

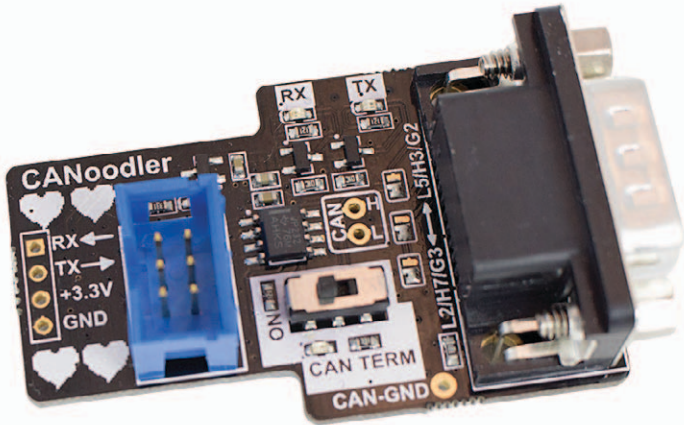


NewAE Technology Inc.  
newae.com

ChipWhisperer® Embedded Security Analysis Tools  
Tools

# CANoodler

Product Datasheet



CANoodler is a simple CAN (not CAN-FD) interface, which provides logic-level 3.3V output. It's designed to be used with microcontrollers that have CAN blocks inside them, and in particular uses a pinout present on some ChipWhisperer CW308 (UFO) Target boards.

It is powered from 3.3V only (does not require a 5V supply) making it easier to interface with existing 3.3V systems compared to many CAN interfaces.

The design is fully open source and can be modified for your own use (or integrated into your product).

## Product Highlights

Switchable CAN termination resistor with LED feedback on current state.

LEDs for TX/RX (uses MOSFET to drive LEDs so doesn't slow your I/O pins down).

SN65HVD232DR Can Transceiver IC

Reverse-polarity protection on 3.3V power supply, device requires only a single 3.3V supply.

Solder jumpers select one of two possible DB9 CAN pinouts.

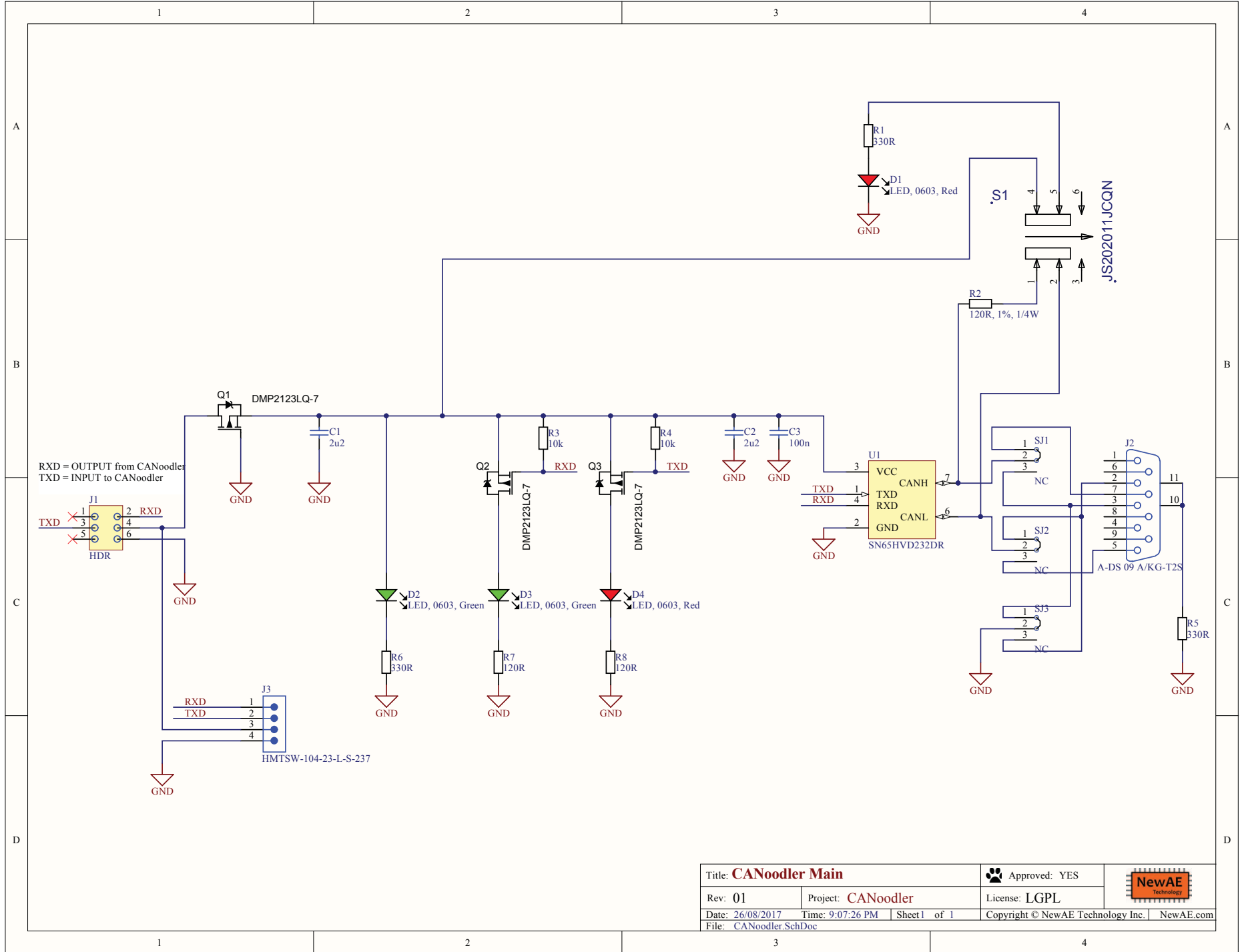
## Ordering Summary

NAE-CANOODLER CANoodler assembled unit (does not come with cables).

## Product Links

Full Documentation <https://github.com/newaetech/CANoodler>

# Schematic



Title: <b>CANnoodler Main</b>		Approved: YES	
Rev: 01	Project: CANnoodler	License: LGPL	
Date: 26/08/2017	Time: 9:07:26 PM	Sheet 1 of 1	Copyright © NewAE Technology Inc. NewAE.com
File: CANnoodler.SchDoc			

## Using CANoodler

CANoodler is simple to use. Simply:

- Connect the RX pin to your microcontroller CAN-RX pin (this is an OUTPUT from the CANoodler).
- Connect the TX pin to your microcontroller CAN-TX pin (this is an INPUT to the CANoodler).
- Provide 3.3V power to the board.
- Select if you'd like the termination resistor ON or OFF with the switch.
- Write an entire CAN stack for your microcontroller from scratch, along with a test framework to ensure you meet applicable relevant standards.

## Solder Jumpers

The solder jumpers specify which pinout you'd like on the male DB9 connector.

The default pinout is selected by shorting the LOWER and MIDDLE solder jumpers. It is used by many boards and the Peak CAN USB interface:

- CAN-Low = Pin 2
- CAN-High = Pin 7
- CAN-GND = Pin 3

The "option" pinout is set by moving each of the three solder jumpers to short the UPPER and MIDDLE pads. This pinout is used by cheap ODB-II to DB9 connectors:

- CAN-Low = Pin 5
- CAN-High = Pin 3
- CAN-GND = Pin 2

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