**预计采购数量：**

5,000-10,000 PCB (150,000-300,000 传感器）in 2017. *每个pcb 上镶嵌30个接近霍尔传感器*

2017 年以后的采购量50,000-100,000PCB system, ( 1500,000-3000,000 传感器）每年。

**对象：** （提供可估量的样品， 图纸，工作原型, 报价请提供 定制费用， 单价-工厂， 时间， 付款方式）

提供传感器定制服务的生产商

提供电子设计服务的外包公司

提供电子设计服务的个人

**设计定制：**

**多通道磁霍尔效应接近传感器（有很强的接近检测稳定性）**

要求：

1. **分辨率：** 1微米
2. **量程（测量范围）：**0-200微米
3. **传感器尺寸**： 3-4 mm，
4. **PCB尺寸**： 总长 180mm, 宽10-15mm
5. **输出**：串行输出（通过SPI接口传输数据）1 serial output. Every 250 microsecond we need to send a string:(Channel1[12 Bit], Channel2[12 Bit],…..., Channel30[12Bit])
6. **通道**： 30个通道，
7. 抽样：30通道，总共250微秒 （Sampling -250 microsecond for all 30 channels together）
8. **成品：**PCB(印刷电路板）。 We need the PCB. From one side – Hall Sensors. From another side – the electronics. Probably, we will need a small additional PCB to be connected to OUR OWN electronic board: the RECEIVER.

解释：

一面有30个磁霍尔传感器镶嵌在PCB上，另一面是electronics。 每个磁霍尔传感器装在一个金属球轴承旁，每 个球轴承可以移动， 最多可以移动0.2mm(200微米）， 总共有30个球轴承，每个磁霍尔磁性传感器可以感觉到球轴承的运动，用1微米的精度来测量运动。30个信号从30个磁霍尔传感器发送到电子板，这30个信号需序列化成一行。每行到达250 微秒, 可以通过SPI接口传输数据

规格参照：传感器DRV5053

<http://www.ti.com/product/DRV5053/description>

<http://www.ti.com/lit/ds/symlink/drv5053.pdf>

以下是适合的系统，但是技术不同，这是一个磁阻传感器, 很精确但是很贵，对于我们来说霍尔传感器就够了

<http://www.murata.com/zh-cn/products/sensor/magnetic>

参考例子

<http://www.ti.com.cn/cn/lit/ug/tidu397/tidu397.pdf>

**Predict Purchase quantity**

5,000-10,000 PCB (150,000-300,000 sensors) in 2017, then up to 50,000-100,000 PCB per year.

**Partners**

The Manufacturer that offer customization service.

The company offer electronic design services.

The person who can offer electronic design services.

The partners should offer drawings, working prototype, elevation sample for factory, cost for the customization. if produce, better to offer unit price, time , payment term.

**Customization:**

**Multichannel magnetic Hall effect proximity sensor( have superior proximity stability )**

Specification as follow

**Resolution :** 1 micrometer

**Measurement range：** 0-200 micrometers

**Size for the sensor：** 3-4 mm，

**PCB Size：**  Totally, the PCB is 180mm, width is 10-15mm

**Output：** Serial output ( SPI interface to transmit the data )1 serial output. Every 250 microsecond we need to send a string:(Channel1[12 Bit], Channel2[12 Bit],…..., Channel30[12Bit])

**channels：** 30 channels

**Sampling** ： 30 channel, totally 250 microsecond（Sampling -250 microsecond for all 30 channels together）

**Completed product：** PCB( printed circuit board）We need the PCB. From one side – Hall Sensors. From another side – the electronics. Probably, we will need a small additional PCB to be connected to OUR OWN electronic board: the RECEIVER.

Explanation:

（this PCB should contain 30 sensors from one side and the electronics from another side.The sensor should be mounted on PCB, each sensor is placed near a metal ball bearing,Each ball bearing can move a little, maximum 0.2mm, which is 200 micrometers.There are 30 ball bearings. Each magnetic sensor can feel the movement of the ball bearing.We need to measure this movement with the precision of 1 micrometer.It should be magnetic hall effect sensors. Then we need 30 signal ( from 30 sensors) to send to our electronic board. These 30 signals should be serialized into one line. Each line should come every 250 microsecond.The data can be transmitted through an SPI interface.）

**Specification reference：**

sensor DRV5053

<http://www.ti.com/product/DRV5053/description>

<http://www.ti.com/lit/ds/symlink/drv5053.pdf>

Th following is a suitable system, but different technology, This is a magneto resistive sensor, it is very precise but very expensive. For us , the hall effect sensor is enough.

<http://www.murata.com/zh-cn/products/sensor/magnetic>

Example for reference:

<http://www.ti.com.cn/cn/lit/ug/tidu397/tidu397.pdf>