IGNITE™ Family of Microprocessors

Half the Size, Consumes Half the Power & Delivers Twice the Performance

PTSC's IGNITE™ family of microprocessors enables manufacturers to differentiate their products, replace less efficient control devices, add functionality and reduce cost. The unique dual stack architecture coupled with the lowest gate count and memory footprint in the industry, enables IGNITE to be the industry's price/performance leader. PTSC has successfully integrated the industry's smallest and most powerful RISC 32-bit microprocessor. It also has a full Java application environment including Personal Java and VxWorks, as well as Linux, ensuring real-time system response for time-critical system tasks. The speed, flexibility, efficiency and low cost of this technology package are what make it the most attractive advanced microprocessor on the market today.

IGNITE Microprocessor Family

IGNITE I – Silicon Microprocessor – Floating Point Product

IGNITE Ia - 0.35 micron *(Available now)*

Silicon feature list

IGNITE Ib -0 .18 micron *(Available Q4 2002)*

- Patented Zero-operand, dual-stack architecture
- 4 Gigabyte of physical address space
- 8-level interrupt controller
- Dedicated 8 input and 8 output bits
- 32-bit System Bus
- Multi-instruction fetch with overlap execution
- Automatic Stack fills and refills in hardware
- Posted Writes
- Hardware assist to single/double precision IEEE Floating point instructions
- Fully Static Design
- JTAG support
- Low-cost, high-performance, low-power 32 bit RISC processor
- Up to 200MHz operating frequency (worst case)
- Memory efficient, eight-bit instruction op codes

IGNITE II – Silicon Microprocessors – Integer Product

IGNITE IIb - 0.18 micron *(Available Q4 2002)*

- Patented Zero-operand, dual-stack architecture

- 4 Gigabyte of physical address space
- 8-level interrupt controller
- Dedicated 8 input and 8 output bits
- 32-bit System Bus
- Multi-instruction fetch with overlap execution
- Automatic Stack fills and refills in hardware
- Posted Writes
- Fully Static Design
- JTAG support
- Low-cost, high-performance, low-power 32 bit RISC processor
- Up to 225MHz operating frequency (worst case)
- Memory efficient, eight-bit instruction op codes

IGNITE III – Floating Point Core Microprocessors

IGNITE IIIb – Generic reference to FP 0.18 micron soft-core *(Available now)*

IGNITE IIIb.d - FP 0.18 micron hardcore *(Available Q4 2002)*

IGNITE IV – Integer Core Microprocessors

IGNITE IVb – Generic reference to Integer 0.18 micron softcore (Available now)

IGNITE IVb.d – Integer 0.18 micron hardcore (Available Q4 2002)

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IGNITE™ Product Specifications

DEVICE	CPU frequency (MHz)	Bus interface (address/data) (bits)	Instruction width (bits)	Operating voltages (V)	Typical power at maximum frequency	Power down modes	Caching	Memory	Memory controller	Timers	Serial, Parallel I/O	Interrupts	Additional features
IGNITE I	100	32 (multiplexed)	8	5	350 mW	Stop, halt	not required (single cycle random access supported)			yes	VPU	Hardware baud rate generation	Eight	
IGNITE Ia	100	32 (multiplexed)	8	3.5	165 mW	Stop, halt	not required (single cycle random access supported)			yes	VPU	Hardware baud rate generation	Eight	
IGNITE Ib	200	32/8, 16, 32	8	1.8	100 mW	Stop, halt, sleep and dynamically variable frequency clock (0-max)	not required (single cycle random access supported)	Configurable	Optional			Fully configurable	Eight	Fully synthesizable core
IGNITE IIb	220	32/8, 16, 32	8	1.8	110 mW	Stop, halt, sleep and dynamically variable frequency clock (0-max)	not required (single cycle random access supported)	Configurable	Optional			Fully configurable	Eight	Fully synthesizable core
IGNITE IIIb	365	32/8, 16, 32	8	1.8	81mW or 0.22 mW/MHz	Stop, halt, sleep and dynamically variable frequency clock (0-max)	not required (single cycle random access supported)	Configurable	Optional			Fully configurable	Eight	Fully synthesizable core
IGNITE IIIb.a	365	32/8, 16, 32	8	1.8	84mW or 0.23 mW/MHz	Stop, halt, sleep and dynamically variable frequency clock (0-max)	not required (single cycle random access supported)	Configurable	Optional			Fully configurable	Eight	Fully synthesizable core
IGNITE IVb	400	32/8, 16, 32	8	1.8	88mW or 0.22 mW/MHz	Stop, halt, sleep and dynamically variable frequency clock (0-max)	not required (single cycle random access supported)	Configurable	Optional			Fully configurable	Eight	Fully synthesizable core
IGNITE IVb.a	400	32/8, 16, 32	8	1.8	92mW or 0.23 mW/MHz	Stop, halt, sleep and dynamically variable frequency clock (0-max)	not required (single cycle random access supported)	Configurable	Optional			Fully configurable	Eight	Fully synthesizable core

Specifications subject to change without notice.