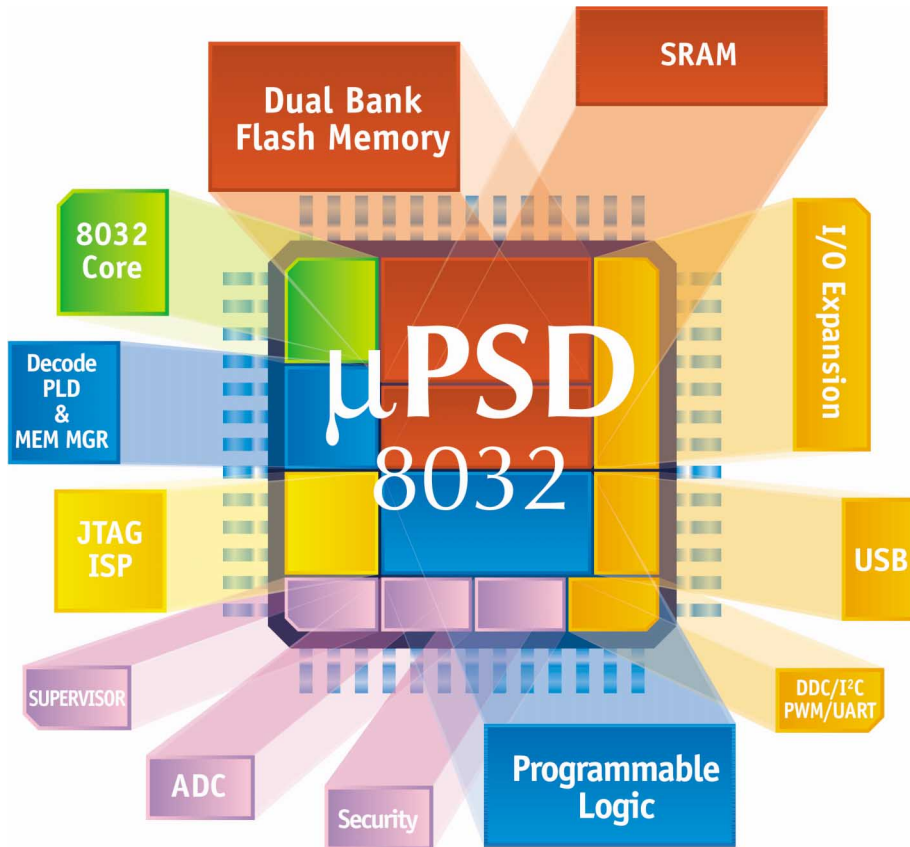


μPSD3200 Family

A Highly Integrated Flash 8032 Microcontroller
with Programmable Logic and USB

www.st.com/micropsd



μPSD3200 Family

- 8051 compatible MCU core
- Dual-independent large Flash memories
- Large SRAM
- Flexible memory management with paging logic
- Programmable logic and general-purpose I/O
- In-System Programming (ISP) via JTAG

μPSD
It's All You Need

STMicroelectronics
More Intelligent Solutions



μPSD3200 Family

ST Tools



DK3200 DEVELOPMENT KIT

- Three ways to debug
- Keil ISD51 background debugger runs on UART
- Easily connect In-Circuit Emulator with no adaptor required
- Connect Agilent logic analyzer cables directly to expansion connectors
- FlashLINK JTAG In-System Programmer
- Keil evaluation C compiler/debugger
- 8032 firmware drivers, demo code and USB examples
- PSDsoft Express μPSD development software

**PSDsoft
Express**

PSDSOFT EXPRESS μPSD DEVELOPMENT SOFTWARE

- Point and click design entry
- No programmable logic language to learn
- Single click programming via the FlashLINK Programmer
- Runs on Windows 95/98/NT/2000/XP and ME

Install from the attached CD, or download from our website and complete your first design in less than 30 minutes.

