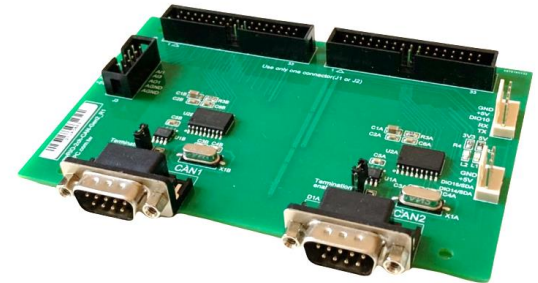


myRIO-Embedded-CAN

WPC Systems Ltd.

Justin Wu

2021-12-11



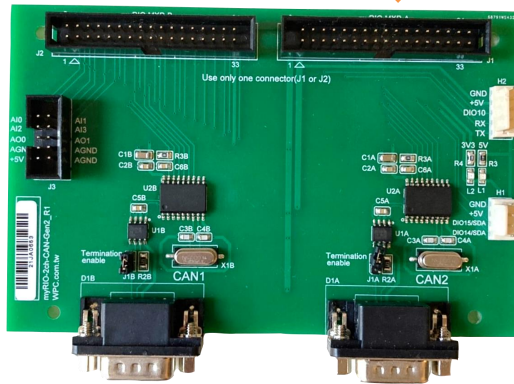
System diagram



34pin ribbon cable

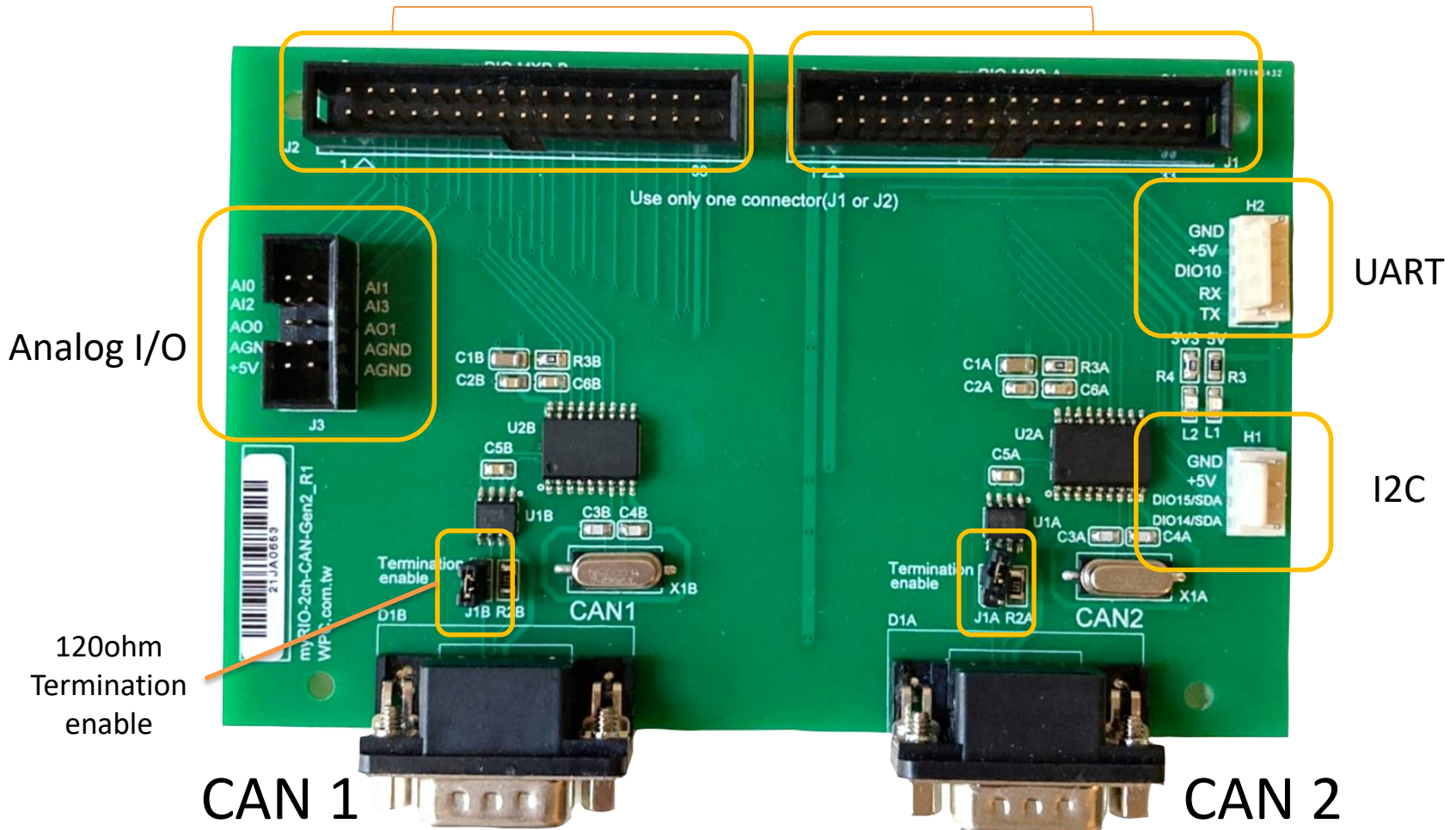


34pin ribbon cable

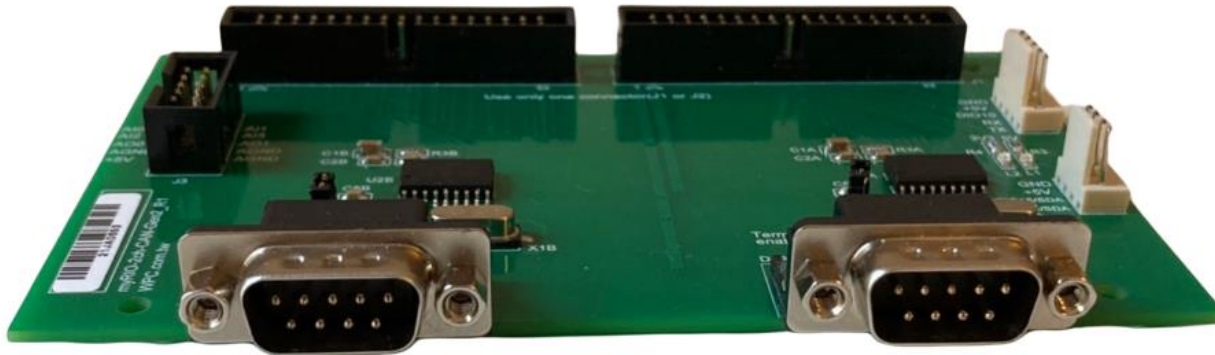


Appearance

Pick one of two

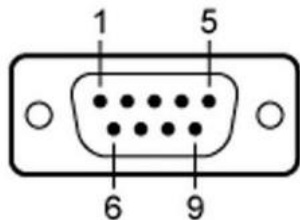


DB9 connector pinout



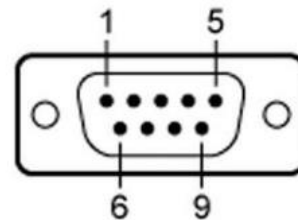
CAN 1

CAN 2



Male 9 Pin Connector

Pin2: CAN_L
Pin7: CAN_H

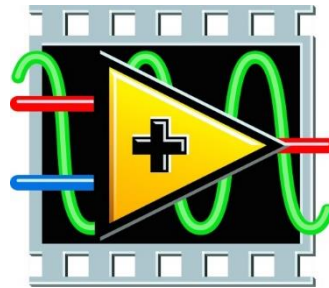


Male 9 Pin Connector

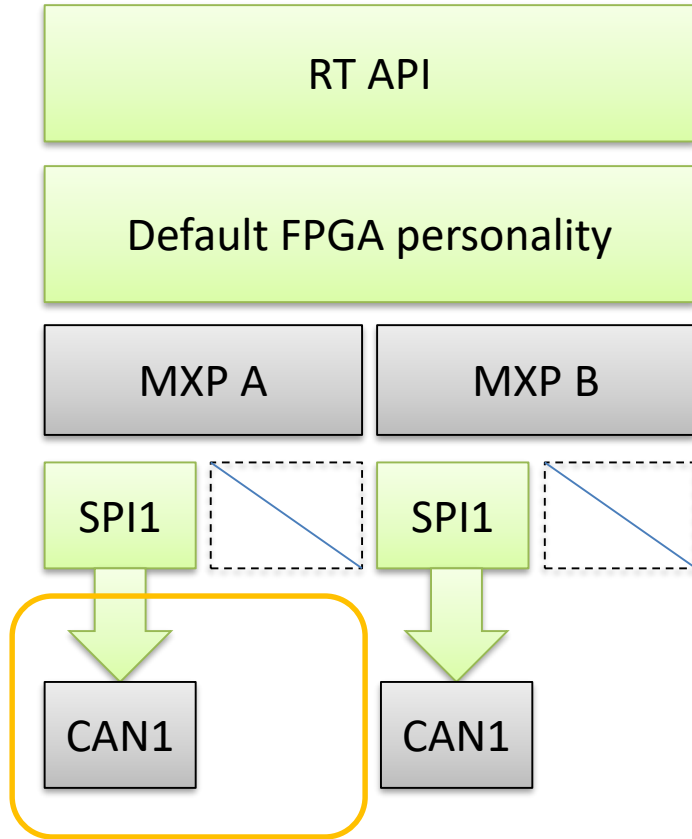
