

深圳市安普盛科技有限公司

HMCORE

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## Data Sheet

—For

编号	N20221116
品牌	HMCORE
品名	HLR2
安普盛型号	HFR23-U-B1-G
客户料号	
客户型号	
制作	WU
审核	Xzz, Siya
批准	Sky
日期	2022.11.16

客户承认签印	
日期	

UNLESS OTHER SPECIFIED TOLERANCES ON: X=±      X.X=±      X.XX=			深圳市安普盛科技有限公司	
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SCALE: N/A	UNIT: mm			
DRAWN BY: WU	CHECKED BY: Xzz, Siya			
DESIGNED BY: WU	APPROVED BY: Sky			
TITLE: HFR23-U Data Sheet		DOCUMENT NO.	N20221116	SPEC REV. R1



## HFR23-U Data Sheet

### 1. 产品特性:

- 轻巧、紧凑
- K波段
- 低成本
- 可隐藏安装
- 不受温度、噪声、气流、尘埃、光线等环境因素影响，抗干扰强

### 2. 应用场景:

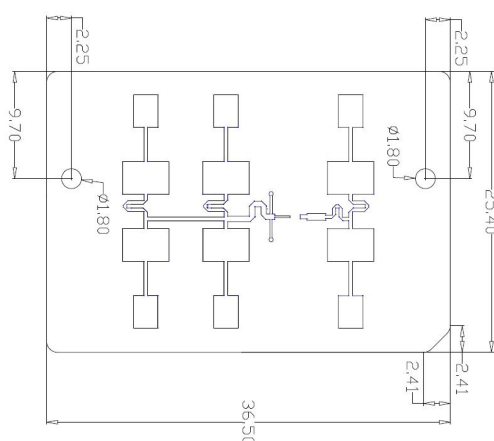
- 楼宇、智能家居
- 灯光控制
- 工业机器人（制造机器人）


### 3. 产品型号命名规则:

HFR23-U-B1-G

- (1) H:HONMAX
- (2) F:F 系列
- (3) R:RADAR
- (4) U:串口通讯
- (5) B1:封装方式, B1 代表胶圈密封 1 号壳
- (6) G:线材型号

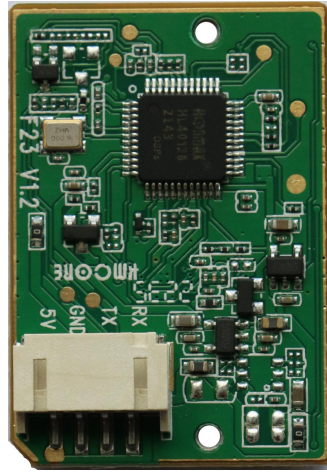
### 4. PCB 尺寸(单位: mm):



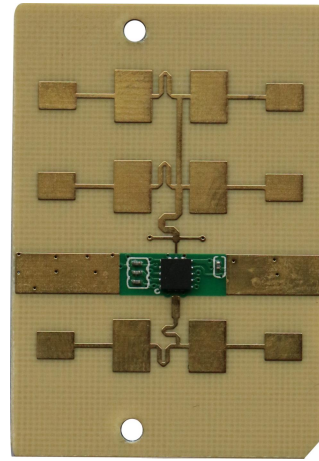
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照片