www.st.com/psm

3rd Party Tools

NOHAU

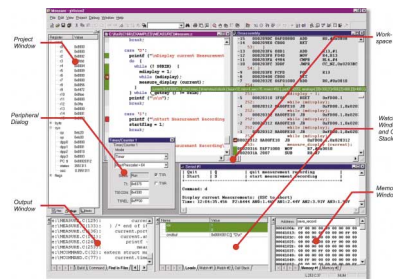


IN-CIRCUIT EMULATION

- Nohau EMUL51
- Hardware emulation of μPSD
- Full speed operation, 5V and 3.3V
- Supports memory paging
- Direct connection to DK3200
- Up to 768K emulation memory
- 256K deep trace w/8 triggers
- C and assembly debug

www.nohau.com/emul151pctsmicro.html

**KEIL
SOFTWARE**



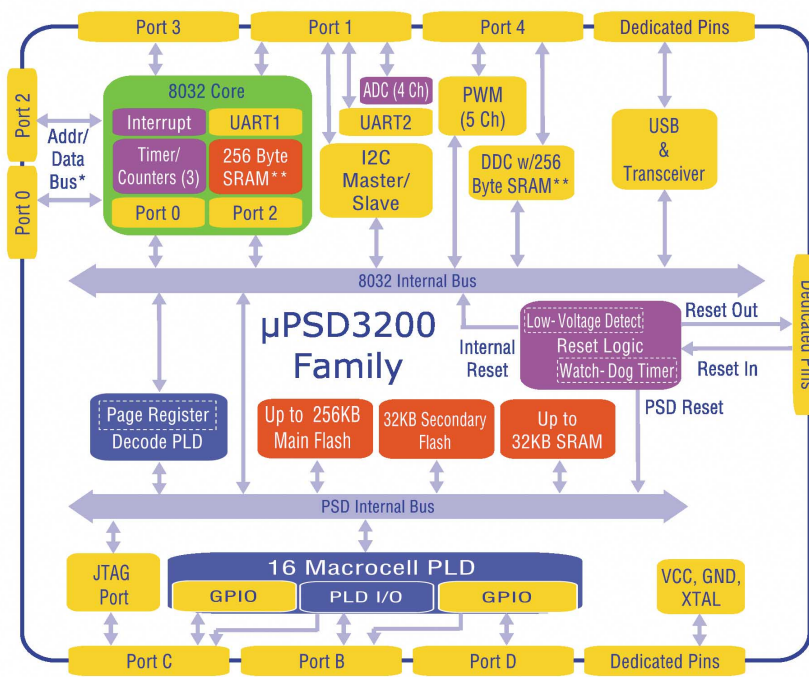
KEIL μVISION2 IDE*

- Optimized C compiler and editor
- ISD51 UART debugger and monitor
- Simulator for standard 8032 functions
- All in one environment
- Evaluation version on attached CD

www.keil.com/c51

*μPSD compatible with any compiler supporting standard 8051 architecture

μPSD3200 Family



* 80-Pin Device Only ** Not available on μPSD3212 devices

I/O and Communication Channels

- Up to 46 GPIO
- 5 PWM channels, one very high resolution
- USB 1.1 peripheral, low-speed mode 1.5 Mbps
- I²C master/slave
- Two UART channels

JTAG In-System Programming

- Program entire chip in 10-25 seconds
- Ideal for development and manufacturing

Analog Functions

- 4 channels, 8-bit ADC
- Vcc monitor with reset generator
- Security lock prevents theft of contents
- PLD power manager

KEY FEATURES

Standard 8032 MCU Core

- 40MHz 5V, 24MHz 3.3V
- Includes programmable watchdog timer

PSD Architecture

- PSD = Programmable System Device
- Perfect match for 8051- style architecture
- Programmable memory management for efficient memory paging
- Flexible allocation of memory between "code" and "data" space, even on-the-fly
- Robust and flexible In-Application Programming (IAP) for field updates

Three Independent Memories

- Up to 256 Kbyte main Flash
- 32 Kbyte secondary Flash
- Up to 32 Kbyte SRAM, battery capable
- Use EEPROM emulation in secondary Flash

