

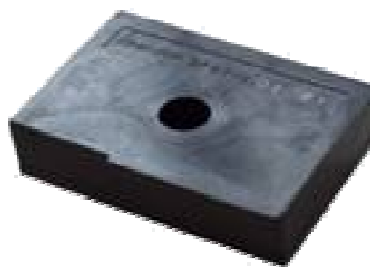


SENSOR PRODUCTS



Current Dust Sensor (now in MP)

- PN: GP2Y1010AU0F
- 35 $\mu\text{g}/\text{m}^3$ detection
- Detects particles of 0.1 μm – 100 μm diameter (w/o separation)
- 46mm x 34mm x 17.6mm



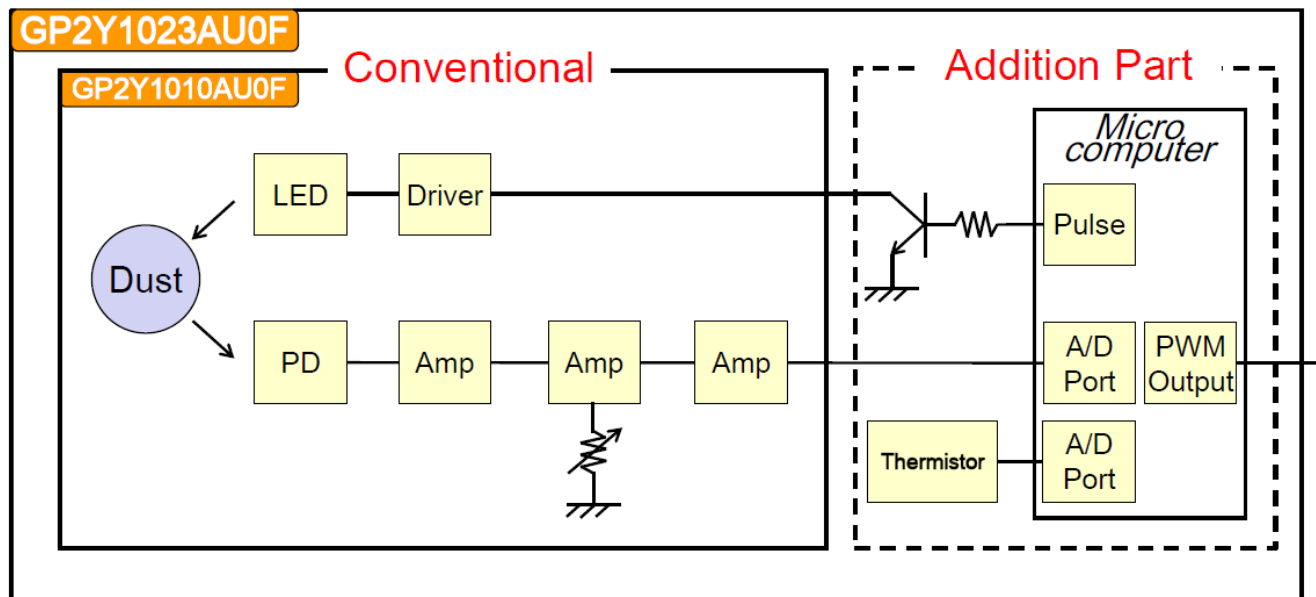
Features:

- High-sensitivity
- Small package size
- Low cost
- Applications include air cleaners, HVAC, environmental monitoring etc.)

New Dust Sensor (MP in mid Dec.'14)

- PN: GP2Y1023AU0F
- Adds micro-processor temperature compensation output
- Same mechanical dimensions
- Electrical connector is 5 pins (vs. 6 in previous)

- ★ Built-in LED pulse driver
- ★ Digital Output (PWM)
- ★ Averaging
- ★ Offset correction
- ★ Temp. correction



