



Processor Specifications

- **Processor:** TMS320C6748 Fixed/Floating Point Digital Signal Processor
- **DSP Performance:** Up to 456 MHz
- **Debugging:** Onboard 14-Pin JTAG emulation connector
- **Configuration:** Boot mode selection switch

Memory

- **Flash Memory:** 256 MB onboard
- **RAM:** 128 MB DDR2 onboard

Communication & Interface Ports

- DB9 connector for UART-1
- 3-pin header for UART-2
- USB Type B connector for UART-2 Debug Console
- RJ45 connector for 10/100 Ethernet
- I2C-based temperature sensor & RTC interface
- SPI-based microSD card interface
- USB Type A and Micro USB Type A connectors for host/OTG interfaces

Video & Audio Interfaces

- VGA output, composite video out provision
- Graphics LCD interface (compatible with GPIO kit)
- Audio codec for speaker output, mic-in audio jack

Power & Safety Features

- Power-on LED & user LEDs for GPIO pin test points
- Voltage protection circuit for inputs up to 27.5V
- LED indicators for power surge and high-voltage input protection

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



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User Interface

- Five user push buttons for various applications
- Onboard jumper selections for switching UART2 and other interfaces

Documentation

- Comprehensive workbook with installation procedures and example DSP projects (Signal generation, audio processing, FIR/IIR filters, image and video processing)

Basic DSP Kit - TMS320C5515

Mechanical Parameters

- **Size:** 99mm x 57.42mm
- **Input Voltage:** 5V DC via adapter

Processor

- TMS320C5515 Fixed Point Digital Signal Processor
- Up to 120 MHz Clock Rate

Memory

- 32 MB Flash Memory
- 320 KB Zero-Wait State On-Chip RAM (Dual-Access and Single-Access RAM)
- 128 KB ROM (Zero Wait-State)

Communication & Interfaces

- UART interface with onboard 3-pin header
- USB Type B connector for debug console
- SPI and I2C interfaces for peripheral communication

User Interface & Input/Output

- 20-pin GPIO connector
- Four user LEDs & two push buttons for applications
- 10-bit ADC input for analog signals
- Two audio jacks for input and output
- LED indicators for power surge and voltage input levels

Power & Safety Features

- Over-voltage protection circuit for high voltage inputs
- LED indicators for USB connection and system health

Documentation

- Workbook with DSP programs for signal generation, audio processing, and filter implementation

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USB JTAG Emulator for DSP Kit

Features

- Provides JTAG access to Texas Instruments devices
- Compatible with Code Composer Studio™ development environment
- Real-time debug features (Run, Halt, Step, Breakpoints)
- USB High-Speed Support (480 Mbit/s)
- Adaptive clocking and LED indicators for USB status
- Supports both 1.8V and 3.3V IO voltages

Compatibility

- Supported with CCSv5 only

General-Purpose GPIO Board

Features

- Designed for GPIO experimentation with microcontrollers
- Includes:
 - o 8 LEDs, 16x2 LCD, 2-digit 7-segment display
 - o Matrix keyboard, DC motor, Stepper motor
 - o Relay output, ADC input via potentiometer
- Compatible with Arduino boards and other educational practice boards

GSM Modem with Enclosure

Specifications

- SIM800 GSM modem for serial communication
- RS-232 interface using DB9 connector
- Supports AT commands for SMS sending and remote-control applications
- Data rate: up to 14400 bps
- Power Supply: 12V SMPS

Applications

- Used in curriculum projects involving messaging, remote appliance control, and industrial monitoring

Fingerprint Module with Enclosure

Specifications

- Image acquisition time: <0.5 seconds
- Storage capacity: 256 fingerprint templates
- FAR: <0.001%
- Matching modes: 1:1 and 1:N
- Interface: UART
- Power supply: Through 2-pin connector

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RFID Interface Module with Enclosure**Features**

- Read range: Up to 5 cm
- Frequency: 125 kHz
- RS232 Interface
- Encapsulated in a durable acrylic enclosure

Setup Include

- Educational Practice Board – 5 units
- Voltage Protection Kit – 5 units
- JTAG Emulator – 5 units
- Power Supply – 5 units
- Cable Accessory Set – 5 units
- CCD Camera – 2 units
- All-in-One General-Purpose Board – 5 units
- Daughter Board – 5 units
- GSM Module – 2 units
- Fingerprint Module – 2 units
- RFID Module – 2 units
- Workbook – 1 unit

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