

Order Code : 20213560.1

Name : Microprocessor

Specifications:



SPECIFICATIONS

- ADC : AD7492 12bit parallel interface
- DAC : DAC 8512 12bit
- LCD / TFT : 128 X 64 Graphics LCD display, TFT Interface (Optional)
- **Keyboard** : 4 x 4 matrixes multi functional keyboard
- **Relay** : 5V Good Sky SPDT mechanical relay
- **Memory** : Flash 2M x16 Parallel
SDRAM 16 M x 32 Parallel
- **SD Card** : Micro SD
- **Onboard motor interface**
- Stepper motor interface using 12-VDC
- **LEDs** : 4 user LEDs
- **Switches** : 4 Pin DIP
- **Interfacing Port** : USB 2.0
- **Ethernet** : 10/100 Ethernet RMII Interface
- **Power Supply** : +5V,+12V,GND

MODULES AND SENSOR

Temperature sensor LM35

- Operating temperature range : -55°C£ TA£ +150°C
- Scale Factor: 10 mV/C

LDR

- Light luminance : 0 - 300 Lux
- DC voltage : 0 - 3V

Biometric Thumb Scanner (Optional)

- A finger print scanner, based upon biometric technology, is endowed with a n optical scanner

ZigBee Module (Optional)

ProBEE module (Ember EM2S0 core)

- integrated 2.4GHz, IEEE 802.15.4 compliant transceiver
- +20dBm transmit power
- 250kbps RF data rate
- -102dBm receiver sensitivity
- Working distance from 300m to 1.6Km' (Line of site)

- **RFID Module (Optional)**
13.56MHz RFID module
- Transmitted power up to +10dBm
- Working distance up to 100mm

Blue tooth Module (Optional)

- Blue toothV2.0+EDR / Class 2
- Serial Port profile (SPP)
- 50m range with default antenna

- DC Motor : 5V DC gear motor

- Stepper Motor : +12V, 1.8° step angle

EXPERIMENTS

128 X 64 Graphics LCD Display

- To study memory organization, font creation for text display and graph plotting etc

Flash Memory

- To study interfacing parallel flash memory, memory organization and commands

Dynamic RAM

- To study interfacing technique memory organization and DMA interface

ADC

- Measurement of conversion time, Measurement of actual throughput of ADC and Effect of resolution of ADC in applications

DAC

- Measurement of settling time and Different waveform generation

Stepper motor

- Study of types of operating modes of stepper motor like two phase drive, wave drive, half step drive
- Generation of velocity profile

DC motor

- Generation of velocity profile

Interrupt

- Study of interrupt using external interrupt of device
- Study of interrupt latency using c code & assembly code
- Handling multiple interrupts
- PWM output for motor controller

RTOS Supported Experiments

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

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