

深圳市安普盛科技有限公司

HMCORE

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Data Sheet

—For

编号	N20230713
品牌	HMCORE
品名	HLR2
安普盛型号	HFR12-4F4-P
客户料号	
客户机型	
制作	WU
审核	XZZ Siya
批准	Sky
日期	2022.07.13

客户承认签印	
日期	

UNLESS OTHER SPECIFIED TOLERANCES ON:

X=±

X.X=±

X.XX=

ANGLES = ±

HOLE DIA = ±



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SCALE: N/A

UNIT: mm

DRAWN BY: WU

CHECKED BY: XZZ Siya

DESIGNED BY: WU

APPROVED BY: Sky

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TITLE: HFR12 Data Sheet

DOCUMENT

NO.

N20230713

SPEC REV.

R1

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HFR12-4F4 Data Sheet



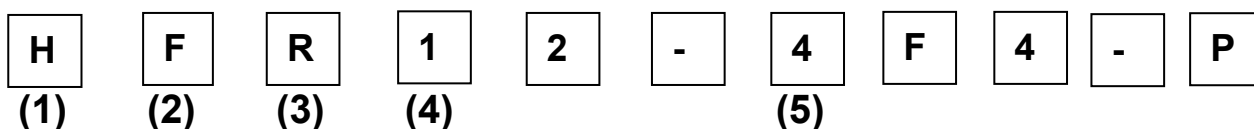
1. 产品特性:

- 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:

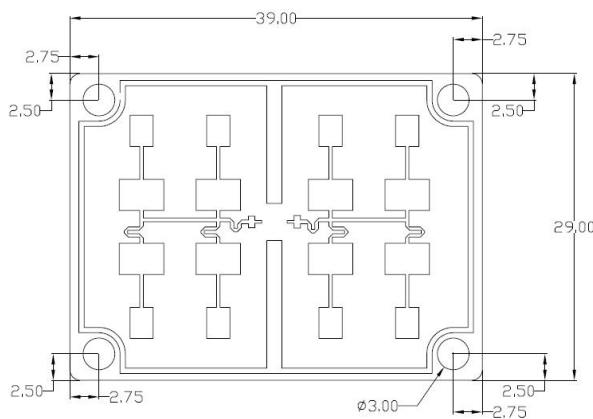
- 楼宇、智能家居
- 灯光控制
- 工业机器人（制造机器人）

3. 产品型号命名规则:



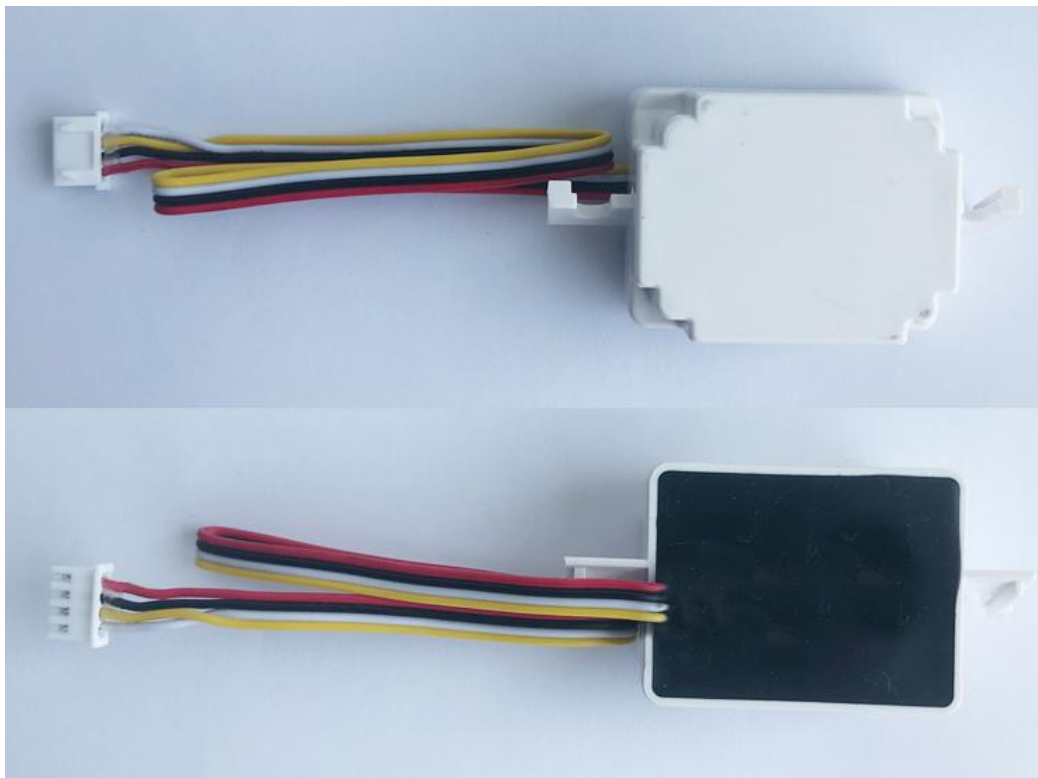
- (1) Honmax
- (2) F Series
- (3) Radar
- (4) Part No.12
- (5) Classification

