

# SynthOS®

SynthOS® is a patented software development tool that automatically generates a custom, secure, optimized, multitasking, real-time system for your Internet of Things edge device. Just add a few simple lines of code, known as SynthOS “primitives,” to your proprietary C routines, and specify some basic parameters. At the push of a button, SynthOS rewrites your code and generates the C source code for a complete system. You don’t need to fool with semaphores and mutexes or be

concerned about race conditions, deadlocks, or many other hazards. You can use all your current tools — compilers, debuggers, interpreters, and emulators — for executing and debugging the synthesized code. The resulting system is secure because it’s unique and has a small attack surface, but also because SynthOS can automatically insert security-checking code that takes corrective action or informs a user of a breach.

## Advantages for Customers

- **Shortens development time**
  - Lower development costs
  - Faster time to market
- **Increases security**
  - Smaller attack surface
  - Each system is unique
  - Automatic security checking
- **Makes debugging easier**
  - Source code in, source code out
  - RTOS expertise is not necessary
- **Uses patented technology**
  - Eliminates race conditions
  - Optimizes the output code
  - Results in a small memory footprint
  - Very low latency times
- **Squeezes performance out of smaller, simpler processors**
  - Lower hardware costs
  - Lower power consumption
- **Portable**
  - Runs on any workstation or PC
  - Integrates with your current tools

## Advantages for Process Vendors

- **Requires minimal support**
- **Immediately works for all new processors**
- **Leverages existing compiler technology**
- **Speeds task switching without hardware assistance**



For more information, including white papers and application notes, contact us at:

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