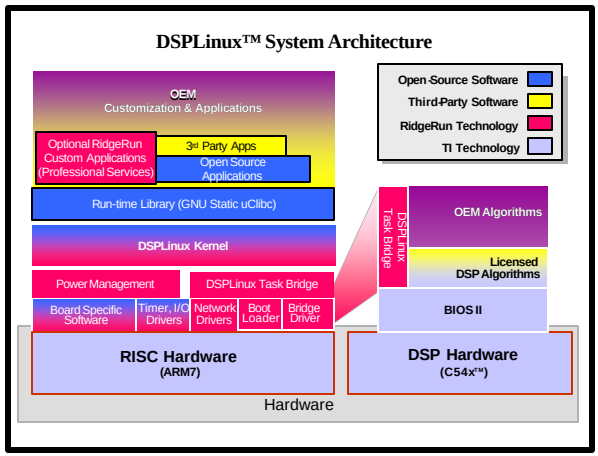
DATASHEET

DSPLinuxä C5471 BSP v1.1 for Texas Instrumentsä TMS320VC5471



- **Out-Of-The-Box** – Development begins with a full Linux operating system, a rich set of device drivers, and full TCP/IP support.
- **Add Open Source** – Jump-start your development with royalty-free Open Source code.
- **Harness DSPs** – Access the power of DSPs even if DSP algorithm development isn't your primary expertise.
- **Appliance Simulator** – Start writing applications without development hardware.

ARM7 and C54x™ Linux Code Generation Tools with GDB Debugger Support

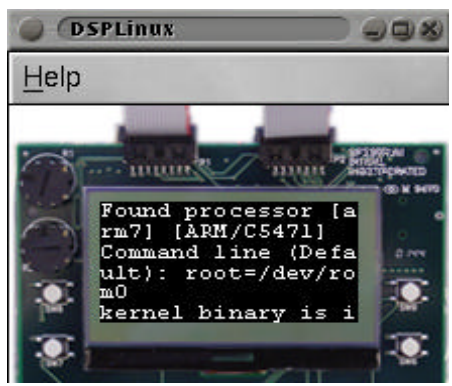
The DSPLinux BSP for the TI C5471 includes a full code generation tool chain for development and debug from a Linux desktop development environment. The industry standard GNU software development tool suite is part of each BSP and is used for the ARM side development. These tools are configured for cross-compilation, allowing you to develop ARM7 code for targets supported by DSPLinux.

For DSP development, TI's C5000 tools execute from the Linux command line allowing code generation for the C5471. These C5000 tools are the same core development tools found in TI's popular Code Composer Studio™, thus assuring consistency for DSP software development.

• Compiler (gcc)	• Linker (ld)
• Assembler (as)	• Optimized C library (dynamic uClibc)
• Debugger (gdb)	• TI C54x Linux command line code generation tools
• Utility programs for software development	• Full JTAG support for the C5471 on-board emulator

Appliance Simulator

- Run DSPLinux on a desktop PC within a simulated embedded device.
- Create and debug applications before running on actual hardware.
- Use the same cross-compile tools as needed for the actual target.
- Deploy full on-screen industrial design simulation of the embedded device.
- Simulate constrained memory conditions with a configurable kernel.
- Develop for connected devices with built-in network support.



OPEN SOURCE SOFTWARE COMPONENTS

Tapping into the large pool of publicly available Open Source code, is among the benefits of building your device using embedded Linux. RidgeRun included several useful Open Source packages for Internet-connected devices with these BSPs. Look for more useful Open Source packages on the DSPLinux.net website in the future.

Boot Loader	Access to low levels of HW, load code to flash, set boot options.
uCLinux Kernel	The core of the Linux OS, including networking. V2.0.38.
TCP/IP Networking	Standard TCP/IP network protocol stack and support stacks.
NFS Root-Mount	Allows file system to reside on the network, useful for development.
UART Serial Driver	Controls the serial port.
Watchdog Timer Driver	Controls watchdog timer and functionality.
Shared uClibc	Minimized C library optimized for ARM7 base footprint.
Busybox	Tiny versions of utilities and a shell into a single small executable.
Tinylogin	Small footprint user authentication.
Gkermit	File transfer utility using Kermit protocol.
Web server	Allows device to serve web pages and supports CGI scripting.
FTP server	Allows file transfer protocol connections into the embedded device.
Telnet server	Allows telnet connections into the embedded device.

RidgeRun Value Added Components

In addition to the above Open Source packages, RidgeRun has developed many valuable software components to access the hardware supported by the TMS320C5471, thus bringing your embedded product to market quickly. Run-time licenses for these proprietary components will vary, depending upon production unit volumes.

MicroBridge	Load and control code on the DSP.
TaskBridge	Allows DSP tasks to access Linux file system, sockets, and devices.
Ethernet Driver	Ethernet driver for Lucent LU3X31T-T64 LAN chipset.
Timer Driver	HW specific functionality for full range of on-chip timers.
Clock Control Drivers	HW specific functionality for full range of on-chip clocks / functions.
Power Management	Optimization for power consumption and clock management modes.

PRICING AND AVAILABILITY

DSPLinux BSPs include full installation and configuration support, private access to DSPLinux.net, 90 days of BSP updates, and a flexible run-time licensing program for the value added components of DSPLinux. For more details, contact us at sales@ridgerun.com.

205 N. 10th Street, Fourth Floor
Boise, Idaho 83702
Tel: 208.331.2226
Fax: 208.331.2227
www.ridgerun.com

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