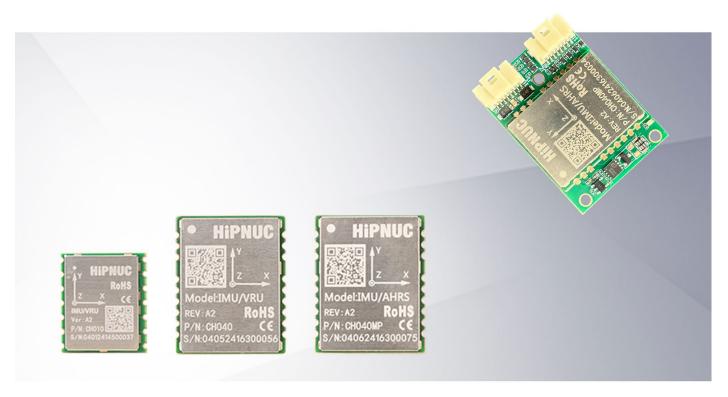
# **CH0X0** Series

## Small Size、 High Performance MEMS- IMU/VRU/AHRS



Attitude Measuring System utilizes an array of MEMS IMU/VRU/AHRS modules with geomagnetic field and sensing the attitude information of objects, equipped with the independent R&D Extended Kalman Filter Fusion Algorithm and IMU noise dynamic analysis technology, which can meet High accuracy of attitude angles in high dynamic conditions.

## Application



AGV/AMR



Agricultural Machinery



Exoskeleton Robot



Lawn Mower



Unmanned Delivery



Inspection Robots



Service Robot

## Product Selection

MODEL	Y HIPNUC RoHS Z X CC MUVRU Ver A2 P/N: CH010	Y HIPNUC RoHs Z X CC MUVRU Var.A2 PAI: CH020 S/Wr04032414500051	HiPNUC     Z     X     Model:IMU/VRU     Rev: A2     RoHS     P/N: CH040     C€     S/N:04052416300056	• HiPNUC V z x Model:IMU/AHRS REV: A2 P/N: CH040MP C E S/N:04062416300075
P/N	CH010	CH020	CH040	CH040MP
IMU	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
VRU	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
AHRS	×	×	×	$\checkmark$

#### **PHYSICAL & ENVIRONMENTAL**

Input Voltage	All Supports 3.3-5	/		
Power Consumption	<160mW	<160mW	<250mW	<250mW
Dimension	17.78x15.24x3mm	17.78x15.24x3mm	25x20x2.6mm	25x20x2.6mm
Weight	1.6g	1.6g	2.5g	2.5g
Certification	All Supports Rohs (	CE		
Temperature	All Supports -40-85	5℃		
INTERFACE				
Communication	UART	UART	UART	UART
Protocols	All Supports Binary	y、Modbus、 CANoper	n	
Note 1:CAN need CAN PHY Exa GYROSCOPE	mple TJA1044			
Range	All Supports 2000°	/s		
Bias Instability	3° /h	2.2° /h	1.6° /h	1.6° /h
Bias Stability	10° /h	7° /h	5° /h	5° /h
ACCELEROMETER				
Range	All Supports 24g			
Bias Instability	0.03mg	0.022mg	0.018mg	0.018mg
Bias Stability	0.07mg	0.05mg	0.035mg	0.035mg
MAGNETIC				
Range	All Supports 2Gaus	55		
ACCURACY Pitch/Roll	0.15°			

Heading(AHRS)	-	2°	-	2°
Heading(VRU)	0.3°	0.3°	0.15°	0.15°
PIICH/ROIL	0.15			

Note 1:Refer to datasheet for more details

### **Evaluate Kit**

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		N X	s	E					30- 20- 10 20- 30-	20 			
IMU原始数							241.70	Unknown		设备时间戳(ms)	Hokoowo		1 CT
加速度X(G)			角速度X(deg										
加速度X(G) 加速度Y(G) 加速度Z(G)	Unknown		角速度X(deg 角速度Y(deg 角速度Z(deg	(/3)	Unknown	12	旸Y(uT)	Unknown Unknown		₩E(pa)	Unknown		
加速度Y(G) 加速度Z(G)	Unknown Unknown		角速度Y(deg	(/3)	Unknown	12	旸Y(uT)	Unknown		₩E(pa)	Unknown		
加速度Y(G)	Unknown Unknown 前闻司步数引	4	角速度V(deg 角速度Z(deg	(/s) (/s)	Unknown	12	旸Y(uT)	Unknown		₩E(pa)	Unknown		
加速度Y(G) 加速度Z(G) 姿态数据及B	Unknown Unknown 前町同步数値 eg) Unk	f nown	角速度Y(deg 角速度Z(deg	(/s) (/s)	Unknown Unknown	12	旸Y(uT)	Unknown		₩E(pa)	Unknown		
加速度Y(G) 加速度Z(G) 姿态数据及E 橫滾角Roll(d	Unknown Unknown 时间同步取闭 eg) Unk deg) Unk	i nown nown	角速度Y(deg 角速度Z(deg 四元数 四元数	(/s) (/s) W U X U	Unknown Unknown Jnknown	12	旸Y(uT)	Unknown		₩E(pa)	Unknown		

The CH0X0 series evaluation board can be connected to the PC GUI via a USB cable. The GUI can help users quickly evaluate the product.

#### **HiPNUC Service**

#### **Quality Warranty**

HiPNUC provide users with free technical support and free firmware upgrade services throughout the product life cycle. The warranty period is 2 years, Longer Quality Warranty for HiPNUC Product

#### **Contact us**

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