



GN4121 Master List of Documents & Electronic Files

The complexity of functions for the GN4121 device have produced an array of documentation. To help you navigate the content, this document outlines the basic content contained within the documents and other files on MyGennum.

Information Note

1. GN4121 Master List of Documents & Electronic Files

Document ID: 52571

This document, which you are now reading, provides a content summary of all the files found on MyGennum.

Data Sheet

2. GN4121 x1 Lane PCI Express to Local Bus Bridge Data Sheet

Document ID: 51539

This document provides a detailed explanations of the GN4121 device functionality.

It includes:

- ◆ Pin and signal descriptions
- ◆ Electrical characteristics
- ◆ Package & Ordering information

Family Reference Manual

3. GN412x PCI Express Family Reference Manual

Document ID: 52624

This document covers the detailed functionality of the GN412x chip family.

This document includes details of the following:

- ◆ Overview of ASIC functionality
- ◆ Initialization of ASIC and system settings
- ◆ PCI Express Link
- ◆ Local Bus Interface
- ◆ Interrupts
- ◆ Peripherals: 2-wire interface, GPIO
- ◆ FPGA Configuration Loader (Bitstream Loader)
- ◆ General device applications
- ◆ Internal Register Map

Release Notes

4. GN4121 Gullwing-x1 RDK Release Notes

Document ID: 52570

This document contains a listing of the RDK Bill of Materials with documentation and software download instructions. This paper is included in all shipped RDKs.

User Guide

5. GN4121 Gullwing-x1 RDK User Guide

Document ID: 52162

This provides:

- ◆ “Getting Started” instructions for the RDK
- ◆ Hardware Board Settings
- ◆ Software Settings

Optional Evaluation Boards

Gennum Evaluation Boards can be used with the GN412x RDK for application specific evaluation.

- Gennum USB Dongle Board, which is used to program the EEPROM

Deserializer Evaluation Boards - Associated Documentation

- GS1559 Multi-Rate Deserializer with Loop-Through Cable Driver Data Sheet (Document ID: 30572)
- GS1559 Reference Design (Document ID: 34990)
- GS1574 HD-LINX® II Adaptive Cable Equalizer Data Sheet (Document ID: 28854) - part of GS1559 Evaluation Board
- GS2960 3Gb/s, HD, SD SDI Receiver Data Sheet (Document ID: 48003)
- EB-GS2960 Evaluation Board User Guide (Document ID: 52136)

Serializer Evaluation Boards - Associated Documentation

- GS1531 Multi-Rate Serializer Data Sheet (Document ID: 30573)
- GS1531 Reference Design (Document ID: 34991)
- GO1525 Voltage Controlled Oscillator Data Sheet (Document ID: 21969) - part of GS1531 Evaluation Board
- GS2962 3Gb/s, HD, SD Transmitter Data Sheet (Document ID: 48005)
- EB-GS2962 Evaluation Board User Guide (Document ID: 52138)

Software

6. GN412x RDK Software Files Electronic software executable files
- ♦ GN412x_RDK_SW_x.x_Linux.tar.gz: Contains the zipped versions of Linux Kernel Mode Driver and includes GenDiag Application for Linux.
 - ♦ GN412x_RDK_SW_x.x_Windows.exe: Contains the software for GN412x Diagnostics Utility (GenDiag), GN412x EEPROM Utility, GN412x I²C Utility and WDM drivers.
 - ♦ GN412x_RDK_SW_x.x_Release_Notes.html: Details on version history and notable features, enhancements and changes.
7. GN412x RDK Software Release Notes Electronic file in format of HTML
- This file explains the changes between revisions of the software.

User Manuals (for Software)

These documents are bundled with the software.

8. GN412x Diagnostic Utility (GenDiag) User Manual Document ID: 51406
- This provides the explanation of the diagnostic tests that this software program does to exercise the GN412x functionality.
9. GN412x EEPROM Utility User Manual Document ID: 51359
- This describes the operation of the Gennum EEPROM Utility software, and how it can be used to modify the contents of an EEPROM on boards such as the Gullwing-x1 RDK board.
- This requires the optional hardware component of the Gennum USB Dongle Board.
10. GN412x I2C Utility User Manual Document ID: 51402
- This explains to the user how to access the PCI Express bridge device internal configuration registers through I²C interface.
- This requires the optional hardware component of the Gennum USB Dongle Board.

Hardware

11. GN4121 Gullwing-x1 Rev 0 Design Files Electronic hardware design files
- Included in this package are the following files:
- ♦ RDB_GN4121_PCIe00.dsn <- GN4124 RDK00 schematics in OrCAD format
 - ♦ RDB_GN4121_PCIe00_BOM.xls <- GN4121 Bill of Materials
 - ♦ RDB_GN4121_PCIe00_Schematic.pdf <- GN4121 RDK00 schematics in pdf format
 - ♦ RDB_GN4121_PCIe00-GERBERS.zip <- Gerbers in RS274x format
 - ♦ RDB_GN4121_PCIe00-PCB.zip <- GN4121 RDK00 PCB layout/Cadence Allegro design database V15.x
 - ♦ RDB_GN4121_PCIe00-PCB_assy.zip <- Assembly package

FPGA IP

12. GN412x Gullwing RDK FPGA Programming Files

Electronic programming files

Provides the firmware layer required by the various FPGAs, such as Altera or Xilinx, to be used in the GN4121 Gullwing-x1 RDK system.

Sample programming has been created for Pinto (Video Capture) and Lambo (GenDiag Application) projects for this RDK, which are explained in detail within the [GN412x FPGA IP Hardware Design Guide](#).

Design Guides

13. GN412x FPGA IP Hardware Design Guide

Document ID: 51860

Details the Gennum FPGA IP and how to attach user application code. It is intended for intermediate hardware/software architects and designers who have general FPGA and HDL experience. This document references the GN4121 Gullwing-x1 RDK, as an example.

- ◆ IP Overview
- ◆ Interface Descriptions
- ◆ Description & Explanation of Source Code and Directories
- ◆ Description & Explanation of FPGA Project
- ◆ Samples of Register Mapping

14. GN412x RDK Software Design Guide

Document ID: 51859

This identifies the steps required for software development on a system that utilizes the GN412x PCI Express endpoint device. The GN412x Gullwing RDK hardware and the demo application, GenDiag, are reference throughout this document.

- ◆ General Overview of Software Development on GN412x
- ◆ GN412x RDK Software on Windows XP
- ◆ Design of GenDiag Application
- ◆ Guideline to GN412x Hardware Initialization

15. GN412x FlexDMA Sequencer Design Guide

Document ID: 52179

Formerly called: Gennum FlexDMA Sequencer User Manual

This describes the operation of the VDMA Sequencer FPGA IP.

- ◆ VDMA Sequencer
- ◆ VDMA Architecture

Other Files

16. GN412x Reliability Report Rev .x

Electronic file

17. IBIS Model

This is the IBIS file for the GN412x device family.

18. Readme for RDK

Text file

This provides the changes made to the RDK since the last official release.

19. GS4911B Data Sheet

Document ID: 36655

This is the GS4911B Data Sheet, which is part of the RDK board design.

Revision History

Version	ECR	Date	Changes and / or Modifications
0	151883	June 2009	New document.

DOCUMENT IDENTIFICATION INFORMATION NOTE

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