Same pinout with
sbRIO CAN connector

NC	1	2	CAN1_L
V- (GND)	3	4	NC
SHIELD	5	6	V- (GND)
CAN1_H	7	8	NC
NC	9	10	SHIELD

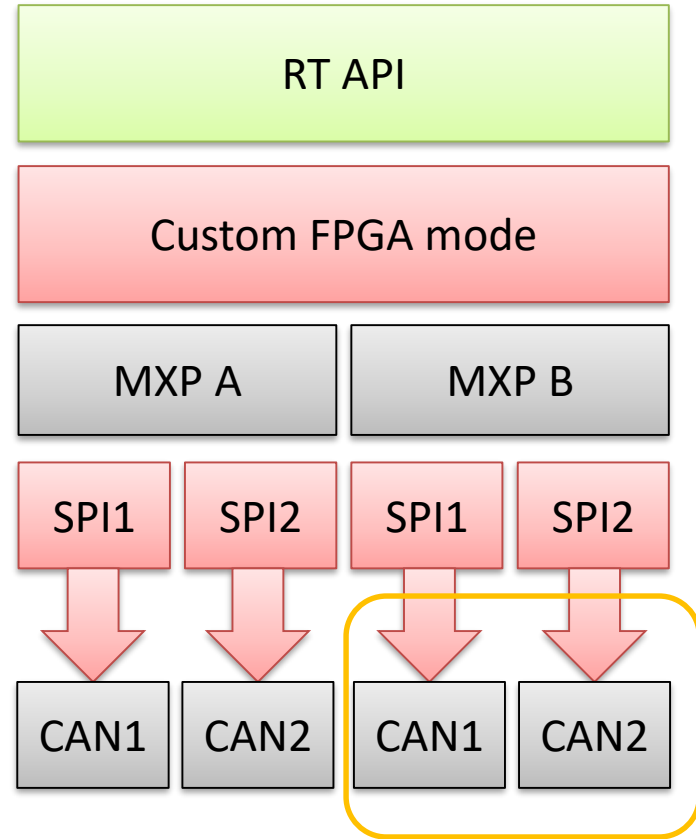
LabVIEW driver API user guide



Driver API topology

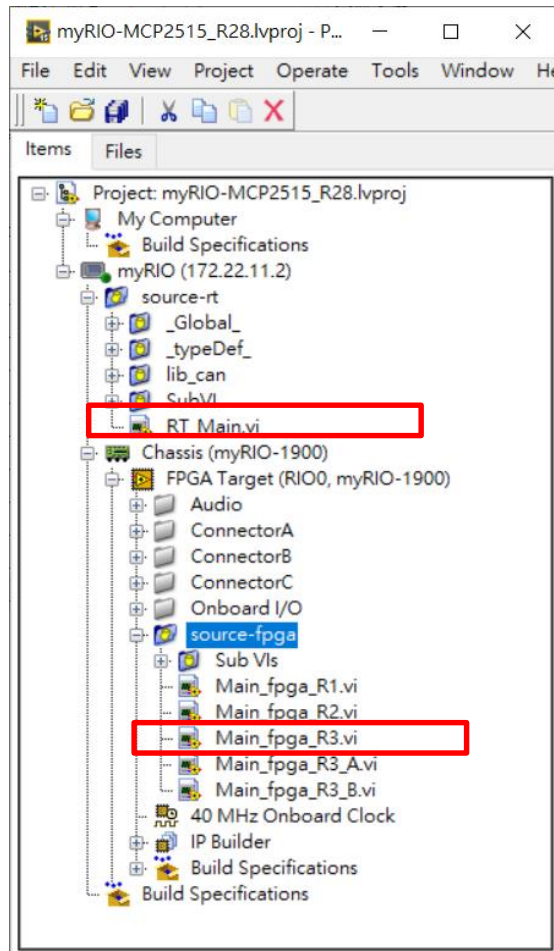


1 WPC myRIO CAN module



1 WPC myRIO CAN module

Driver API in custom FPGA mode



RT example code

FPGA main VI

RT front panel

Transmission Dual RX buffer

The interface is divided into three main sections. The left section, titled 'Transmission', is enclosed in a yellow rounded rectangle and contains three controls: a 