TStik2™ - now RoHS compliant

TINI400 Java™ Network Module

TStik2 brings the TINI400 chipset in the popular Simm72 form factor used by TINI390.

TStik2 is ideal for adding low-cost 10/100BaseT ethernet, 1-Wire, CAN, I2C, SPI, RS232, and more to your product.

TStik2 - a complete Java-programmable network module which anyone can afford.

TStik2 - 10/100BaseT, PPP, HTTP, FTP, Telnet, TCP/IP.

TStik2 - 1-Wire, CAN, 3xRS-232, I2C, SPI.

TStik2 - Three UARTs plus simultaneous CAN and I2C.

TStik2 - now RoHS-compliant

TStik2 has many benefits relative to TStik1 and other TINI400 modules: Improved NVRAM battery life, simultaneous CAN and I2C, Serial1 is now available as a UART, and CAN baud rates are now integer multiples of 1 MHz. Plus, TStik2 is now RoHS-compliant!

The Dallas Semiconductor TINI architecture has blazed new pathways in the world of embedded control, at an unprecedented price point.

TStik2's DS80C400 TINI Java controller core is optimized for use with a Java Virtual Machine.

TStik2 is "real Java". It includes threading, garbage collection, and dynamic class loading. Use any standard Java Development Kit to create your class files. TStik supports standard java packages such as javaxcomm for serial I/O, Web servers, XML parsers, lightweight JINI, encryption, and so forth.

TStik2 is ideal for low cost, embedded ethernet or embedded Java applications.

• Dallas Semiconductor DS80C400 TINI Java Processor. Executes Java code in a firmware JVM with an 8-bit internal architecture.

• 1024 KBytes NVRAM, 2 MBytes Flash. 8-bit wide internal memory data path.

• Three UARTs at up to 115 kbaud. Serial0 is RS-232 output, serial1 is TTL output level or 1-Wire, serial4 is TTL output level and has hardware handshaking. Serial1 can be switched “on the fly” between 1-Wire network and generic asynchronous serial modes.

• 10BaseT or 100BaseTX ethernet with RJ45 & LEDs.

• On-module CAN 2.0B controller, 1-Wire, I2C, SPI, and additional I/O pins for expansion. CAN and I2C can be active at the same instant.

• Simple, very robust subset of the TINI Simm72 bus. No memory-mapped I/O, and greatly improved ESD resistance compared to TINI390.

• Low power internal 3.3V system, accepts 5VDC as external power.

• Power and status LEDs

• TStik2 rev 2.2 and later is RoHS-compliant

• Development kits are available.

Java is a TradeMark of Sun Microsystems, Inc
TStik and JSimm are TradeMarks of Systronix, Inc
1-Wire and TINI are TradeMarks of Dallas Semiconductor Corp
SimmStick is a TradeMark of Dotronics

WWW.TSTIK.COM
FOR INFORMATION, PRICES & ORDERS
TINI400 in the popular Simm72 package!

TStik brings the features and benefits of the DS80C400 TINI Java controller to the popular Simm72 form factor used by TINI390. TStik will work in any well-designed TINI390 socket where memory mapped I/O is not required.

Support for open Java standards

TStik is real Java. Use your favorite Java tools to create standard Java class files, using common packages such as javaccommm, JXTA, XML parsers, etc. Then load your programs via FTP and monitor and control TStik via Telnet.

Designed for OEM use

TStik has several design features intended to make it very rugged and resistant to ESD and surges on the ethernet lines. TStik includes Systronix proprietary reset and control circuitry. We applied what we learned in three years of experience with the TINI390 module, to make TStik easy to configure, and rugged and reliable enough for years of dependable use. TStik2 adds additional features requested by industrial users (see the Technical Details sidebar).

TStik Makes Embedded Java Hardware Easy and Inexpensive

TStik includes memory, ethernet controller and magnetics, crystal, power converter, reset logic, and all other necessary circuitry. All you have to provide is power and I/O connectors.

The on-board ethernet controller and TCP/IP stack provide an open, standards-based ethernet API for rapid network application development.

User I/O Expansion

To keep TStik.72.nb simple and low cost, it does not have a memory-mapped I/O bus. But market research showed that 80% or more of the potential uses of TStik did not require the expense of memory-mapped I/O.

TStik has many other I/O expansion options - CAN, I2C, SPI, asynchronous serial, and 1-Wire. TStik includes sixteen I/O bits which can be used for your own purposes, or for optional features such as SPI (7 bits), serial4 (6 bits), CAN/I2C (4 bits) and external interrupt zero (1 bit).

All I/O pins are TTL-level compatible (thresholds of 0.8 and 2.0 volts) and are 5-volt tolerant. They are compatible with 3V and 5V TTL and 3V CMOS logic. Like other 3V systems, they are not compatible with 5V CMOS which has a 2.5V threshold. Systronix socket boards add additional I/O and signal buffering.

Plug-on JSimm, I2C, SPI or 1-Wire modules for ADC, DAC, digital I/O, IrDA, RF, graphic LCD, power relays, and more are available or under development. Many current SimmStick modules are JSimm compatible.

Ethernet

10BaseT/100BaseTX ethernet controller and magnetics are on-board. TStik supports optional NetBoot startup devices.

Jumperless Configuration

Ethernet option jumpers can be left installed in all but very special cases, and TStik will plug-and-play in existing TINI390 socket boards or new TStik sockets. Rather than jumpers for most options, TStik uses a configuration register implemented in an on-board CPLD.

Developer Community

There is a very large, enthusiastic, and helpful TINI developer community as well as outstanding support from Dallas and Systronix.

Development Tools and Examples

You create TINI programs with standard Java development tools. For complete information see the tutorials links on the TStik web site.