

## INTRODUCTION

The GNode3 is the next generation in Adept System's venerable line of standards based LON and IP custom application nodes. The GNode3 brings an innovative modular design for optimal flexibility at a cost effective price. The GNode3 leverages the same base hardware as the GRouter3 but adds additional I/O options.

The GNode3 has a wide range input power supply that accepts 18-72VDC and 24-48VAC RMS. The power connector uses a 2 pin 3.5 mm Euro connector.

The GNode3 has an external connector for 8 Digital I/O signals. Also included is a real time clock with up to , and integrated FT-10 termination. The integrated FT-10 termination is jumper selectable for disabled, bus, or free topology.

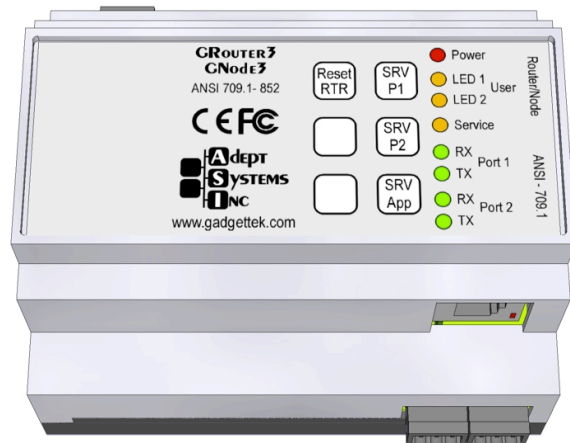
An optional RS-232 serial port for I/O or a console is available. This port may also be used for an optional internal modem. The modem is available in speeds from 1200 bps to 56 kbps.

The GNode3 supports up to two internal 709.1 network ports and one optional external transceiver port. The external interface supports one single ended mode transceiver or one special purpose mode transceiver, such as, power-line. Two active ports are allowed at a time and can be selected from any combination of the two internal ports, the external transceiver interface, or the serial/modem port. The internal port transceivers can be either FT-10 or RS-485 or one of each.

The packaging comes with a built in DIN rail clip and popular "top hat" plastic enclosure.

## GNode3

Modular scalable platform for custom embedded LON® and IP application development. Binary libraries support open interoperable ANSI 709.1 and 852 protocols. Flexible I/O, LON, and IP hardware configurations.



## Features

- \* ANSI 709.1 & 852 stack libraries and API
- \* Net+OS Real Time OS, GNU Tool Chain
- \* DIGI ME or DIGI WIME module based device allows easy migration of IP only custom applications to custom hardware
- \* 55 MHz ARM 7, 8 Mb Ram 2 Mb Flash
- \* Real time clock
- \* Up to two 709 ports: FT-10 and/or RS-485 and/or optional external 709 XCVR interface supports one single ended or one special purpose mode XCVR
- \* Choice of 10/100 Base-T Ethernet or 801.11b WiFi
- \* Integrated FT-10 termination
- \* 8 Digital I/O Pins
- \* Optional RS-232 or Integrated Modem
- \* Optional Integrated Short Isolator
- \* 18-72 VDC, 24-48VAC RMS input power

Unique to the GRouter3 is the choice of either 10/100 Base-T Ethernet (CAT 5) or 802.11b WiFi wireless internet protocol network interface. For high performance, the GRouter3 uses a 55 MHz ARM 7 processor and is based on either the DIGI Connect ME™ or DIGI Connect WIME™ modules.

The GNode3 will provide enhanced high availability support with an optional integrated short isolator module. This module detects and isolates shorts on an FT-10 bus or ring.

The GNode3 comes in either a -25 to 71° C or -40 to 85° C temperature rating.

## **INTEROPERABILITY**

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Custom application support for LON applications is provided through an ANSI C API and associated binary libraries. The libraries include both 709.1 and 852 (LON over IP) stacks. The convenient API enables cost effective development of custom applications. The 709.1 and 852 stacks are compliant with existing network management and configuration software tools and allow for seamless integration of the custom node into existing LonWorks© control networks and interoperability with existing management tools, nodes, gateways, and routers.

\*Net+OS includes support for all the important IP and Web based protocols, such as, TCP/IP, HTTP, SMTP, POP3, Telnet, DNS, DHCP, BootP, RARP, ICMP, FTP, SNTP, and SNMP. The included embedded web server enables remote configuration of the custom application.

## **709.1 "GADGETSTACK" API**

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The GadgetStack protocol stack is written in "C". The C language API is designed to mimic the Neuron C API to make it easy for developers to port applications. Because the stack is not limited by the size of a Neuron chip's memory map, developers are able to tailor node memory requirements to their needs.

The GadgetStack API provides C prototypes which are intended to maintain backward compatibility with Echelon's Neuron C, and

which represent the Service Interface documented in section 11.3 of the ANSI/EIA 709.1 standard.

The following files are typically included in the GadgetStack distribution: api.h, lontalk.h, and custom.h.

Api.h is the application program interface include file. It contains the ANSI 709.1 address typedefs, 709.1 message structure typedefs, GadgetStack network variable type definitions and the GadgetStack API function prototypes. Lontalk.h contains ANSI 709.1 enumerated constants as well as source and destination address type definitions. Custom.h is the Custom.c include file. It contains the data types and definitions that can be modified to build a custom 709.1 compliant node.

## **OEM VERSIONS**

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Adept Systems will provide OEM versions that can be private labeled. Adept also provides custom application development and custom board configurations

## **ORDERING PRICING AVAILABILITY**

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The GNode3 Developer Kit is required to do custom application development on the GNode3. The Developer Kit includes 709.1 and 852 binaries for Net+OS GNU Tools, API, BSP, and sample applications. There is no runtime royalty for using the binaries on GNode3 platforms. The developers kit also includes the Digi ME GNU Tool Chain.

For up-to-date ordering, pricing, and availability information, please contact our sales staff or check our online catalog. The GNode3 is planned for release in early 2nd quarter 2005.

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