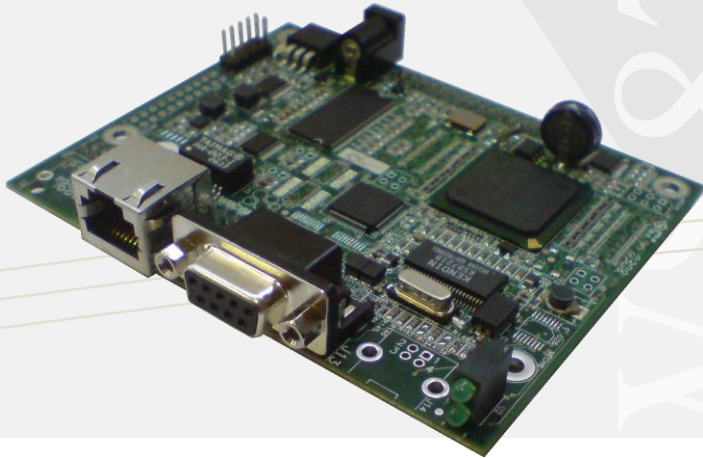


WebSilicon WS875 SBC



*Flexible, communication
optimised embedded
networking platform*

Rich combination of interfaces and on-board peripherals makes an ideal solution for networking and communication intensive applications.

The WS875 is a high power compact sized embedded/stand alone single board computer module based on Freescale PowerQUICC MPC875 processor. The rich set of communication interfaces, on board peripherals, and expansion bus makes the WS875 an ideal platform for implementing versatile communications, industrial, and consumer applications.

The MPC875 processor features an integrated PowerPC core and Communications Processor Module (CPM) to provide a scalable computing solution for networked devices. The PowerPC core can run at speeds of 133MHz and provide general purpose control and computing functionality, while the dedicated CPM offloads communications functions such as fast Ethernet, HDLC, and ATM. The processor expansion bus on the WS875 brings the processor signals to standard expansion connectors allowing simple and full access to the power of the processor.

Developed by WebSilicon, a leader in innovative network management products, The WS875 is a fully flexible solution that cost effectively integrates with both existing and new product designs.

Available as a standard off the shelf platform or as a reference design that can be embedded into the end product, the WS875 is an ideal solution for managing complex elements or arrays of satellite modules (backplane oriented or rack mount systems).

The WS875 is a flexible platform that can be easily customized in terms of memory size and configurations, communication interfaces, digital and analog I/O, DC supply etc.

TYPICAL APPLICATIONS

- Shelf processor for backplane oriented systems
- Embedded web server and SNMP agents for telecom/datacom systems
- RF over fiber systems, DAS
- Satcom modems and frequency converters
- System controller for telecom power systems
- Fiber optic and cellular amplifiers
- Security appliances / Access servers

SOLUTION BENEFITS

- Complete hardware/software solution
- Reliable, field proven design
- Stable, robust platform shortens time to market and reduces risks
- Flexible platform – HW can be easily modified to meet both functionality and cost targets
- Native network support – IPv4 + IPv6
- Easily integrated with existing or new designs
- Widely used dev. Tools: Linux, WindRiver VxWorks/Workbench, GNU compiler
- Comprehensive support - full turn key projects, professional services available

The small size and low power consumption of the WS875 allows its integration into practically any device, while its competitive price makes it an ideal selection for numerous applications. Based on Freescale PowerQUICC architecture, the WS875 delivers an excellent price/performance.

Processor Unit

CPU	Freescale MPC875 PowerPC CPU core.
Clock	133MHz (driven by 5MHz oscillator and PLL).
Bus width	32bit data bus 28bit flat address bus.

Memory

Flash	16MByte, expandable to 32, 64MByte.
RAM	16MByte SDRAM, expandable to 32, 64MByte.
EEPROM	2Kbit serial EEPROM.

Communication

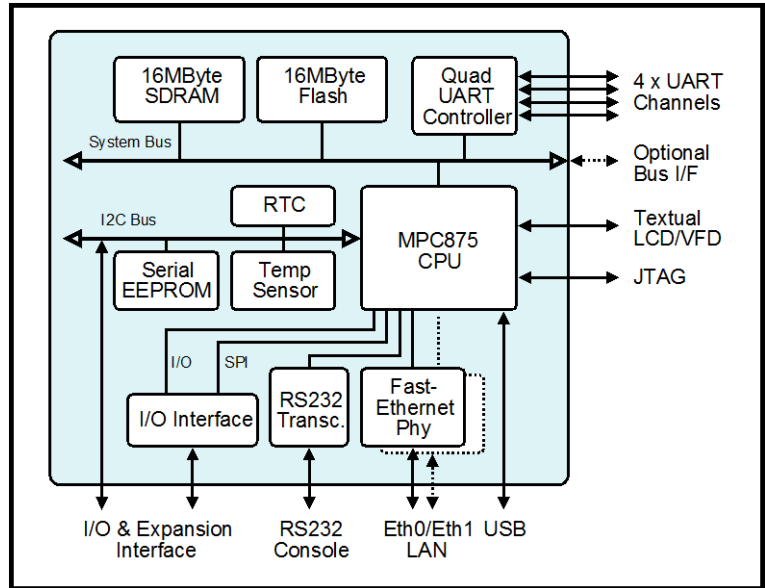
LAN	1 or 2 Fast-Ethernet ports, 10/100baseT Auto-neg. RJ45 connector.
Console	Dedicated RS232 port; D-9 female connector.
USB	USB 2.0 compatible. host/device; Low/high speed
UART	High speed quad UART controller on system bus. Selectable TTL, RS232, or RS485 levels.

Peripherals

Temp sensor	On board digital temp. sensor.
EEPROM	On board 2Kbit serial EEPROM. Expandable up to 512Kbit.
RTC	I ² C real time clock with capacitor backup.

Interfaces

GPIO	Input/Output pins. LVTTTL levels, 5V tolerant.
UART	Four UART channels. 120bps to 1Mbps. LVTTTL, RS232, or RS485 levels.
Serial	Dedicated I ² C and SPI ports (master mode).
Interrupt	Interrupt input, edge or level activated.



Power

DC feed	3.3Vdc or 5Vdc, single supply.
Consumption	<3.5W (1A) typical power consumption.

Environmental

Operating	Commercial 0 to +65°C as standard. Industrial -40°C to +85°C range available.
Storage	-40°C to +85°C.
Relative hum.	0 to 90% non-condensing.
Dimensions	100mm x 80mm x 19mm.
Environment	RoHS compliant.

Software and Development Tools

C Compiler	GNU C / Diab compiler.
RTOS	Complete Linux and VxWorks BSP.
TCP/IP	Full IPv4 and IPv6 protocol stack, including ICMP, ARP, TCP, UDP, and raw sockets.
Drivers	Drivers for all on-board peripherals + many external ICs including A to D converters, serial port expanders, D to A converters, LCD, keypad, RTC, Ethernet Phy etc.
Software Modules	SNMP agent, HTTP server, Email client, Telnet server, Phy/Switch management, TFTP client, RADIUS client, NVRAM and storage engine, MD5 digest algorithm.
Bootloader	FTP based bootloader – IP configuration and setup, firmware updates, backup etc.
Debug	BDM interface for online debugging.

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