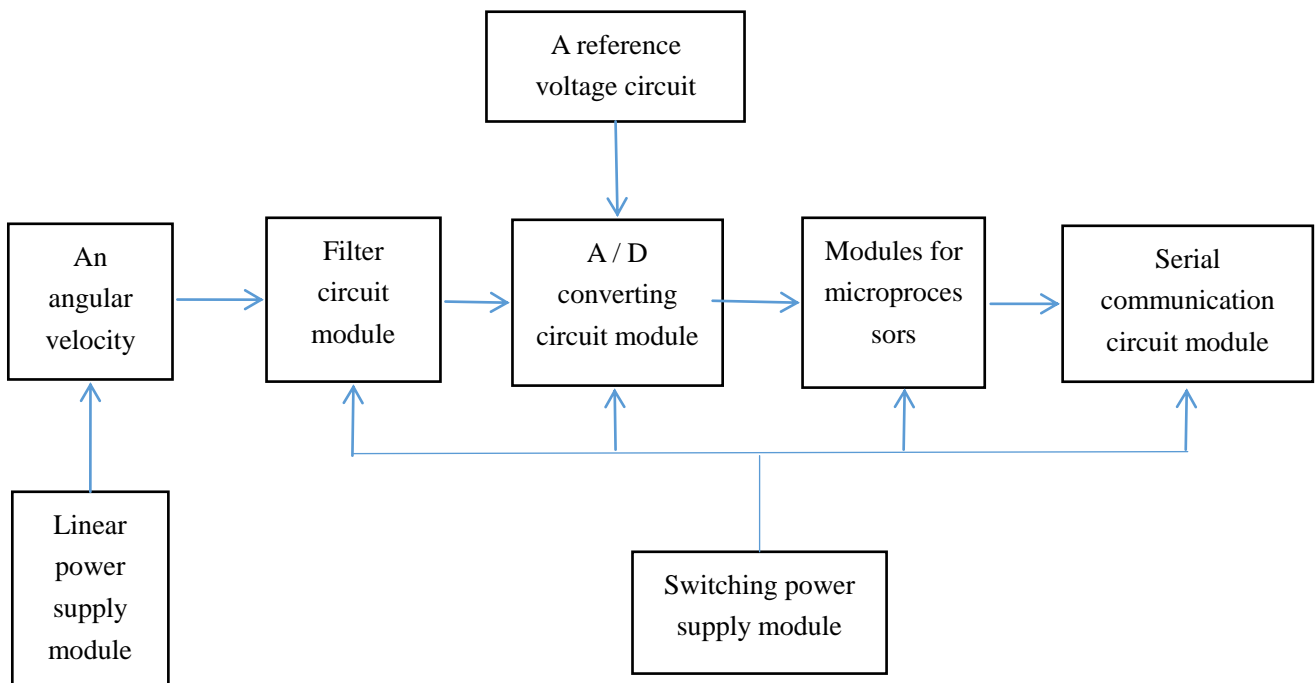
# Integrating gyro goniometer HTC-JY-100

## 1.Product Description:

Dynamic angle measurement based on user needs, our company developed a new type of integrating gyro goniometer, model: HT-CJY-100, integrating gyro This is a goniometer can output angular velocity and angular increment angle measuring instruments. Integrating gyro goniometer built MEMS angular velocity sensor, high-precision 24-bit AD quantized angular velocity signal, signal filtering algorithm processing using the quantized, high-precision real-time output value of the angular velocity and angular increment value.



Integrating gyro goniometer works as follows:



## 2.The main technical parameters

### A.Physical parameters

No.	parameter	Typical values
1	Supply voltage	DC 9V (7-15V)
2	Current consumption	85mA
3	Operating temperature	-40°C to +85°C
4	vibration	2g rms (20Hz to 2kHz, random)
5	Attack	200g (1ms, 1 sine)
6	size	98*55*36 mm
7	weight	240g

### B.Angular velocity section

No.	parameter	Typical values
1	Measuring range	$\pm 100^\circ/\text{s}$
2	Scaling factor	20mV/ $^\circ/\text{s}$
3	Nonlinear	$< \pm 0.5\%$ of full scale
4	bandwidth	20Hz
5	Static Noise	$< 1\text{mV rms}$ (3Hz to 10Hz)
6	Temperature drift	$< \pm 3^\circ/\text{s}$
7	Random drift	$< \pm 0.55^\circ/\text{s}$ in any 30s period

**C.Angular increments part**

No.	parameter	Typical values
1	Measuring range	0-360°
2	Maintain accuracy	1° (Within 3 Min)
3	measurement accuracy	0.1° (0.05°和 0.001°可选)
4	bandwidth	20Hz

**3.Communication interfaces and protocols**

A.Data Interface:

RS232 level; data format: 115200, N, 8,1.

B. Data Output Format

Byte position	meaning	type of data	Explanation
1	Header	Unsigned	0xDD
2	High angular velocity	Have signed	Angular velocity= $U * 2500 / (K * 8388608)$ K for the gyro scale factor
3	The median angular velocity		
4	Low angular velocity		
5	High angular velocity	Have signed	Angular increments= $((U * 100) / (K * 83886.08))$ K for the gyro scale factor
6	The median		

	angular velocity		
7	Low angular velocity		
8	Checksum	Unsigned	The first seven bytes accumulated low

#### **4. Interface definition**

Pin	Explanation
Pin1	+ 9VDC (positive power input 7-15V)
Pin2	GND (power supply and digital ground)
Pin3	TX (transmit data terminal)
Pin4	RX (receive data terminal)