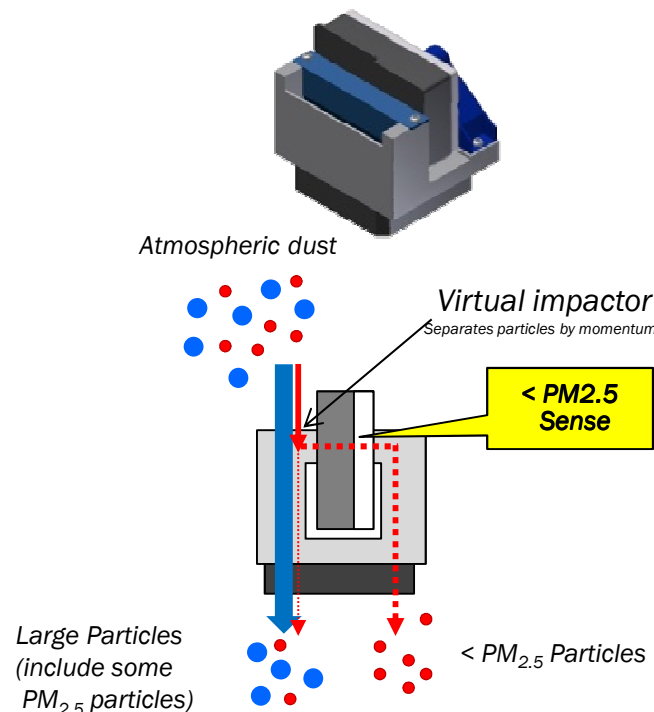
PM2.5 Sensor

(now in MP)

- EPA regulated particle size for daily and annual exposure
- Selective detection of 2.5 μm or smaller particles with an original mesh filter or a virtual impactor (flow divider).
- Sensitivity of 10 $\mu\text{g}/\text{m}^3$ and dynamic range from 25 to 500 $\mu\text{g}/\text{m}^3$ by a newly developed low-noise analog front-end IC (Sensor-Connect IC).

Features:

- High-sensitivity
- Competitive pricing
- Applications include environmental monitoring, air cleaners, HVAC, etc.)



PM_{2.5} Definition:

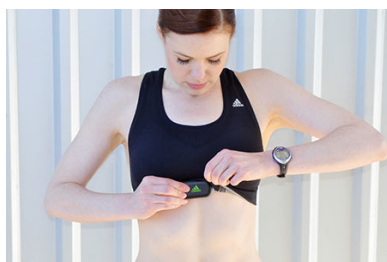
Particulate Matter (PM) with particles less than 2.5 μm in diameter. Also known as “fine” particles.

QM1H0P0073

- Single chip, I2C-based solution
- High sensitivity achieved through thin film polymer and a pair of comb-shaped electrodes
- Fast response time
 - Wake-up and measurement time $\leq 55\text{ms}$
- Measurement accuracy not influenced by surface characteristics
- Immersible **with precaution**

Applications:

- Consumer electronics
- Wearable
- Automotive
- White goods

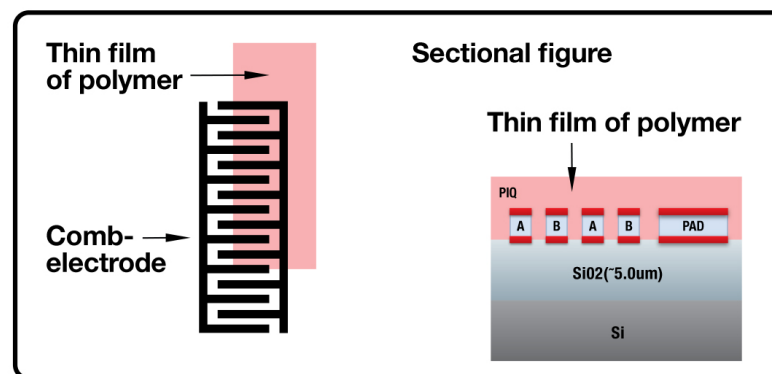


e.g. measure body temp.

