CANopen Router/B

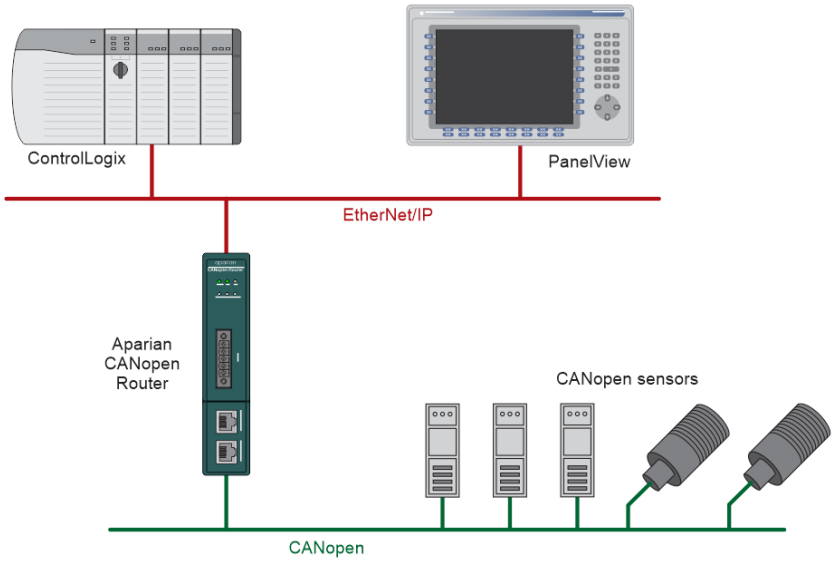
Quick Start Guide

A-CANOR/B

NOTE: Before installing, configuring, operating, or maintaining Aparian products, please review this information and the information located on www.aparian.com for the latest software, documentation, and installation files specific to your Aparian product.

INTRODUCTION

This quick start guide provides an basic overview of the installation, operation, and diagnostics of the Aparian CANopen Router Series B module. The CANopen Router/B provides intelligent data routing between either EtherNet/IP or Modbus TCP/RTU232/RTU485 and the CANopen bus network. This allows the user to integrate CANopen devices into a Rockwell Logix platform (e.g., ControlLogix or CompactLogix) or any Modbus Master or Slave device with minimal effort. The module can be configured to be either a CANopen Master or CANopen Slave allowing the user to not only integrate CANopen devices into a Logix or Modbus system, but to also to use EtherNet/IP or Modbus devices in an existing CANopen network (by using the CANopen Router/B in Slave mode).



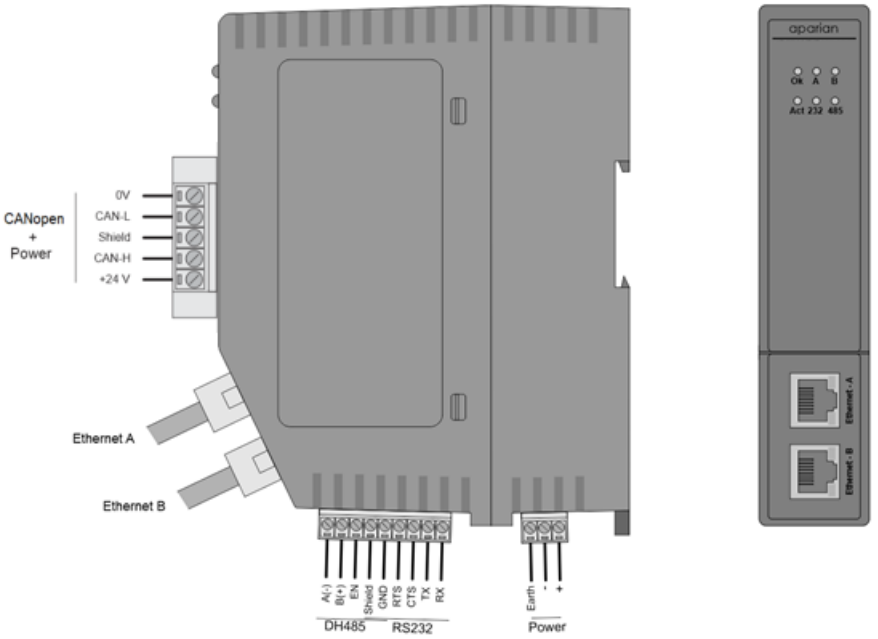
REQUIRED SOFTWARE

The CANopen Router/B requires Aparian Slate software to setup and configure. The software installation can be found at www.aparian.com/software/slate.

MODULE INSTALLATION

The module has two Ethernet ports located at the lower front of the module. There are also two ports at the bottom of the module for RS232/RS485 serial and power. The power port uses a three-way connector which is used for the DC power supply positive and negative (or ground) voltage as well as the earth connection. The at the front of the module there is a 5-way connector which is used for the CANopen network and can also be used for power. Both bottom and front power connectors can be plugged in at the same time.

