Energus Power Solutions Ltd.

Datasheet

UART2CAN v1.0 converter

Revision A, 2018-07-30

INTRODUCTION

UART2CAN is a very compact isolated *UART* to *CAN* bus converter, designed to be used with *Energus Power Solutions Tiny BMS* (*Battery Management System*) device. With standard firmware, it provides a robust isolated interface between *Tiny BMS* and various user side *CAN* bus devices. *Energus PS* open *CAN* bus protocol to communicate with *Tiny BMS* device is provided in the *Tiny BMS communication protocols* documentation.

FLEXIBILITY

User-upgradeable firmware allows quick updates, bug fixes, new features and other improvements, such as client-specific functionality, which allows to connect *UART2CAN* converter to any other user side embedded system and gives an instant *CAN* bus connectivity.

FEATURES

- Supports *30 A* low power and *150 A* high power *Tiny BMS* versions
- Bootloader for firmware upgrades
- Ultralow power sleep mode when no data received on *CAN* bus or *UART* interface and instant wakeup when data received
- Two *LED* indicators for *CAN* bus and *UART* interface activity monitoring
- *CAN* bus bit rates up to *1Mbit/s*
- Provides *CAN* bus galvanic isolation up to *2500* V_{RMS}
- Powered from *UART* side, no power needed on *CAN* side
- Compact plastic case *60x35x15 mm*

APPLICATIONS

- Battery systems with integrated *Tiny BMS* device for personal transportation, industrial equipment, robotics, stationary solar and wind power storage.

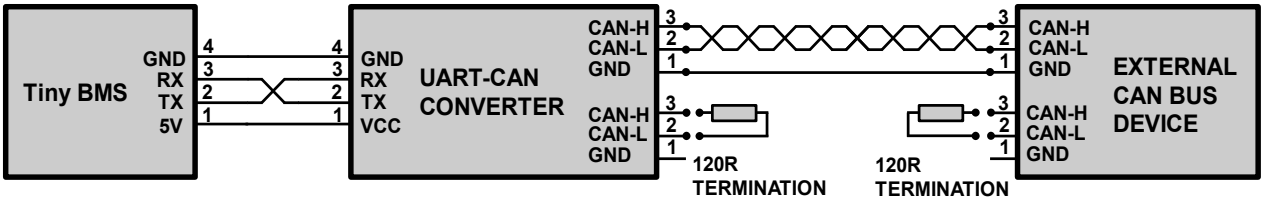

Figure 1: A typical CAN-UART converter connection diagram

ELECTRICAL CHARACTERISTICS

Table 1: Product characteristics (all parameters rated at 25 °C if not specified otherwise)

Parameter	Comment	Min.	Typ.	Max.	Unit
Supply voltage	Operation range	*3.3*	*5*	*5.5*	*V*
Supply current	Active mode	-	*30*	*50*	*mA*
	Sleep mode	-	*8*	*10*	*µA*
UART characteristics	Baud rate	-	*115200*	-	*bps*
	Data bits	-	*8*	-	*b*
	Stop bits	-	*1*	-	*b*
	Parity	-	-	-	-
	Flow control	-	-	-	-
CAN bit rate		-	*500 k*	*1 M*	*bps*
Isolation		-	*1000*	*2500*	V_{RMS}
Dimensions		-	*60x35x15*	-	*mm*

Document revision history

Revision	Date	Description
A	2018-07-30	Initial release.