'MXP B_Wait(ms)' knob set to 150, an 'MXP B_Send_SID' knob set to 0, and an 'MXP B_Send_Data[]' array of 10 buttons, all set to 0. Below this is a 'ConfigOK?' indicator with a dark green sphere. The middle and right sections, titled 'Dual RX buffer', are also enclosed in a yellow rounded rectangle. Each section has a vertical stack of controls: 'MXP B_Rx0_Data' and 'MXP B_Rx1_Data' knobs set to 222, 'RxBn_ID(U32)' knobs set to 222, 'RxBnLength' knobs set to 8, and 'RxBnData[8]' arrays of 8 buttons. The buttons in the 'MXP B_Rx0_Data' array are set to 6C, 33, 55, 22, 44, 66, 88, and 77. The buttons in the 'MXP B_Rx1_Data' array are set to 6C, 33, 55, 22, 44, 66, 88, and 77. Below each array is an 'RxBn_Pending?' indicator with a green sphere. To the right of these sections is an 'error out' panel with a 'status' indicator (green checkmark), a 'code' knob set to 0, and a 'source' text area.

MXP B_Wait(ms) 150

MXP B_Send_SID 0

MXP B_Send_Data[] 0

ConfigOK?

MXP B_Rx0_Data RxBn_ID(U32) 222

RxBnLength 8

RxBnData[8] 6C 33 55 22 44 66 88 77 0 0

RxBn_Pending?

MXP B_Rx1_Data RxBn_ID(U32) 222

RxBnLength 8

RxBnData[8] 6C 33 55 22 44 66 88 77 0 0

RxBn_Pending?

