Cross Domain Development Kit | XDK
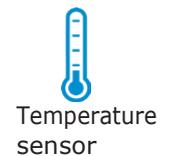
Start your Sensor X - perience

The universal programmable sensor device & prototyping platform for any IoT use case you can imagine!

Make use of the power to monitor, control and analyze your product remotely over Bluetooth or Wireless Network. In this way, devices, products or machines become connective and smarter. XDK is now released for 24/7 usage giving you the freedom to use it either for short-term proof of concepts or long-term projects. Inclusive of multiple Micro-Electromechanical Systems (MEMS) sensors, various parameters for condition monitoring or predictive maintenance can be recorded.

*The **XDK** was designed for rapid prototyping and allows users an easy transition from prototype to mass production by providing a clear road to product development.*

BUILT-IN SENSORS

| Accelero-meter | Acoustic sensor | Digital light sensor | Gyroscope | Humidity sensor | Magneto-meter | Pressure sensor | Temperature sensor |

APPLICATION ADVANTAGES

- ► All-in-one sensor kit: no need for component selection, hardware assembly, or deployment of a real-time operating system
- ► Algorithm library
- ► Example code in open source licensing
- ► Drivers for all system components included
- ► Secure data protocol
- ► Small form factor (Length 60 mm x Width 40 mm x Height 22 mm; Weight 54 g)
- ► Built-in lithium ion rechargeable battery
- ► Functional extendibility via the included extension board
- ► High-level API for the standard user and low-level API for the power user
- ► CE, FCC, IC, IMDA, ACMA, NTC and NBTC certified | further on request

INCLUDED IN DELIVERY

XDK - Rapid Prototyping Kit

- ► XDK Development Kit
- ► "XDK Gateway" extension board for easy access to additional MCU functionality
- ► 10 cm connector cable
- ► Micro USB 2.0 connector cable
- ► Mounting plate and screws

MAIN COMPONENTS

- Bluetooth 4.0 low energy IEEE 802.15.1
- Wireless LAN IEEE 802.11b/g/n
- 32-Bit microcontroller (ARM Cortex M3), 1MB Flash, 128 kB RAM
- Internal Li-Ion rechargeable battery 560 mAh
- Integrated antennas

OPERATING CONDITIONS

Indoor use	
Operating temperature range	-20 ºC … 60 °C, (0 °C … 45 °C for battery charging)
Storage temperature range	-20 ºC … 60 °C
Humidity range	10…90 %rH (non-condensing)
IP Rating	IP 30 (IEC 60529)
Supply Voltage	5 V DC

MEASUREMENT RANGES

Accelerometer	±2 … ±16 g (programmable)
Gyroscope	±125 º/s … ±2000 º/s (programmable)
Magnetic field strength	±1300 µT (X,Y-Axis); ±2500µT (Z-Axis)
Light sensor	0.045 lux … 188,000 lux ; 22-bit
Temperature	-20 ºC … 60 °C [limited by XDK operating conditions]
Pressure	300…1100 hPa
Humidity	10…90 %rH (non-condensing) [limited by XDK operating conditions]

SAMPLING RATE

Accelerometer BMA280	2000 Hz
Gyroscope BMG160	2000 Hz
Magnetometer BMM150	300 Hz
Hum./Press./Temp. BME280	182 Hz
Inertial Measurement Unit BMI160	1600 Hz (Accelerometer); 3200 Hz (Gyroscope)

SOFTWARE

Free software download for XDK from the website (https://xdk.io/software-downloads)

- Integrated development environment supplied with XDK Workbench (Eclipse)
- LWM2M communication protocol
- Extensive libraries and modular source code enable the developer to fully understand the system
- Datagram Transport Layer Security (DTLS)

USER INTERFACE

- Power switch
- Green system LED to display the state of charging
- 3 programmable status LEDs (red, orange, yellow)
- 2 programmable push-buttons
- Micro SD card slot
- Interface for J-Link Debug-probe
- Interface for extension board

GET IN CONTACT WITH US

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VISIT OUR WEBSITE

www.xdk.io