



GNUPro™ 05r1 Tools for Embedded Systems Development

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Overview

Red Hat's GNUPro 05r1 toolsuite for embedded software development provides:

- Easy-to-install versions of the full suite of industry-standard GNU cross development tools and libraries for embedded systems—targeting x86, ARM/XScale, MIPS, MN10300/AM33 2.0, M68k, V850, PowerPC and Sparc architectures
- GNUPro documentation, including a "Getting Started" guide and tutorials
- Fast, knowledgeable support through direct access with our world-class support experts

Description

GNUPro, recognized as the world's most popular embedded development tools suite, is a collection of tools and runtime technologies that enables the creation, deployment, and testing of target software components for devices.

The core of the GNUPro toolsuite include specially configured, built, tested, and supported versions of the GNU development tools:

- GCC version 4.0.1
- GDB version 6.3
- Insight, the graphical debugger interface, version 6.3
- GNU binutils version 2.16
- The newlib ISO C runtime library, version 1.13

Additional GNUPro enhancements to the core GNU utilities include processor-specific optimizations, cross-development usability enhancements, and bug fixes backported from the very latest development sources for these tools.



All 05r1 compilers for embedded development generate ELF object files and DWARF2 debug info by default.

The following target configurations are supported:

Configuration	Targets	Description
am33_2.0-linux-gnu	<ul style="list-style-type: none">GDB Remote Stub (RDA)	Generates MN10300 code (AM33 v2.0 by default). Includes glibc 2.3.4. Compiles Linux.
arm-eabi	<ul style="list-style-type: none">SimulatorGDB Remote Stub	Generates ARM code (ARMv4 by default). Uses the EABI, (also known as the BPABI), ABI by default.
arm-elf	<ul style="list-style-type: none">SimulatorGDB Remote Stub	Generates ARM code (ARMv4 by default). Uses the ATPCS ABI by default.
armv5-elf	<ul style="list-style-type: none">SimulatorGDB Remote Stub	Generates ARM code (ARMv5 by default). Uses the ATPCS ABI by default.
armv6-elf	<ul style="list-style-type: none">SimulatorGDB Remote Stub	Generates ARM code (ARMv6 by default). Uses the ATPCS ABI by default.
armv4l-linux-gnu	<ul style="list-style-type: none">GDB Remote Stub (RDA)	Like <i>arm-elf</i> but includes glibc 2.3.4 rather than newlib and will compile Linux for the ARM.
armv5l-linux-gnu	<ul style="list-style-type: none">GDB Remote Stub (RDA)	Like <i>armv4-linux-gnu</i> but defaults to producing code for the ARMv5 architecture and will compile Linux for the XSCALE.
armv5b-linux-gnu	<ul style="list-style-type: none">GDB Remote Stub (RDA)	Like <i>armv5l-linux-gnu</i> except that it produces big endian code by default.
h8300	<ul style="list-style-type: none">Simulator	Generates H8 code
i386-elf	<ul style="list-style-type: none">GDB Remote Stub	Generates x86 code.
iq2000-elf	<ul style="list-style-type: none">Simulator	Generates IQ2000 code.
m68k-elf	<ul style="list-style-type: none">Simulator	Generates M68k code.
mips-elf	<ul style="list-style-type: none">SimulatorGDB Remote Stub	Generates MIPS code (MIPS1 by default). Uses the O32 ABI.
mips64-elf	<ul style="list-style-type: none">SimulatorGDB Remote Stub	Generates MIPS code (MIPS3 by default). Uses the O64 ABI.
mipsisa64-elf	<ul style="list-style-type: none">Simulator	Generates MIPS code (MIPS64 by default).



Configuration	Targets	Description
	<ul style="list-style-type: none">• GDB Remote Stub	Uses the EABI binary interface.
mips-linux-gnu	<ul style="list-style-type: none">• GDB Remote Stub (RDA)	Generates MIPS code (MIPS2 by default). Uses the O32 ABI. Includes glibc 2.3.4. Compiles Linux.
mipsisa64-linux-gnu	<ul style="list-style-type: none">• GDB Remote Stub (RDA)	Generates MIPS code (MIPS3 by default). Uses the O32 ABI. Includes glibc 2.3.4. Compiles Linux.
mips64-linux-gnu	<ul style="list-style-type: none">• GDB Remote Stub (RDA)	Generates MIPS code (MIPS3 by default). Uses the N32 ABI. Includes glibc 2.3.4. Compiles Linux.
mn10300-elf	<ul style="list-style-type: none">• Simulator• GDB Remote Stub	Generates MN10300 and AM33 code. (MN10300 by default).
powerpc-eabi	<ul style="list-style-type: none">• Simulator• GDB Remote Stub	Generates PowerPC code.
powerpc-eabispe	<ul style="list-style-type: none">• GDB Remote Stub	Generates PowerPC compatible ELF object files for the BookE family of processors.
powerpc-linux-gnu	<ul style="list-style-type: none">• GDB Remote Stub (RDA)	Generates PowerPC Linux code. Includes glibc 2.3.4.
powerpc-linux-gnuspe	<ul style="list-style-type: none">• GDB Remote Stub (RDA)	Generates BookE PowerPC Linux code. Includes glibc 2.3.4.
sparc-elf	<ul style="list-style-type: none">• GDB Remote Stub	Generates 32-bit sparc compatible ELF object files.
v850-elf	<ul style="list-style-type: none">• Simulator	Generates V850 compatible ELF code.
xstormy16-elf	<ul style="list-style-type: none">• Simulator	Venerages Xstormy16 compatible ELF code.

This latest release of Red Hat's GNUPro for embedded systems development runs on:

- Red Hat Enterprise Linux v2.1, v.3, and v.4 for x86
- Sun Solaris 2.6, 2.7, 2.8, 2.9 and 2.10 for sparc
- Microsoft Windows NT4, 2000, XP and 2003



Availability

GNUPro 05r1 support offerings for embedded systems development are available immediately.

See <http://www.redhat.com/embedded> for more information.

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