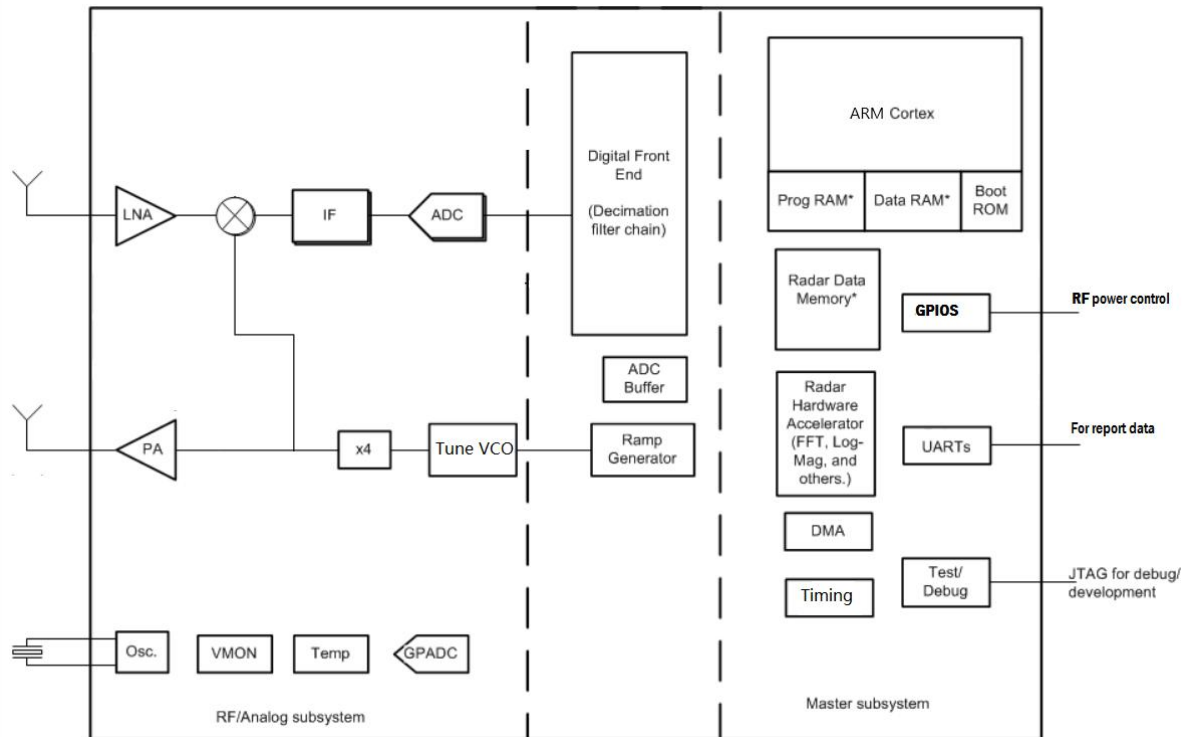



正面



背面

5. 方框原理图:




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## 6. 产品参数表:

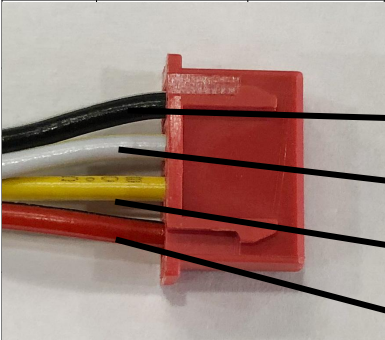
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参数条件	环境	最小值	典型值	最大值	单位
<b>System</b>					
工作频率		K-BAND			
输出功率 (TX output)	@ 25°C		5		mW
调制方式	FMCW				
更新时间			100		ms
通信接口		UART			
<b>Radar</b>					
检测距离	@0 dBsm			2	m
<b>Antenna</b>					
天线-6dB 波束	水平面角度(-6dB)		59		deg
	垂直面角度 (-6dB)		36		deg
<b>Other</b>					
工作电压		3.6	5	5.5	V
工作电流			70	<80	mA

