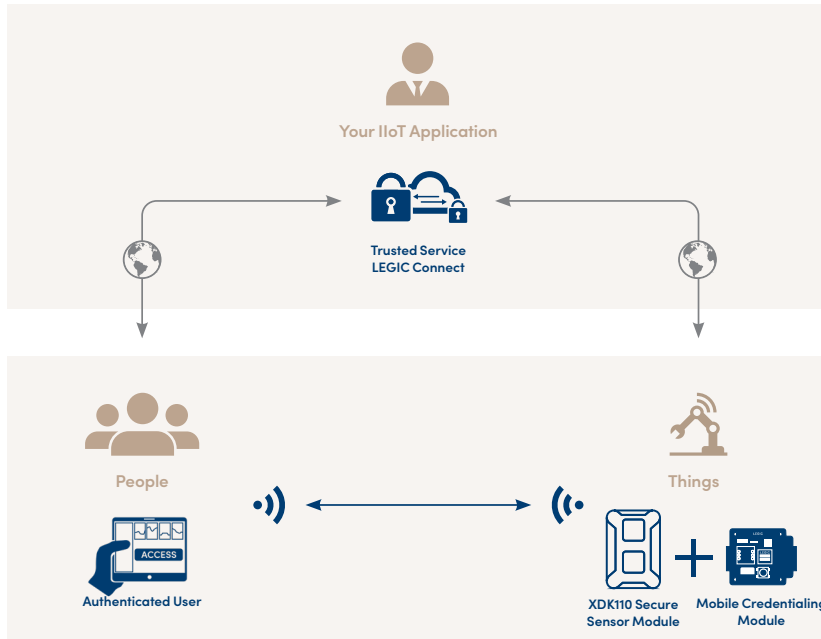


LEGIC XDK Secure Sensor Evaluation Kit

IIoT Evaluation Kit with 8 Sensors & Secure Mobile Credentialing



- ✓ Seamless integration with LEGIC Connect mobile credentialing platform for secure operation with Android and iOS devices
- ✓ Integrates eight MEMS sensors, Bluetooth, Wi-Fi, NFC, RFID and Secure Element
- ✓ Enables rapid prototyping and fast transition from prototype to mass production
- ✓ Software included: XDK Workbench, extensive libraries & modular source code, example firmware for Azure integration

Universal sensor & prototyping platform with end-to-end encryption and mobile credentialing

Equipped with embedded security module with Secure Element for storage of cryptographic keys/whitelists and wireless communications, the kit allows rapid prototyping of mobile-app based IIoT applications that support basic to advanced solutions.

Powerful prototyping platform

All-in-one sensor kit: no need for component selection, hardware assembly, or a real-time operating system. Securely monitor, control and analyze your IoT sensors using mobile devices over Bluetooth, NFC or Wi-Fi.

Kit includes accelerometer, acoustic, light, gyroscopic, humidity, magnetometer, pressure and temperature sensors. Development environment, algorithm library, example code, secure data protocol and drivers are included. Perfect for short-term proof-of-concept or long-term projects.

Integrates with LEGIC Connect

With the included extension board containing a LEGIC SM-6310 Security Module, user interactions can be securely managed and monitored via the LEGIC Connect end-to-end mobile security platform. Example firmware also included for Azure integration.

Based on dynamically assigned mobile credentials, access / usage permissions can be distributed to user smartphones/tablets granting them specific authorizations to read and configure each XDK. All data is protected by AES encryption.

Off-the-shelf expertise

Need help with your design or mass production? Take advantage of LEGIC's 300+ global Partner Network of Design Houses, System Integrators and OEM Manufacturers.

Our partners are experts in LEGIC technology including end-to-end security, virtual key management and mobile credentialing. They can help you design and bring your IoT sensor solution to production quickly and cost-effectively: www.legic.com/partners

Benefits and features

- All-in-one IoT sensor kit: no need for component selection, hardware assembly, or deployment of a real-time operating system
- Fully integrates with LEGIC Connect mobile security platform enabling you to create, distribute and revoke mobile credentials as well as configure sensors and IoT devices
- Simple integration within existing infrastructures - wireless interfaces enable easy retrofit
- End-to-end encryption with keys stored in Secure Element
- Enables quick mobile app development via SDKs provided for Android and iOS
- Integrated Bluetooth, Wi-Fi, RFID and NFC
- Algorithm library
- Example firmware for Azure integration
- Built-in lithium ion rechargeable battery
- PC and MAC based development tools for Windows, LINUX and MacOS



LEGIC XDK with Mobile credentialing interface extension

The kit includes an extension module for support of secure management of users and sensors via cloud service or mobile devices (Android, iOS), as well as end-to-end encrypted communication with LEGIC Connect Trusted Service.

