

All-in-One GD-xD-W515-EVAL Board

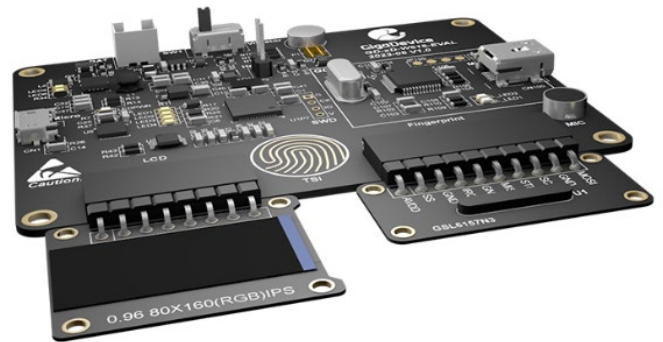
GD-xD-W515-EVAL Board Overview

GigaDevice releases the new xD (Multi-Dimension) series evaluation platform, which leverages various GigaDevice products that enable customers to evaluate multiple hardware and software combinations all within one comprehensive kit.

The GD-xD-W515-EVAL Board is the first evaluation kit in the xD series. Through the integration of diverse GigaDevice's MCU, Flash, PMU and Sensor products, this EVAL board delivers tailored solutions to customers across a spectrum of applications, including smart home HMI, smart door lock, and portable device control.

The EVAL board

- consists of a mainboard, fingerprint board and LCD board.
- is powered by battery or Mini-USB interface of GD-Link.
- can realize USB voltage monitoring, battery charging, voltage and power monitoring, flexible switching power supply, touch and fingerprint control, multi-dimensional information indication and applications support.



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Key Features

1. Privacy and Security

- Secure fingerprint recognition and data management with encryption & authentication algorithm by GigaDevice's fingerprint sensor and MCU.
- The EVAL board supports fingerprint enrolment, authentication and deletion.

2. High Efficiency Battery Charging

- Up to 1.5A battery charging current.

3. Accurate Battery Power Estimation

- Battery charging and discharging current and voltage detection with optimization of battery power calculation algorithm.

4. System Protection

- USB power-on wake up and voltage monitoring, battery voltage and power monitoring.

5. Fast and Secure Data Access

- Onboard small package GD25Q128E 128Mbit NOR Flash, to store and read UI and user data via QSPI interface at clock frequency 45MHz.
- The data can be encrypted/decrypted by the CAU module of MCU.

6. Touch Operation

- A capacitive touch key, controlled by the MCU TSI, provides easy and fast operation.

7. Multi-Dimensional Information Indication

- One flat vibration motor, multi-channel LEDs, and one LCD screen, to achieve accurate and multi-dimensional indication info

8. Multi-Dimensional applications support

- High sensitivity MIC, wake up MCU, ensure the time-sensitive system response
- One high-power port to support high-power components (e.g. Heating Coil).

9. Onboard Debug and Programming

- Onboard GD-Link to support on-chip debug and flash programming.

Related Products

MCU: [GD32W515PIQ6](#) High Performance & Security MCU

Sensor: [GSL6157](#) Capacitive Fingerprint Sensor

Flash: [GD25Q128E](#) SPI NOR flash

PMU: [GD30BC2416](#) Battery Management IC, [GD30LD1002](#) High-Performance Power IC



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