Programmable Logic

- Memory decode and management
- 16 macrocell general purpose PLD



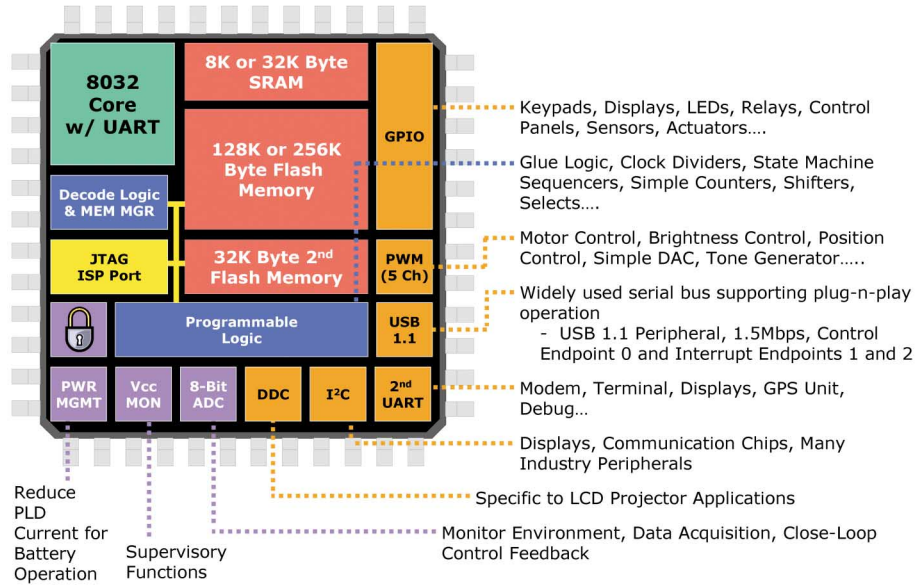
μPSD3200 Family

TYPICAL APPLICATIONS

- Point-of-sale peripherals
- Vending machines
- Security and building controls

- Industrial controls
- Data acquisition
- Handheld instrumentation
- Telecommunications

TYPICAL PERIPHERAL CONNECTIONS



μPSD3200 family product portfolio

Part Number	Main Flash Kbyte	2nd Flash Kbyte	SRAM Kbyte	I/O Pins	PWM Ch.	Tmr/ Ctrs	UART	USB	Vcc	Package
μPSD3254A-40U6	256K	32K	32K	46	5	3	2	Low	4.5-5.0	TQFP80
μPSD3254A-40T6	256K	32K	32K	46	5	3	2	Low	4.5-5.0	TQFP52
μPSD3254BV-24U6	256K	32K	32K	46	5	3	2	N	3.0-3.6	TQFP80
μPSD3234A-40U6	256K	32K	8K	46	5	3	2	Low	4.5-5.0	TQFP80
μPSD3234BV-24U6	256K	32K	8K	46	5	3	2	N	3.0-3.6	TQFP80
μPSD3234A-40T6	256K	32K	8K	37	5	3	2	Low	4.5-5.0	TQFP52
μPSD3253B-40T6	128K	32K	32K	37	5	3	2	N	4.5-5.0	TQFP52
μPSD3253BV-24T6	128K	32K	32K	37	5	3	2	N	3.0-3.6	TQFP52
μPSD3233B-40U6	128K	32K	8K	46	5	3	2	N	4.5-5.0	TQFP80
μPSD3233BV-24U6	128K	32K	8K	46	5	3	2	N	3.0-3.6	TQFP80
μPSD3233B-40T6	128K	32K	8K	37	5	3	2	N	4.5-5.0	TQFP52
μPSD3233BV-24T6	128K	32K	8K	37	5	3	2	N	3.0-3.6	TQFP52
μPSD3212CV-24T6*	64K	16K	2K	37	5	3	2	N	3.0-3.6	TQFP52
μPSD3212C-40T6*	64K	16K	2K	37	5	3	2	N	4.5-5.0	TQFP52
μPSD3212CV-24U6*	64K	16K	2K	46	5	3	2	N	3.0-3.6	TQFP80
μPSD3212C-40U6*	64K	16K	2K	46	5	3	2	N	4.5-5.0	TQFP80

* New! μPSD Lite, low-cost version



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Full product information at www.st.com