- Enables permissioned, mobile or RFID/smartcard access to your IIoT sensors
- Includes embedded LEGIC SM-6310 Security Module
- Tamper-proof Secure Element for storage of cryptographic keys and sensitive data
- Supports RFID, NFC and Bluetooth Low Energy

Technical data

LEGIC XDK Secure Sensor Evaluation Kit	
Kit contents	
<ul style="list-style-type: none"> ▪ LEGIC XDK110 with 32-bit microcontroller (ARM Cortex M3), 1 MB Flash, 128 kB RAM, Li-Ion rechargeable 560 mA battery, integrated antennas and extension slot for support of additional functionalities* ▪ Mobile credentialing interface extension board supporting encrypted, managed communications with iOS/Android mobile devices via Bluetooth, Wi-Fi, or RFID/NFC. ▪ Micro USB 2.0 connector cable ▪ 10 cm connector cable, mounting plates and screws 	
Software	
Free software download for XDK at www.xdk.io <ul style="list-style-type: none"> ▪ XDK Workbench integrated development environment for Linux, Mac and Windows ▪ Extensive libraries and modular source code to enable developers to fully understand the system ▪ Example firmware for MS Azure integration ▪ LWM2M communication protocol ▪ User Guide 	
User interfaces	
<ul style="list-style-type: none"> ▪ Power switch ▪ Green system LED to display the state of charging ▪ 3 programmable status LEDs (red, orange, yellow) 	<ul style="list-style-type: none"> ▪ 2 programmable push-buttons ▪ Micro SD card slot ▪ Interface for J-Link Debug-probe ▪ Interface for extension board
Wireless interfaces	
Bluetooth Wi-Fi RFID / NFC	<ul style="list-style-type: none"> ▪ V4.0 Bluetooth Low Energy IEEE 802.15. ▪ Wireless LAN IEEE 802.11b/g/n SO 14443 A + B ▪ ISO 14443 A + B ▪ SO 15693 ▪ LEGIC RF standard ▪ Inside Secure, Sony Felica, ST SR series
Measurement ranges	
Accelerometer Gyroscope Magnetic field strength Light sensor Temperature sensor Pressure sensor Humidity sensor	<ul style="list-style-type: none"> ▪ ±2 to ±16 g (programmable) ▪ ±125 °/s to ±2000 °/s (programmable) ▪ ±1300 µT (X,Y-Axis); ±2500 µT (Z-Axis) ▪ 0.045 lux to 188,000 lux ; 22-bit ▪ -20 °C to 60 °C** ▪ 300 to 1100 hPa** ▪ 10...90 %rH (non-condensing)**
Sampling rate	
Accelerometer BMA280 Gyroscope BMG160 Magnetometer BMM150 Hum./Press./Temp. BME280 Inertial Measurement BMI160	<ul style="list-style-type: none"> ▪ 2000 Hz ▪ 2000 Hz ▪ 300 Hz ▪ 182 Hz ▪ 1600 Hz (Accelerometer) ▪ 3200 Hz (Gyroscope)
Mobile credentialing	
<ul style="list-style-type: none"> ▪ Data encryption with end-to-end security from LEGIC Connect to mobile credentialing extension board ▪ Application-specific AES-128 Bit keys 	
Operating conditions***	
Operating voltage Operating current Operating temperature Storage temperature Humidity IP Rating	<ul style="list-style-type: none"> ▪ 5.0 V ▪ 1.8 µA to 5 mA (sensor and mode dependent) ▪ -20 °C to 60 °C, (0 °C to 45 °C for battery charging) ▪ -20 °C to 60 °C ▪ 10 to 90 %rH (non-condensing) ▪ IP 30 (IEC 60529)

* LEGIC XDK110 also available as stand-alone product
 ** Limited by XDK operating conditions
 *** Recommended for indoor use only