4. PCB 尺寸 (单位: mm) :

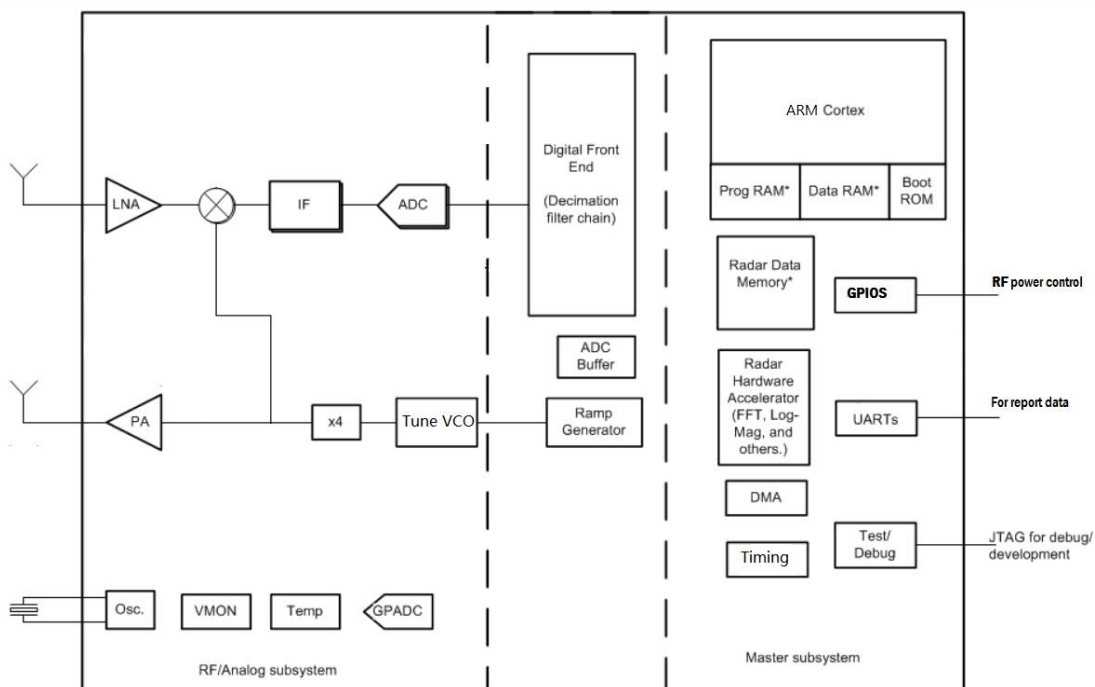


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Photo



5. 原理图:



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6. 产品参数表:

