

# KEV7 – Crypto Chip



## KEV7

### ■ Main Features

- Crypto Algorithm – HW Logic SoC Chip
- Acquired KCMVP certification (Highest grade, 2)
- Crypto Engine
  - ❖ Secure Boot
  - ❖ Secret Key Crypto (ARIA/AES engine)
  - ❖ Public Key Crypto (ECC256 engine)
  - ❖ SHA256 / HMAC verification
  - ❖ PUF (Physical Unclonable Function)
  - ❖ TRNG (True Random Number Generator)
  - ✓ NIST SP 800–22 statistical test
  - ✓ FIPS 140–2 compliant
- Security Requirements
  - ❖ Data Confidentiality
    - ✓ Encryption, Key generation, Management
    - ✓ ARIA/AES, TRNG, Token/Object/Section
  - ❖ Data Integrity
    - ✓ Hash function, Signature
    - ✓ SHA256, HMAC, ECDSA
  - ❖ Certification
    - ✓ Signature, ID/PW
    - ✓ ECDH, ECDSA, SHA256
  - ❖ Transmission Data Security
    - ✓ Secret key
    - ✓ ARIA/AES–128/192/256

### ■ Standard Specifications

<b>CPU</b>	ARM Cortex-M3 processor
<b>IO</b>	Ethernet 10/100 PHY IF SD2.0 Card IF SPI IF (Master/Slave) I2C IF (Master/Slave) UART IF GPIO IF
<b>Memory</b>	E-FLASH 512Kbyte C-SRAM 416Kbyte D-SRAM 128Kbyte
<b>Voltage</b>	IO 3.3V / Core 1.2V
<b>Power</b>	120mA@100Mhz
<b>Temperature</b>	-40°C ~ 85°C
<b>Package</b>	FBGA 6mm x 6mm (121-pin) QFN 7mm x 7mm (56-pin)

### ■ Application fields

- IoT Device / Sensor
- Smart City
- Smart Factory
- IP Camera
- Home Network
- Military (Weapon/Drone)
- Connected CAR
- Smart AMI/PMU