lightfoot

digital communication technologies ltd.

lightfoot™ – the processor setting the pace for Java™ enabled products

lightfoot™ is a 32-bit processor core unlike any other you've seen. Its novel architecture sweeps aside the barriers that have held back the widespread adoption of Java™ and Jini™ in the embedded market.

Created by Digital Communication Technologies, lightfoot™ hits a price-performance point that makes it the ideal platform to use in your next generation mass-market Java™ enabled product.

With the lightfoot™ integration package we've made every step in the development path as simple as coding in Java™.

Check out the features to see why lightfoot™ is the ultimate solution for building tomorrow's devices today.

Key features of the lightfoot™ core

- Tiny size: less than 30,000 gates for the full 32-bit processor
- High performance: typically 8 times better Java performance than RISC interpreters running at equivalent clock speeds
- Low power dissipation: due to simplicity of core and close match with JVM specification
- 8-bit program memory interface: minimises cost of external components
- One-to-one mapping from Java™ bytecodes to lightfoot™ instructions: compactness of bytecode format is preserved down to the lowest levels of the run-time
- Customizable instruction set: supports mixed language development (C/C++/Java) and secure processor design
- Fast real-time response: deterministic performance
- Java™ run-time checking: supported in hardware
- Low cost of ownership: application and run-time code typically 2–5 times more compact than standard processor implementations.

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Embedded code development and IP integration doesn't come any easier

Software development tools

- Industry standard design and debugging environments can be used for application code development
- DCT's ANSI-compliant C compiler, assembler, linker and simulator make it easy to implement native I/O interfaces and drivers
- Extensive examples of native I/O interfaces are included in the lightfoot™ development system.

System runtime software

- lightfoot™ ports available for J2ME™, JavaCard™, KVM™ and JINI™
- DCT's Class Loader and JVM come as standard run-time elements
- TCP/IP networking stacks available.

IP integration support

- Synthesizable RTL available in Verilog and VHDL formats
- Test and validation harness developed using Verisity Inc.'s leading-edge Specman Elite tool delivers fully verified executable IP
- Verisity's Invisible Specman lets lightfoot™ run alongside your custom IP with your Verilog or VHDL simulator for fast, robust and easy IP integration.

Development system

- lightfoot™ development card
- lightfoot™ software tools
- Extensive Integrator documentation.

You won't be on your own

- DCT provides start-to-finish software and hardware integration support to get your product to market fast.

Contact Chris Turner for more information and hit the ground running with lightfoot™