

AN707 - Developing an Application Program for CAN to Ethernet Converter (AX140900)

Introduction

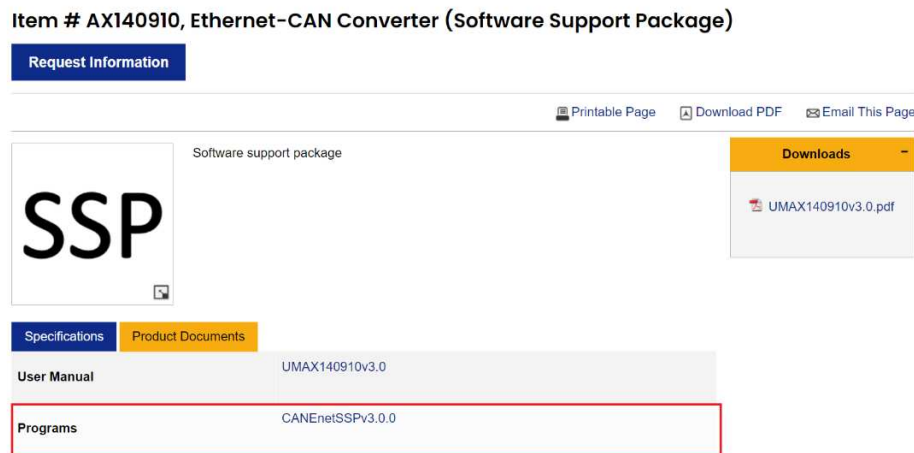
This note provides a basic guideline for developing personalized application programs to interface with the AX140900 CAN/Ethernet Converter.

Program Aides

The SSP

This software is a developmental tool, designed to help users jumpstart development on personalized application programs which interface with the CAN-ENET converter. It is available on the Axiomatic website, at: www.axiomatic.com.

A collection of SSP coding examples (relating to receiving data, sending data, requesting converter status, etc.) may be found on the website, as shown below:



Item # AX140910, Ethernet-CAN Converter (Software Support Package)

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Software support package

SSP

Downloads

UMAX140910v3.0.pdf

Specifications Product Documents

User Manual	UMAX140910v3.0
Programs	CANenetSSPv3.0.0

The Ethernet to CAN Converter Communication Protocol

This protocol provides exact information on how CAN data is encoded in ENET frames.

The CAN Assistant - Scope

The 'CAN Assistant – Scope' software is a convenient program for displaying CAN data on a laptop or PC. It also provides an excellent starting point for testing.

- When using this software, if the CAN-ENET converter is selected as the interface device, the Scope window will display the CAN data as it is being sent on the ENET frames. The data is like a typical CAN ‘sniffing’ or ‘scoping’ window.
- Just the CAN ID + bytes 1 – 8 are included.
- The data may be logged to a text file.

The ‘CAN Assistant – Scope’ is also available for download on the Axiomatic website, at: <http://www.axiomatic.com>. To access the ‘CAN Assistant – Scope’ downloads from the website, go to the “EA & Other Configuration Tools” page, under the “Support” tab. To obtain the password for the “EA & Other Configuration Tools” page, contact Axiomatic at sales@axiomatic.com.

Electronic Assistant Service Tool	Type	Downloads
Software License Agreement	Document	License Agreement Axiomatic
Using the EA with Windows 7, 8, 10	Application Note	EA and Windows 7, 8 & 10
Electronic Assistant	Program	ElectronicAssistantSetup_V5.16.136.0
USB-CAN Converter AX070502 or AX070501	User Manual (for use with AX070502)	UMAX07050x
USB-CAN Drivers	Drivers	USBCANDrivers
USB-CAN Firmware Updater	Program	USB- CAN Firmware Updater
USB-CAN Converter AX070505	User Manual (for use with AX070505 only)	UMAX070505
CAN Assistant – Scope	User Manual	UMAX070501SCO
CAN Assistant – Scope	Program	CAN Assistant Scope Setup_V4.0.0
CAN Assistant - Visual	User Manual	UMAX070501VIS
CAN Assistant - Visual	Program	CAN Assistant Visual Setup_V4.0.0
CAN Assistant – SDK (Software Development Kit)	User Manual	UMAX070501SDK
CAN Assistant – SDK (Software Development Kit)	Program	USB CAN SDK V2.0.0

Extender Setup

Two CAN-ENET Converters may be used for an ‘extender’ type of setup; in this case, the data on each side will be an independent CAN network, and the modules will be connected via Ethernet. A description of how this setup works may be found below:

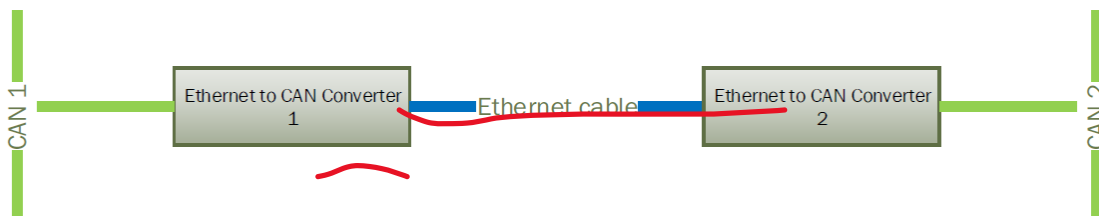


Figure 22. Simple Local Connection

Converter Configuration

After the physical connection is established, the converters should be configured to exchange messages between one another. Since the converters support a client/server communication model, one of the converters should be a server and the other one should be a client.

Version	Date	Authors	Comments
1.00	May 6, 2021	Greg LaRonde/Kiril Mojsov	Initial Release
1.01	July 17, 2023	Kiril Mojsov	Legacy Updates, Marketing Review, and Photo Updates