# GROUTER4 ™

# GR4A-EFNPI

## DESCRIPTION

The *GROUTER4* provides industry proven router network management and simple configuration to seamlessly expand and access LONWORKS control networks.

The *GROUTER4* is a compact LON over IP router that supports ANSI 709.1 (LON) and ANSI 852 (IP) communication standards. The LON interface is TP/FT-10 with a removable, pluggable screw-down connector. The IP interface is 10/100 Base-T Ethernet using a standard RJ-45 connector.
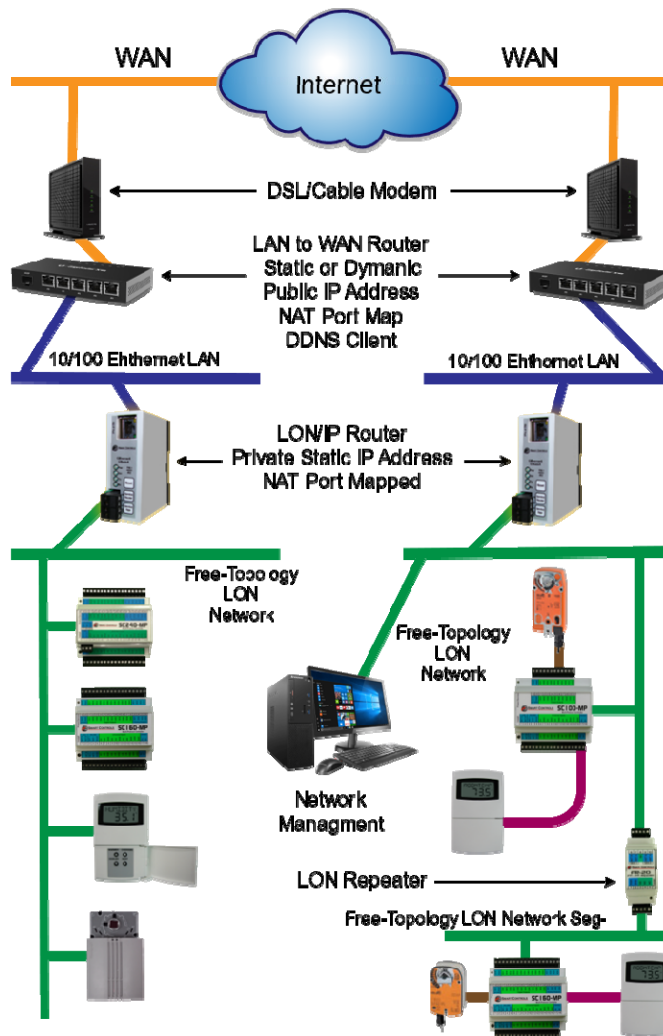
Each GRouter4 can be configured to send and receive from multiple routers using selective forwarding to connect multiple network channels without reducing the number of routers to interconnect the system, therefore connecting multiple networks . IP communication between routers can be implemented in uni-cast or multi-cast mode.
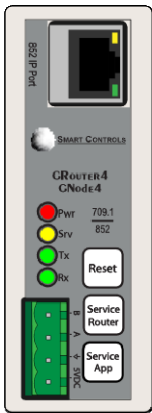
Intuitive configuration and fast set-up of the GRouter4 is achieved with an on-board webpage. Remote capabilities are easily implemented allowing tremendous flexibility to set-up and commission control networks in Normal or Manual mode.

## FEATURES

- **ANSI 852/709.1 LON Over IP**

- **128 devices per channel**

- **Web server for commissioning and troubleshooting**

- **IP Multicast, NAT, & Dynamic DNS support**

- **Flood mode "invisible links" for legacy integration**

- **Interoperates with LonMaker, i.LON Configuration Server, and legacy Coactive Router LL**

- **High availability applications with optional redundant twin mode**

- **Large installation support with 852 to 852 bridging router mode**

- **MD5 authentication**

- **Real time clock**

- **Low power, <1.5 watts**

- **Industrial Temperature Range**

- **Compact size, DIN rail mount**

- **Remote firmware upgrades over IP connection**
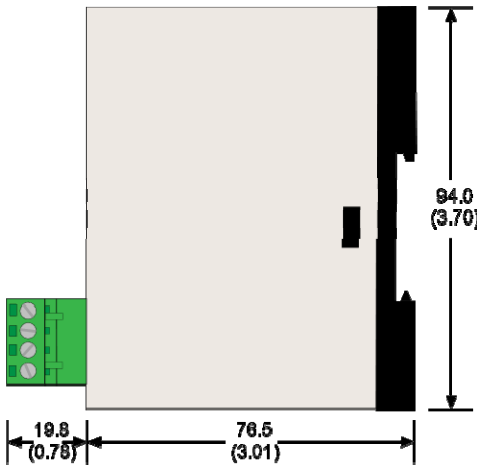
- **ROHS compliant, CE Mark**

- **Pluggable terminal block**

## EXAMPLE NETWORK

# SPECIFICATIONS

### Communication Protocol
IP: ANSI/CTA-852-C, HTTP, DHCP, FTP, SSH
LON: ANSI/CTA-709.1-D LonWorks networking

### Communication Interface
Ethernet Port: IEEE 802.3 10/100 Mbps data rate
10Base-T, 100Base-TX
100 m (max) CAT5 cable length
Twisted-Pair: ANSI/CTA-709.3 R-2015, 78.2 Kbps data rate
Free-Topology TP/FT-10
(link power compatible)
64 nodes per channel
*Bus-Topology Distance(no repeaters):
22AWG/0.65mm (typical)
Double ended Termination
1400 m (max) with 3 m (max) stub
*Free-Topology Distance(no repeaters):
22AWG/0.65mm (typical)
Single Termination
400 m (max) node-to-node
500 m (max) total wire length
*See Smart Controls S-Term-F for termination
and additional wiring information

### Power
Input Voltage: 5.0 ± 0.25 VDC
Typical Consumption: 1.5 VA
Protection: Fused, Reverse Voltage

### LED Indicators
Power: Red
Service: Yellow
LON Tx: Green
LON RX: Green
IP Link: Yellow
IP Traffic: Green

### Push Buttons
Reset: Resets Router Firmware
Service Router: Sends Service Pin Message for Router over IP
and FT channels
Service App: Sends Service Pin Message for embedded
Application over IP and FT channels

### Environmental
Operating Temperature: -40 °C to +85 °C,
-40 °F to 185 °F

### Agencies
ROHS: Lead Free ROHS compliant
EMI: FCC Part 15 class B,
EN 55022 1994 + A1 & A2 (CE Mark)
ICES-003
Immunity: EN 55024: 1998, EN 61000-3-2
EN 61000-3-3 (CE Mark)
Safety: EN 60950-1: 2001 (CE Mark)

### Enclosure
Mounting: 35mm DIN Rail
Dimensions: L 1.34" x W 3.70" x H 3.01"
(34.0 x 94.0 x 76.5 mm)
Material: Housing; Lexan 940,
Base; Noryl VO 1550,
both UL 94-VO rated

### Warranty
Period: 2 Years (Limited)

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35.0
(1.38)

Millimeters
(Inches)

94.0
(3.70)

19.8
(0.78)

76.5
(3.01)

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# CONTACT

## SMART CONTROLS

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# Part Number

GR4A-EFNPI

Operating Temperature — I - Industrial -40° to +85° C
Terminal — P - Pluggable
Internal LON Termination — N - None
LON Network — F - Free Topology
IP Network — E - Ethernet 10/100 Base-T

Document Number: 37- 0334, rev. A