

What is TINI?

The Tiny Internet Network Interface (TINI®), more properly referred to as the TINI® Runtime Environment, is a Java™ runtime environment for developing network-aware applications for Maxim/Dallas IP-ready microcontrollers such as the DS80C400. As IP networks have become more pervasive, it is now necessary to network-enable embedded systems. However, network protocols tend to be complicated to code and require a lengthy test cycle. The TINI® runtime environment provides a full TCP IPv4/6 protocol stack verified for compliance to Internet standards. The network stack is driven by a multitasking operating system (TINI®-OS). Using the runtime environment and its built-in APIs, a developer can quickly write embedded applications that are network-aware.

TINI® Features

I/O Interfaces Support in TINI OS

RS-232 Serial	Up to 4
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1-Wire	2
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I2C	1
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RS-485	1
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SPI	1
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CAN	1
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Networking

Full TCP/IP Stack	Yes
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PPP	Yes
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IPv4	Yes
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IPv6	Yes
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DAD	Yes
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DN	Yes
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UDP	Yes
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IGMP	Yes
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ICMP	Yes
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STMP	Yes
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DHCP	Yes
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FTP	Yes
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TELNET	Yes
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HTTP	Yes
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Java Features

Processes	8
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Threads	32
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Serialization	Yes
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Dynamic Class Loading	Yes
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Reflection	Yes
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Primitive Types	All
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Native Methods	Assembly
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IEEE 754 Floating Point	Yes
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All Packages

Java API Version	JDK 1.4
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java.lang	Yes
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java.io	Yes
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java.util	Yes
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java.net	Yes
Javax.comm	Yes
TINI Development	

EMAC provides a Free Eclipse IDE featuring TiniAnt that is pre-integrated to provide everything the user needs for developing TINI applications. All the compiling, converting and downloading inherent to TINI development can be done from one easy to use high level interface. The distribution provides an SDK for the EMAC SoM-100ES and SoM-400EM which contains Java classes and source examples for the Interrupt Driven Keypad, LCD, Digital I/O ports, A/D, D/A, SPI, MMC, Modem, and One-Wire thermometer. It also comes with JavaKit pre-integrated, to provide an easy to use serial interface to the TINI OS. In addition two Web Servers are provided and integrated

into the Eclipse IDE, the free TINI Web Server and the full-featured Tynamo™ Web Server (tynamo.qindesign.com).

The Tynamo™ server is a fast, conditionally compliant HTTP/1.1 server and Servlet 2.2 container for embedded Java platforms. Supporting such advanced features as basic authentication, persistent connections, and servlet reloading, it is an excellent tool for accessing and controlling your hardware via the Internet.

The EMAC Eclipse IDE is by far the most complete and best integrated development environment for the TINI and even features CVS version control support.

Source URL: <https://www.emacinc.com/what-tini>