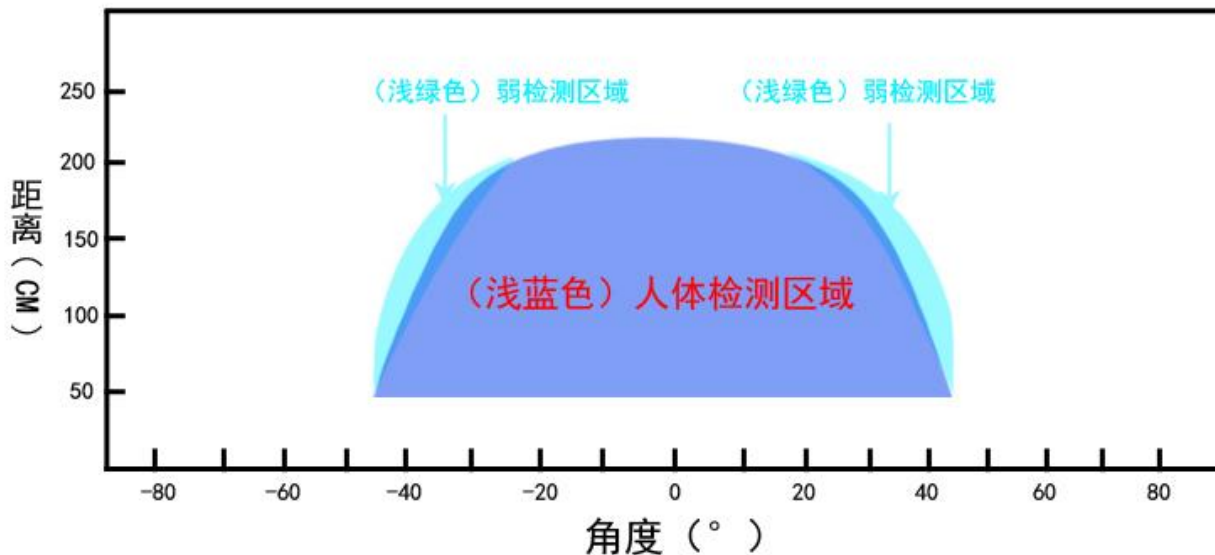
参数条件	环境	最小值	典型值	最大值	单位
System					
雷达工作频率	delivery condition	K-band			
输出功率 TX Output	@ 25°C		5		mW
调制方式	FMCW				
更新时间			100		ms
通信接口		UART			
Radar					
检测距离	@0 dBsm	0.6		2.15	m
Antenna					
天线线-6dB 波束	水平面角度 (-6dB)		59		deg
	垂直面角度 (-6dB)		36		deg
Other					
工作电压		4.8	5	12.8	V (DC)
工作电流			<70		mA

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水平方向检测范围

60-110cm	110-160cm	160-215cm
±45°	±40°	±40°




说明:

测试物体 (人)

安装在马桶中 (马桶盖内部安装角度和位置不同、马桶盖内部空间结构不同, 检测角度也会不同。)

弱检测区域: 当人体信号较强时, 该区域也有可能被检测到。

检测角度可通过软件, 适当做出修改。

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7.接口定义:

	PIN#	DESCRIPTION	IN/OUT	COMMENT
	PIN1	Power	input	5~12 (V)
	PIN2	GND	-	GND
	PIN3	RX	input	TTL 兼容 3.3V/5V
	PIN4	TX	Output (OD)	TTL 兼容 3.3V/5V

8. 线材规格:



9.安装角度:

装于马桶内，天线的法线与水平夹为30° ~40° 。

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10. 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℃~30℃，湿度应小于60%RH。

2、使用条件:

- ①请严格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℃ to +70℃。


注：详见使用注意事项。

11. 协议:

串口默认波特率为9600，详细通讯协议见通讯协议文件。

12. 变更记录:

版本	变更内容	变更人	生效日期
2023/04/23	“首次发布”	WU	2023-04-23
2023/07/13	更改线材端子	WU	2023-07-13

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