The nine-way connector is used to connect the RS232 and RS485 conductors for serial communication. The shield terminal can be used for shielded cable in high noise environments.



LED	Description
Ok	The module LED will provide information regarding the system-level operation of the module. If the LED is **red**, then the module is not operating correctly. For example, if the module application firmware has been corrupted or there is a hardware fault the module will have a red Module LED. If the LED is **green (flashing)**, then the module has booted and is running correctly **without** any application configuration loaded. If the LED is **green (solid)**, then the module has booted and is running correctly **with** application configuration loaded.

A / B	The Ethernet LED will light up when an Ethernet link has been detected (by plugging in a connected Ethernet cable). The LED will flash every time traffic is detected. This module has two Ethernet ports A and B. Each LEDs represents each specific port.
Run	The module Run LED will provide information regarding the operational state of the CANopen network. **Solid Green** – CANopen network is operational **Flashing Green** – CANopen network is pre-operational **Blink Green** – CANopen network is stopped
Err	The Err LED will provide information regarding the operational condition of the CANopen devices. **CANopen Master** **Solid Red** – No configuration has been loaded on the CANopen Router. **Flashing Red** – The primary interface (EtherNet/IP or Modbus TCP) to the CANopen Router has been lost. **Blink Red** – There is an issue with at least one CANopen Slave device. **Off** – There are no issues. **CANopen Slave** **Solid Red** – No configuration has been loaded on the CANopen Router. **Flashing Red** – The primary interface (EtherNet/IP or Modbus TCP) to the CANopen Router has been lost. **Blink Red** – There is an issue with at least one PDO in the CANopen Router when operating as a CANopen Slave device. **Off** – There are no issues.
Act	The activity LED is used for the external interface update. Every time there is a successful packet received from the external interface (e.g. EtherNet/IP or Modbus) the LED will flash green. The LED will flash red if there was an error with the received external interface packet (e.g., Checksum error).

CANOPEN TERMINATION

All CANopen networks need to be terminated at the extremities (start and end point) of the communication conductor. The termination for the CANopen network can be enabled/disabled via the module configuration. Enabling the termination will connect an internal 120 Ohm resistor across the positive (+) and negative (-) conductors of the CANopen network.

ELECTRICAL AND ENVIRONMENTAL

Specification	Rating
Power requirements	Input: 10 – 32V DC,
Power consumption	2.2 W (Max.) Current: 180 mA @ 10 V Current: 85 mA @ 24 V
Temperature	-20 – 70 °C

STUDIO 5000 CONFIGURATION

The module must be added to the Logix IO tree using a EDS AOP (Logix v21+).

NORTH AMERICAN HAZARDOUS LOCATION APPROVAL

The following information applies when operating the product in hazardous locations:

SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUPS A, B, C AND D HAZARDOUS LOCATIONS, OR NONHAZARDOUS LOCATIONS ONLY.
-20°C to +70°C, T5A
Class 1, Div 2 Gps A, B, C, D

THIS EQUIPMENT IS OPEN-TYPE DEVICE AND IS MEANT TO BE INSTALLED IN AN ENCLOSURE SUITABLE FOR THE ENVIRONMENT SUCH THAT THE EQUIPMENT IS ONLY ACCESSIBLE WITH THE USE OF A TOOL.

WARNING - EXPLOSION HAZARD - DO NOT DISCONNECT EQUIPMENT WHILE THE CIRCUIT IS LIVE OR UNLESS THE AREA IS KNOW TO BE FREE OF IGNITABLE CONCENTRATIONS.
WARNING - EXPLOSION HAZARD - SUBSTITUTION OF ANY COMPONENT MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2.

For professional users in the European Union

If you wish to discard electrical and electronic equipment (EEE), please contact your dealer or supplier for further information.

WARNING – Cancer and reproductive harm – www.p65warnings.ca.gov

ADDITIONAL INFORMATION

The following resources contain additional information that can assist the user with the module installation and operation.

Resource	Link
Slate Installation	www.aparian.com/software/slate
CANopen Router/B User Manual CANopen Router/B Datasheet Example Code & UDTs	http://www.aparian.com/products/canopenrouterb
Ethernet wiring standard	www.cisco.com/c/en/us/td/docs/video/cds/cde/cde205_220_420/installation/guide/cde205_220_420_hig/Connectors.html
CANopen Standards	https://www.can-cia.org/canopen/
Slate Installation	www.aparian.com/software/slate

SUPPORT

Technical support will be provided via the Web (in the form of user manuals, FAQ, datasheets etc.) to assist with installation, operation, and diagnostics.
For additional support the user can use either of the following:

Contact Us web link	https://www.prosoft-technology.com/Services-Support/Customer-Support
Support email	support@prosoft-technology.com