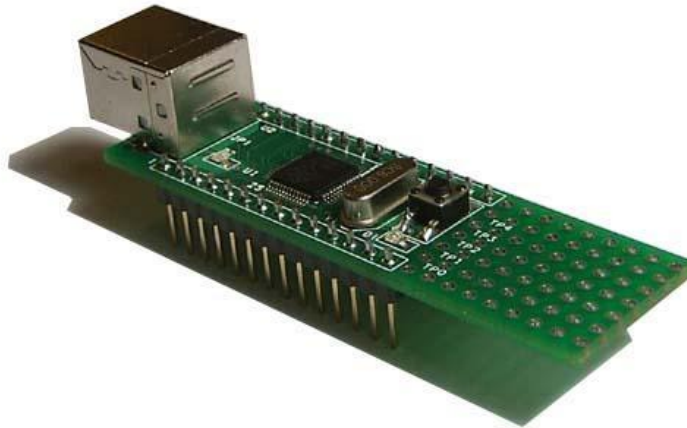


USB-LT

API Manual

Version 1.0



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Board Level API Functions

Overview

Int **InitBoard (void)**

InitBoard

This function initializes the USB-LT board.

After initial power on, initialize the board before use.

int **InitBoard (void)**

Parameters:

Return Value:

If initialization fails, "0" is returned. If successful, "1" is returned.

Port API Functions

Overview

int **PortConfigure** (WORD P4, WORD P5, WORD P6, WORD P7, WORD P1)
int **PortRead** (BYTE *P4, BYTE *P5, BYTE *P6, BYTE *P7, BYTE *P1)
int **PortWrite** (BYTE P4, BYTE P5, BYTE P6, BYTE P7)
int **Port1Write** (BYTE act, BYTE pos)

PortConfigure

This function decides whether to use each port as input or output.

int **PortConfigure** (WORD P4, WORD P5, WORD P6, WORD P7, WORD P1)

Parameters:

Input/output is determined by each bit value of P4, P5, P6, P7, and P1. Below is a description with an example of the P4 value.

비트 위치

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
----	----	----	----	----	----	---	---	---	---	---	---	---	---	---	---

Port4.7

15/14	0	0	Schmitt trigger input
	0	1	Schmitt trigger input with pull-up
	1	0	N-ch open drain output
	1	1	N-ch open drain output with pull-up

Port4.6

13/12	0	0	Schmitt trigger input
	0	1	Schmitt trigger input with pull-up
	1	0	N-ch open drain output
	1	1	N-ch open drain output with pull-up



Port4.1

3/2	0	0	Schmitt trigger input
	0	1	Schmitt trigger input with pull-up
	1	0	N-ch open drain output
	1	1	N-ch open drain output with pull-up

Port4.0

1/0	0	0	Schmitt trigger input
	0	1	Schmitt trigger input with pull-up
	1	0	N-ch open drain output
	1	1	N-ch open drain output with pull-up

P4, P5, P6, and P7 have the same format. For reference, only ports 0 and 1 are available for P7. Therefore, only the values of bits 0,1,2,3 are meaningful.

The case of P1 is as follows.

Bit Position

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
----	----	----	----	----	----	---	---	---	---	---	---	---	---	---	---

Port1.7 – Port1.0

7 -- 0

0	Pull-up disable
1	Pull-up enable

In case of P1, it is processed the same as standard 8051 Port1 and there is no need to specify input/output separately, but it is decided whether to use internal pull-up resistor. In parameter P1, only bits 7 to 0 are meaningful, and bits 15 to 8 are meaningless.

Return Value:

If initialization fails, "0" is returned. If successful, "1" is returned.

PortRead

This function returns the current input state of each port.

int PortRead (BYTE *P4, BYTE *P5, BYTE *P6, BYTE *P7, BYTE *P1)

Parameters:

Pointer that can receive the value of each port (*P4, *P5, *P6, *P7, *P1)

Return Value:

If the read fails, "0" is returned. In the case of success, "1" is returned.

PortWrite

This function outputs each port as a specified value (except for port 1).

int PortWrite (BYTE P4, BYTE P5, BYTE P6, BYTE P7)

Parameters:

Port value to be output (P4, P5, P6, P7)

Return Value:

If writing fails, "0" is returned. In case of success, "1" is returned.

Port1Write

This function outputs each bit of port 1 as a specified value. Port 1's 0 and 1 are used as USB data lines, so the entire value cannot be written, and each bit (except bits 0 and 1) must be written separately.

int **Port1Write (BYTE act, BYTE pos)**

Parameters:

act : If it is '0', '0' is recorded, and if it is not '0', '1' is recorded.

pos : indicates the bit position (bit positions 2 to 7). The rest of the values are meaningless.

Return Value:

If the command fails, "0" is returned. In case of success, "1" is returned.

Memo

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