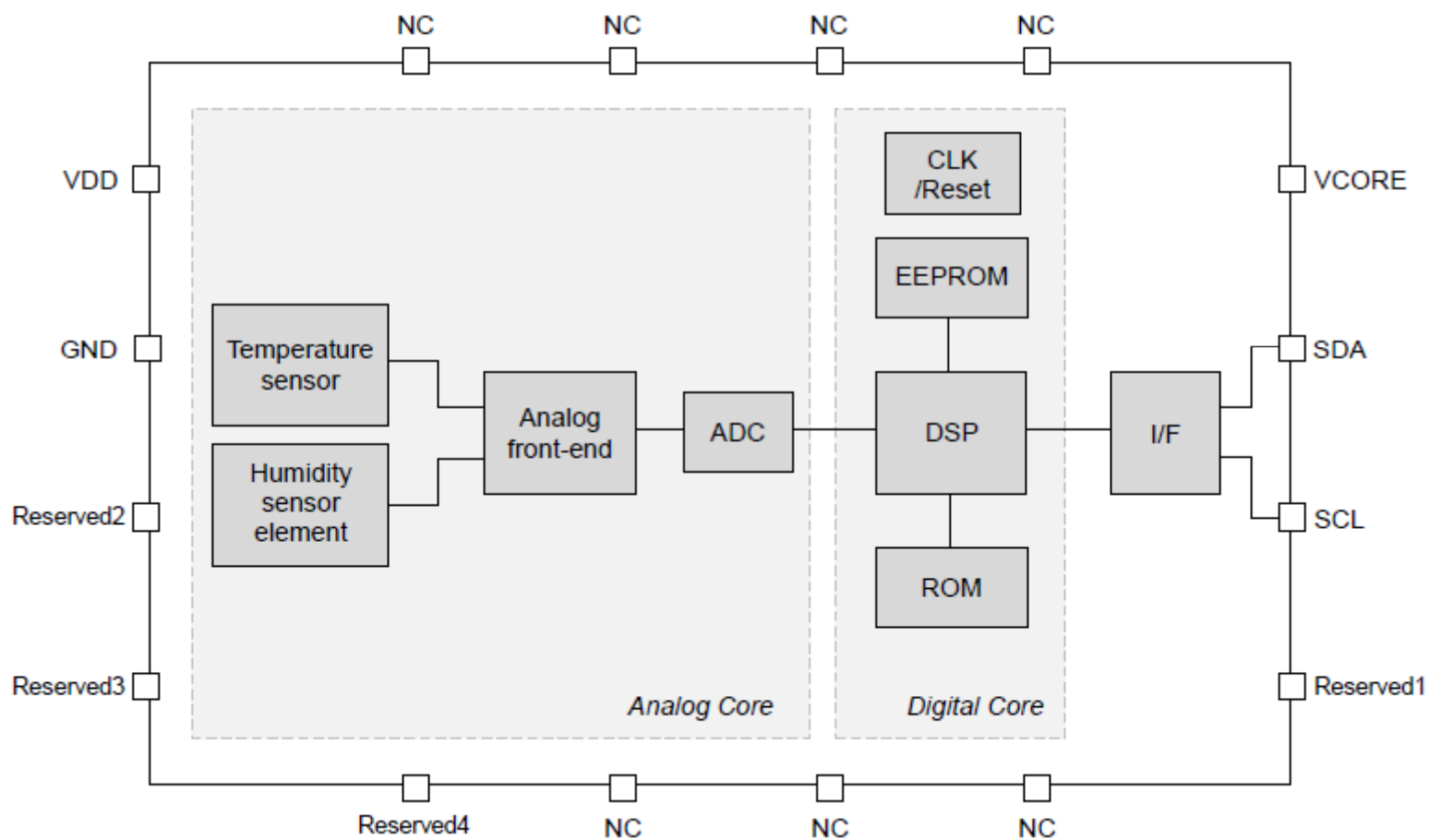
Main Features

| | |
|-------------------|------------------------------|
| Type | Macromolecule Capacitance |
| Range | 0% ~ 100% RH -20°C ~ 85°C |
| Absolute Accuracy | $< \pm 5\%$ RH |
| Resolution | $< 0.01\%$ RH |
| Package | 3 × 3 × 1 mm Reflowable QFN |

Sensor



Temperature & Humidity

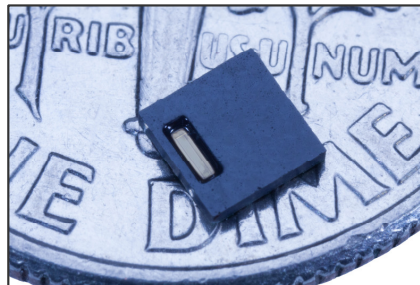


Compact Package

- Surface mount
- Two sensors in one package
- Additional integration possible

Std. Digital Interface (I2C)

- High speed DSP included
- Simplified data acquisition
- External compensation network NOT required



Factory Calibrated

- Accuracy: $\pm 2\%RH$ / $\pm 0.3^{\circ}C$
- Repeatability: $\pm 0.1\%RH$ / $\pm 0.1^{\circ}C$

Low Power Consumption

- Automatic power conservation
- Input supply range (2.7V-5.5V)
- Standby current (Typ. $1\mu A$)