CAN Bus Router/B

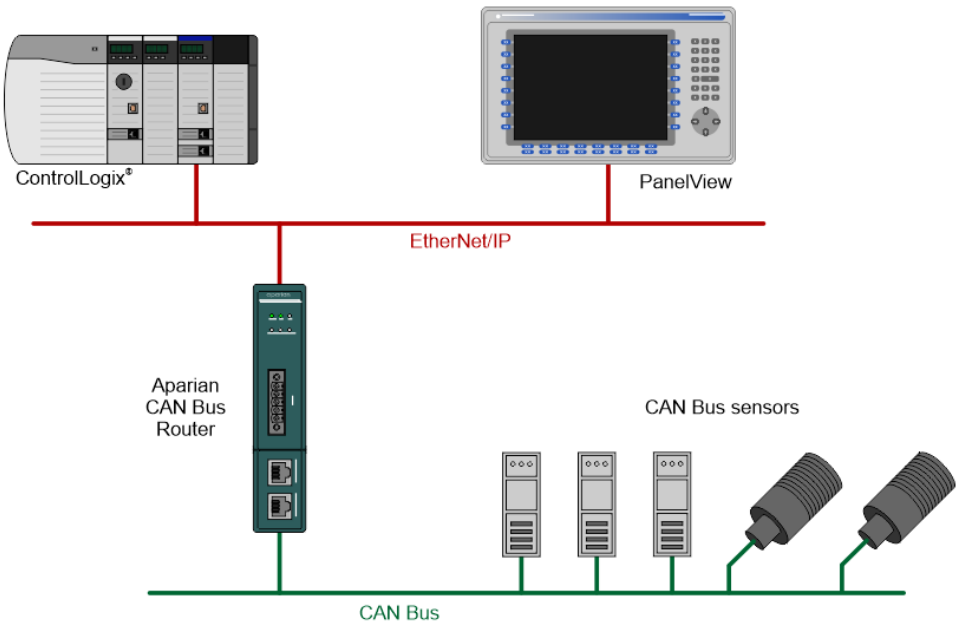
Quick Start Guide

A-CANBR/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 describes the installation, operation, and diagnostics of the Aparian CAN Bus Router module. The CAN Bus Router provides intelligent data routing between either EtherNet/IP or Modbus TCP/RTU232/RTU485 and the CAN Bus 2.0 network. This allows the user to integrate CAN Bus devices into a Rockwell Automation Logix platform (e.g., ControlLogix or CompactLogix) or any Modbus Client or Server device with minimal effort.



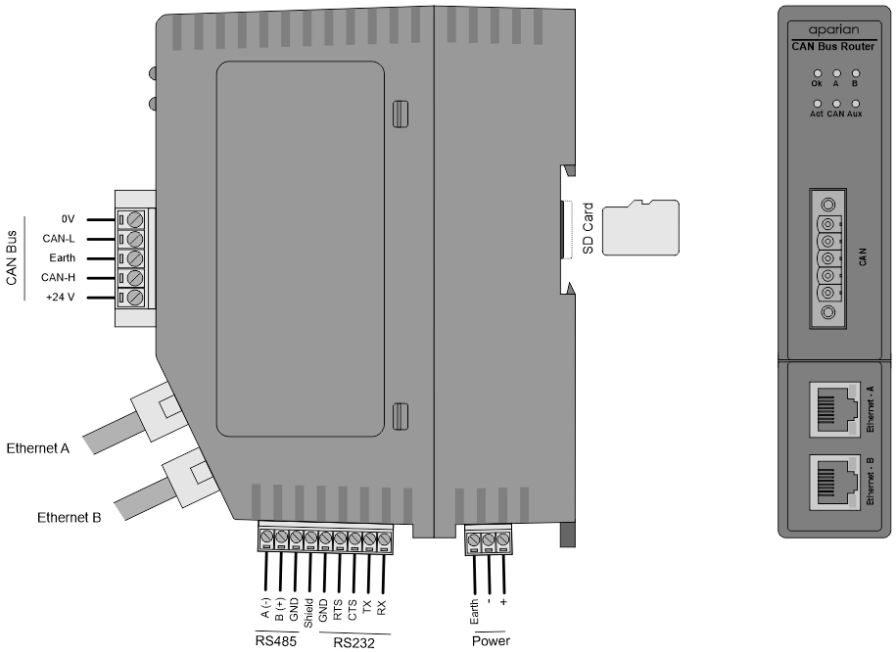
REQUIRED SOFTWARE

The CAN Bus Router 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 CAN Bus 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.
Act	The Act LED indicates if the module is currently in an active state. Flashing Green – The LED flashes green each time a valid CAN packet is received which matches the criteria of an item in the CAN Receive list. Off - The local CAN Bus Router is **not** sending or receiving any valid CAN packets.
CAN	The CAN LED indicates the activity on the CAN Bus network. Flashing Red – A corrupted or incorrect CAN Bus packet was received. Flashing Green – A valid CAN Bus packet was received. Off – No CAN Bus packets are being received or sent.
Aux	The Aux LED will flash each time there was activity on any of the primary interfaces. Flashing Red – A corrupted or incorrect packet was received on one of the Primary Interfaces (EtherNet/IP, Modbus TCP/RTU232/RTU485). Flashing Green – A valid packet was received on one of the Primary Interfaces (EtherNet/IP, Modbus TCP/RTU232/RTU485). Off – No activity.

CAN BUS TERMINATION

All CAN Bus networks need to be terminated at the extremities (start and end point) of the communication conductor. The termination for the CAN Bus 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 CAN Bus network.

ELECTRICAL AND ENVIRONMENTAL

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

STUDIO 5000 CONFIGURATION

The module must be added to the Logix IO tree using an 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
CANbus Router/B User Manual CANbus Router/B Datasheet Example Code & UDTs	https://www.aparian.com/products/CANbusRouterb
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
CANbus Standards	
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