

### About SAMYOUNG

Samyoung S&C designs, develops and manufactures environment, safety and health (ESH) related sensors and electronic control systems for commercial and industrial applications. From sensor elements to control modules and wireless transmitters, Samyoung S&C is committed to provide a full spectrum of product solutions and services to meet diverse customer requirements.

Formerly a R&D center and a new product division of Samyoung Electronics, the third largest capacitor manufacturer in the world, Samyoung S&C was spun off in 2000 and continued to grow in its product lines and customer base worldwide as an independent sensor specialist.

Aiming to provide "Sensible Sensing Solutions" to customers ever-challenging requirements, Samyoung S&C operates a nationally accredited R&D center, world class wafer fabricating and component packaging facilities and state of the art measurement and testing laboratories. All products of Samyoung S&C are developed inhouse and manufactured at the manufacturing plants in Korea.

Samyoung S&C is certified to ISO/TS 16949, KS Q 14001, ISO 14001 by KMAR.

### Product Range

- Humidity and Temperature sensor solutions
- Resistive RH sensor elements
- Particle / Gas sensors
- Condensation solutions
- Humidity sensors for ADS



### Application Examples

- **Energy saving HVAC control**  
Air conditioning, Refrigeration, IAQ monitoring, Vent Fans, Home Appliances, Humi/Dehumidifiers
- **Process Control & Instrumentations**  
Medical Instruments, Handheld Devices, Weather Stations, Food Processing, Printers, RFIDs
- **Automobile & Transportation**  
Cabin Climate Control, Defogging Control, Condensing Preventive Device
- **Mass Quantity Application**  
OEM custom specification available

## HumiChip®

RH & Temperature Sensor Modules designed with in-house sensor elements by SAMYOUNG S&C offer optimal solution for easy and cost saving application.

Standard modules either based on resistive or capacitive RH sensor are available in analogue or digital output.

These RH& Temp. modules are field proven for their reliable quality by major home appliance, HVAC and automotive customers.

## Features

- Fully calibrated
- Temp. Accuracy +/- 0,3°C
- RH Accuracy +/- 3%RH
- Digital or analog output
- Free operating voltage
- Low power consumption



## DewChip®

DewChip® is a derivative version of HumiChipII®, ideally engineered and designed for effective condensation (fogging, frost) control and prevention in HVAC, automotive and home appliance applications.

With the highly accurate temperature sensing over wider ambient range and the precise humidity measurement at higher humidity range, DewChip® offers the most advanced and cost effective condensation and humidity control solution.

## Features

- Standard I<sup>2</sup>C or PWM output of %RH & Temp as well as dew point temp
- External temp connection & output
- Highly accurate @ extended ambient range:  
+/- 0.18°C for 0~80°C  
+/- 2%RH for 20-80%RH  
+/- 0.5°C Dew Point @ 25°C, 80%RH
- Low current consumption (8µA, operating)
- PTFE insert molded filter available

## HumiChipII®

HumiChipII is an improved version of HumiChip.

A capacitive polymer sensor chip, developed and fabricated in-house, and a CMOS integrated circuit with EEPROM are integrated into one embedded system in a reflow solderable SMD package.

Individually calibrated and tested, it performs +/-2% from 20% to 80% RH.

HumiChipII provides linearized output signals in various interfaces to customer requirements I<sup>2</sup>C, PDM (convertible to analog signal) and an alarm function for preset control at min/max humidity.

## Features

- Improved Temperature Accuracy & Range  
(+/-0.2°C for -20°C - 60°C)
- Supply Voltage: 2.1V - 3.6V
- Extremely low current consumption (13µA operating)
- I<sup>2</sup>C, PDM with alarm function
- Enhanced Accuracy of RH% (+/-2%RH, 14bit)
- Pin compatible to HumiChip
- Fast natural recovery after reflow soldering
- Enhanced reliability against chemical influences