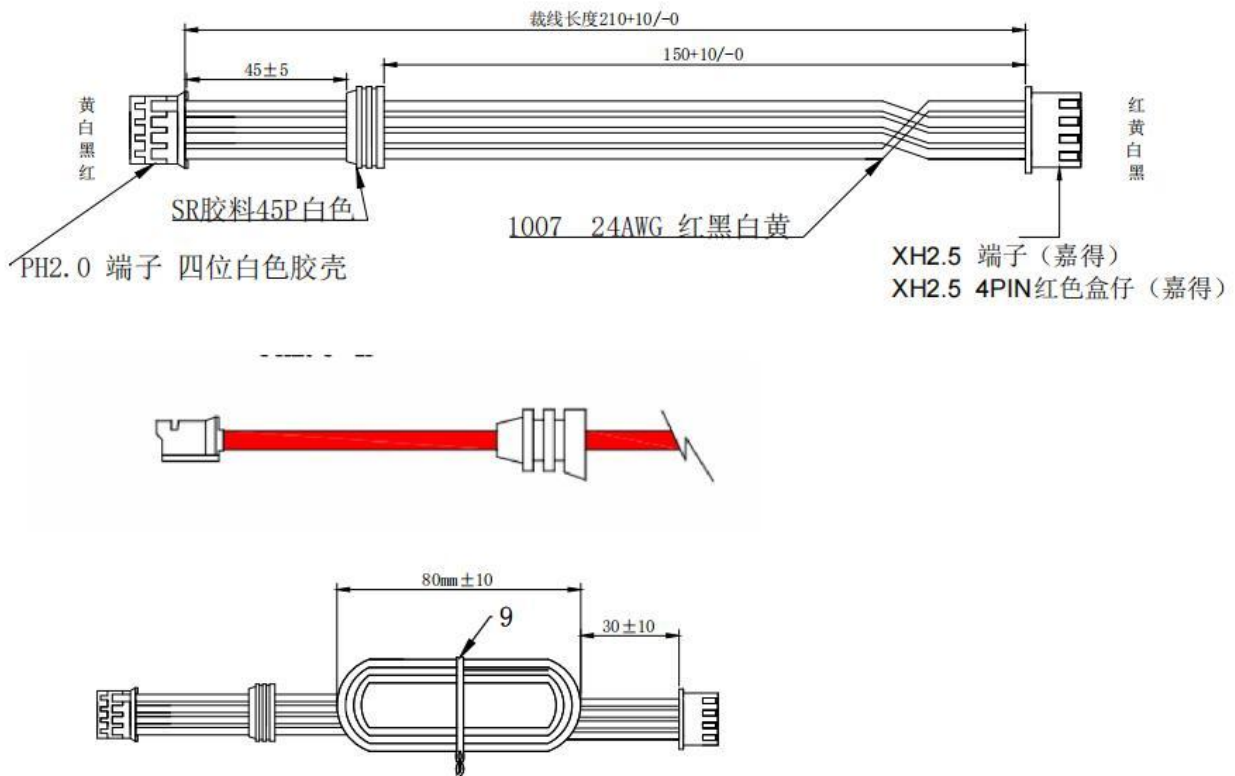
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7.接口定义:

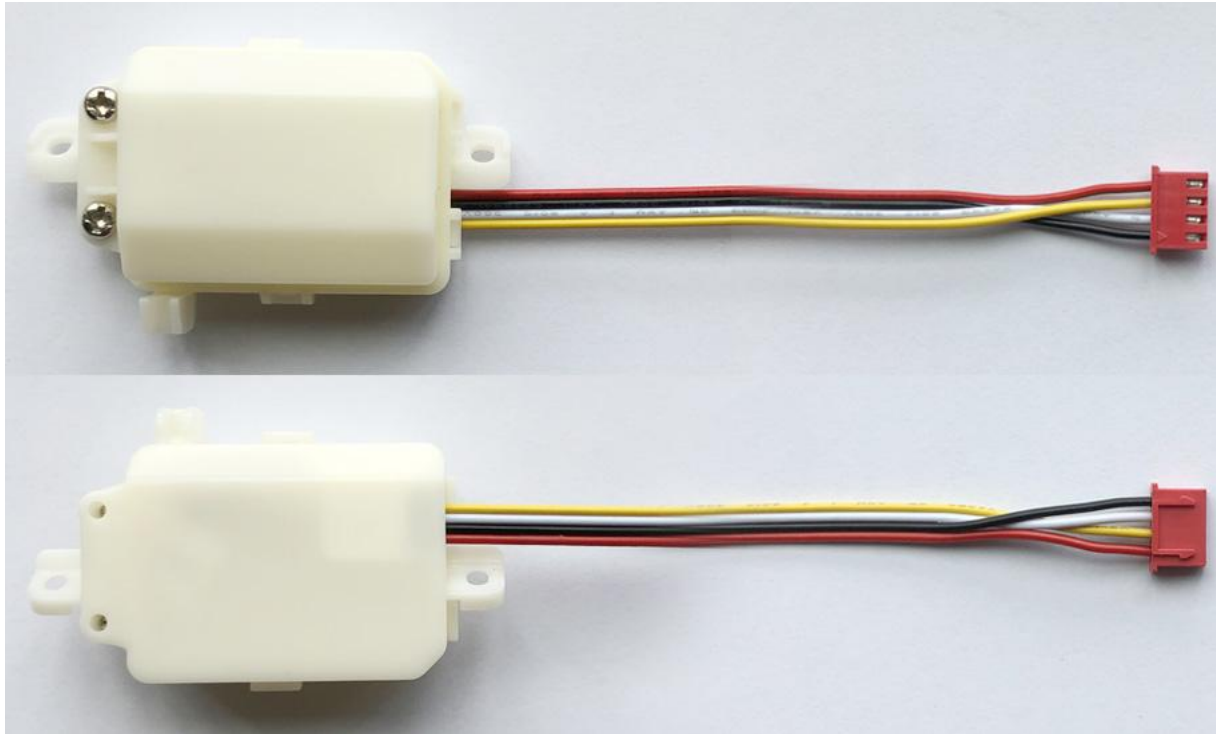
	PIN#	DESCRI	IN/OUT	COMMENT
	PIN1	GND	-	GND
	PIN2	TX	Output(OD)	TTL 兼容 3.3V/5V
	PIN3	RX	input	TTL 兼容 3.3V/5V
	PIN4	Power	input	3.6~5.5(V)

