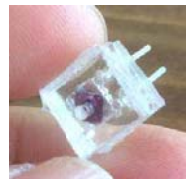
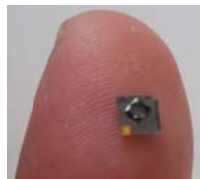


# Microfluidic Foundry

A R&D center and a microfluidic chip developer & supplier

## 2016 Investment Opportunity

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Chip (left) and  
Plug&Play  
Package (right)



Flow  
Information  
Input (left) and  
Sensing Unit  
(right)



Digital Chip  
Reader (left)  
and  
Communication  
Unit (right)

## Fund Raise Statement

Microfluidic Foundry LLC is founded on early 2011 at California. Our core businesses are being a microfluidic chip provider and contract R&D. Microfluidic Foundry was one of the five finalists in the elevator pitch of 2015 MEMS executive congress. So far, other than contract R&D, we have raised \$110K in Angel Funds. Microfluidic Foundry has released the demo of its microchip of flow reader. We are seeking investments to accelerate the commercialization or capitalization of the flow reader chip, and strengthen our R&D capabilities.

Currently Microfluidic Foundry relies on the wafer process facilities at University of California at Berkeley for carrying on its core businesses. We are planning to build several indoor facilities that is much needed to make us more cost-effective, reliable, and have a shorter turn-around time. This is also needed by our soon-coming efforts of strategic partnership developments and new versions chip releasing. Such expected facilities include a contact aligner for photo resist expose (costs about \$50K), an evaporator for metal depositions (costs about \$80K), a wafer dicing machine (costs about \$20K), a wafer bonder (costs about \$50K). These facilities will not only satisfy our R&D needs, but also enable us to achieve a chip production capability of about half million a year.

Table 1: Estimation of Flow Reader Chip Production Costs

	4" wafer	6" wafer
# of chips per wafer pair	300	600
# of wafer pairs per year	1000	1000
# of chips per year	300K	600K
Material: \$ per wafer pair	30	60
Process: \$ per wafer pair	50	60
Production costs: \$/year	80K	120K
Engineer/Costs (#/\$)	1/100K	1/100K
Total costs ( \$/year )	180K	220K
Costs per chip ( \$ )	0.6	0.4
50% Overhead ( \$/year )	90K	110K

## SAMPLE APPLICATIONS AND MARKETS OF FLOW READER CHIP

### 1. Pipeline flow metering and leakage monitoring



### 2. Wind and moving speed measurements



Table 2: Current Technology and Flow Reader Chip (Product Size & Price)

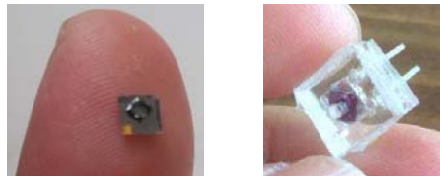
		Size	Unit Price (\$)
OEM for sport equipment	Flow Reader Chip	Finger Tip	10
OEM for pipeline leak-monitor	Flow Reader Chip	Finger Tip	10
OEM for high pressure pipeline flow metering	Flow Reader Chip	Finger Tip	10
Speedometer for end-customer	Radar Speedometer	Pocket	100
	Flow Reader Chip	Pen Drive	20
Gas meter for utility supplier	Thermal flow meter	3"×3"×2"	80
	Flow Reader Chip	3"×1"×1"	40
Anemometer	Cup anemometer	14"×3"×3"	400
Weather station or wind turbine	Flow Reader Chip	3"×1"×1"	200

# 微流体科创有限责任公司

微流体研发和芯片供应商

## 2016 引资计划

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芯片（左）和  
即插即用封装  
（右）



流动信息输入  
（左）和传感  
单元（右）



芯片读数器  
（左）和通讯  
单元（右）

## 引资申明

微流体科创有限责任公司于 2011 年在加州成立。公司主要业务是微流体芯片开发和合同研发。微流体科创 2015 年微机电领导论坛推选的五个创新公司之一。迄今为止，除合同研发之外，公司也引进了天使基金 11 万美元。微流体科创已经成功展示了最新开发的流动传感芯片。公司本次引资主要为加速流动传感芯片的商业化和市场化，以及加强自身研发能力。

微流体科创现在主要依靠加州大学伯克利分校的晶圆流片设备来进行研发和芯片开发。公司计划建设几个继续设备以实现更经济，更有效，更快的业务运转。这也是下一步的战略伙伴开发和新芯片发布所必须的。这些设备包括一台接触式光刻胶曝光机（费用大概五万美元），一个金属蒸发沉积设备（费用大概八万美元），一个晶圆切割设备（费用大概两万美元），a wafer bonder（费用大概五万美元）。这些设备不但用于满足公司研发需求，而且将使公司拥有大约 50 万片芯片的年生产能力。

表 1: 流动传感芯片生产成本估计

	四英寸晶圆	六英寸晶圆
每对晶圆芯片数	300	600
每年晶圆对数	1000	1000
每年芯片产量	300K	600K
每对晶圆成本（美元）	30	60
每对晶圆流片成本（美元）	50	60
生产成本（美元每年）	80K	120K
工程师数/年薪（#/美元）	1/100K	1/100K
总成本（美元每年）	180K	220K
每个芯片成本（美元）	0.6	0.4
50% 管理费用（美元每年）	90K	110K

## 流动传感芯片应用和市场

### 1. 输送管道计量和泄露监测



### 2. 风速和运动速度测量



表二：现用技术和流动传感芯片对比（产品大小和价格）

		大小	单价（美元）
运动器材OEM	流动传感芯片	指尖	10
输送管道泄露监测OEM	流动传感芯片	指尖	10
高压输送管道计量OEM	流动传感芯片	指尖	10
速度计	雷达速度计	口袋	100
	流动传感芯片	U盘	20
气体流量计	热线仪	3"×3"×2"	80
	流动传感芯片	3"×1"×1"	40
气象站和风电风速仪	杯式风速仪	14"×3"×3"	400
	流动传感芯片	3"×1"×1"	200