

Product List

OB59A128A1W80LP,
 OB59A128A1W64VP,

Description

The OB59A128A1 is a 1T (one machine cycle per clock) single-chip 8-bit microcontroller. It has 128KB embedded Flash for program, and executes all ASM51 instructions fully compatible with MCS-51.

OB59A128A1 contains 4KB+256B on-chip RAM, up to 59 GPIOs (80L package), various serial interfaces and many peripheral functions as described below. It can be programmed via writers. Its on-chip ICE is convenient for users in verification during development stage.

The high performance of OB59A128A1 can achieve complicated manipulation within short time. About one third of the instructions are pure 1T, and the average speed is 8 times of traditional 8051, the fastest one among all the 1T 51-series. Its excellent EMI and ESD characteristics are advantageous for many different applications.

Ordering Information

OB59A128A1ihhKL YWW

i: process identifier { W = 2.2V ~ 5.5V }

hh: pin count

k: package type postfix {as table below }

L:PB Free identifier

{No text is Non-PB free, "P" is PB free}

Y: Year Code

WW: Week Code (01-52)

Postfix	Package
V	LQFP

Features

- Main Flash ROM 128KB(127KB for program memory or EEPROM and 1KB for Information block) , 1KB/page .
- Working voltage 2.2V~5.5V.
- High speed architecture of 1 clock/machine cycle runs up to 22.1184MHz.
- LCD maximum SEG-driver 36 pins, COM-driver 8pin
- 256 bytes RAM as standard 8052, plus 4k bytes on-chip expandable SRAM
- Port 0~7,59 GPIO
- Dual 16-bit Data Pointers (DPTR0 & DPTR1).
- Four serial peripheral interfaces in full duplex mode (UART0 ~ UART3)
- Additional Baud Rate Generator for Serial port
- UART transmitter optionally modulated with 38KHz for IR
- Three 16-bit Timer/Counters. (Timer 0,1,2)
- Programmable watchdog timer.
- One IIC interface (Master/Slave mode).
- One SPI interface (Master/Slave mode).
- 3 On-Chip Comparator
- 4-channel 16-bit compare / capture functions.
 - Comparator out can be CCU input source internally.
 - Noise filter with CCU input with sample frequency select.
- 32768Hz low power crystal and high accuracy RTC
- 9.83MHZ system clock from PLL and Internal RC Oscillator.
- ISP/IAP/ICP functions.
- 2-channel ISO7816 interfaces for ESAM and IC Card.
- On-Chip in-circuit emulator (ICE) functions with On-Chip Debugger (OCD).
- LVI/LVR (LVR deglitch 500ns).
- 16-bit Sigma-Delta ADC for Temperature sensor and Battery
- 9-channel 12-bit SAR ADC for external pin
- Build-in clock failure detection of 32KHz quartz oscillator
- On-chip Temperature sensor and voltage reference with individual voltage supply level
- On-chip 3.0V low-dropout regulator
- Configurable supply level (V5V/VIO3) for five SPI-related I/O port
- Power management unit for IDLE and power down modes.
- LCD selectable duty : 1/8, 1/6, 1/4 , 1/3 , 1/2 or full-duty
- LCD selectable 1/4, 1/3, 1/2 bias

Pin Configuration

80 Pin LQFP