8. 线材规格(单位: mm):

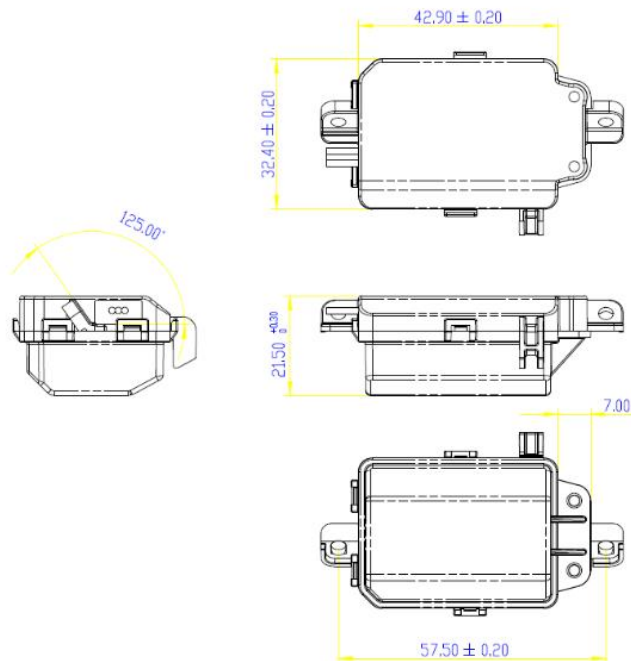



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9. 装配实图:



10. 外壳尺寸(单位: mm):



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### 11. 安装角度:

装于马桶内，天线的法线与水平夹角一般为25-35°。

### 12. 注意事项:

#### 1、存储条件:

- ①为避免损坏电路，在存储、使用时都应采取ESD静电防护措施；
- ②产品在交付后应1年内被使用，存储温度适宜在0°C~30°C，湿度应小于60%RH。

#### 2、使用条件:

- ①请按照产品手册所示的电气参数（例如电压、电流等）范围内使用，如果超标使用，会降低产品的可靠性，并可能造成硬件永久性损坏，导致产品功能失效；
- ②安装前请将马桶断电，确认接线正确；
- ③可操作温度范围：-20°C to +70°C。


注：详见使用注意事项。

### 13. 协议:

串口默认波特率为1200，详见通讯协议文件。

### 14. 变更记录:

版本	变更内容	变更人	生效日期
2022/11/16	“首次发布”	WU	2022-11-16

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