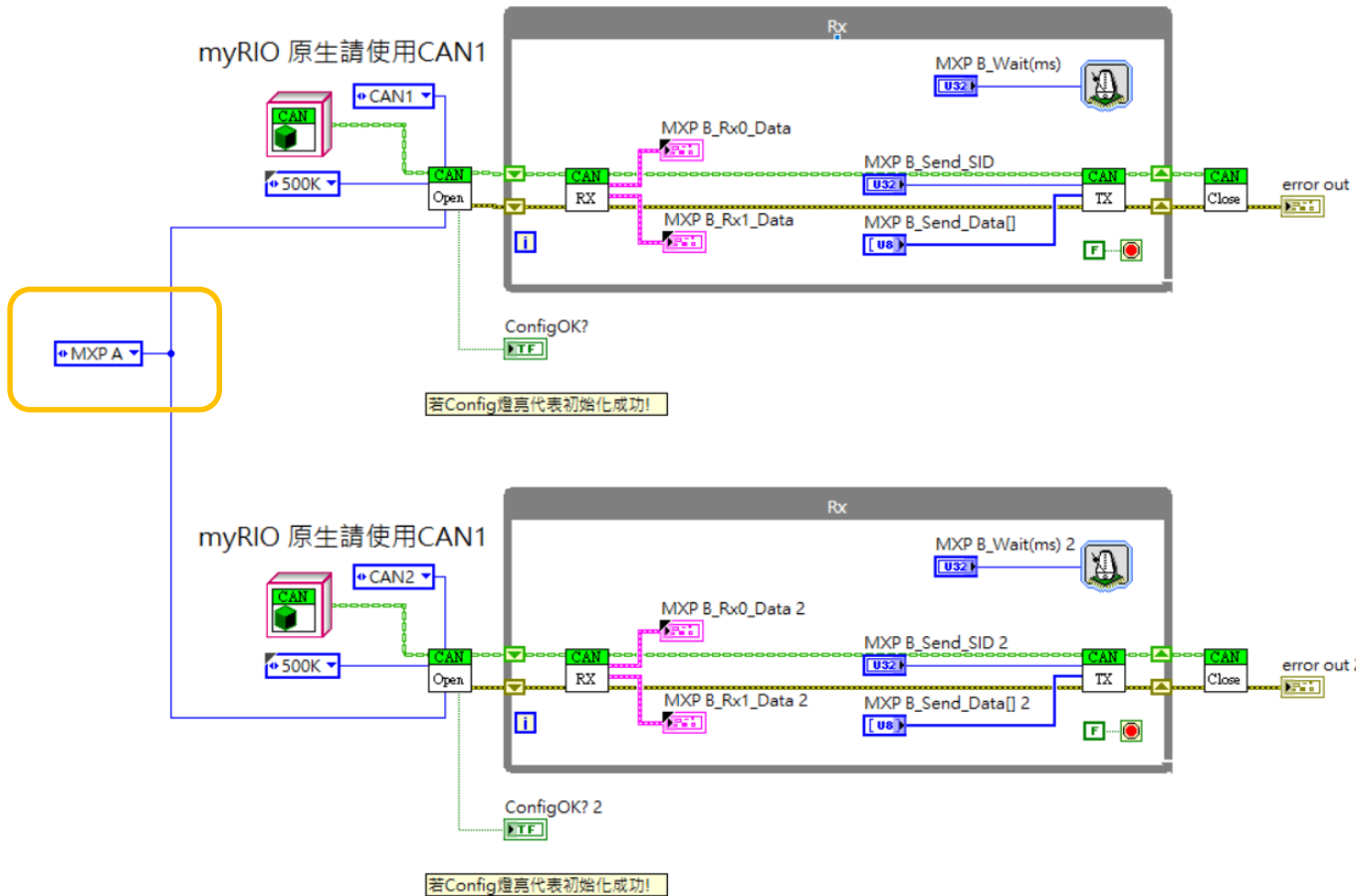
error out

status code 0

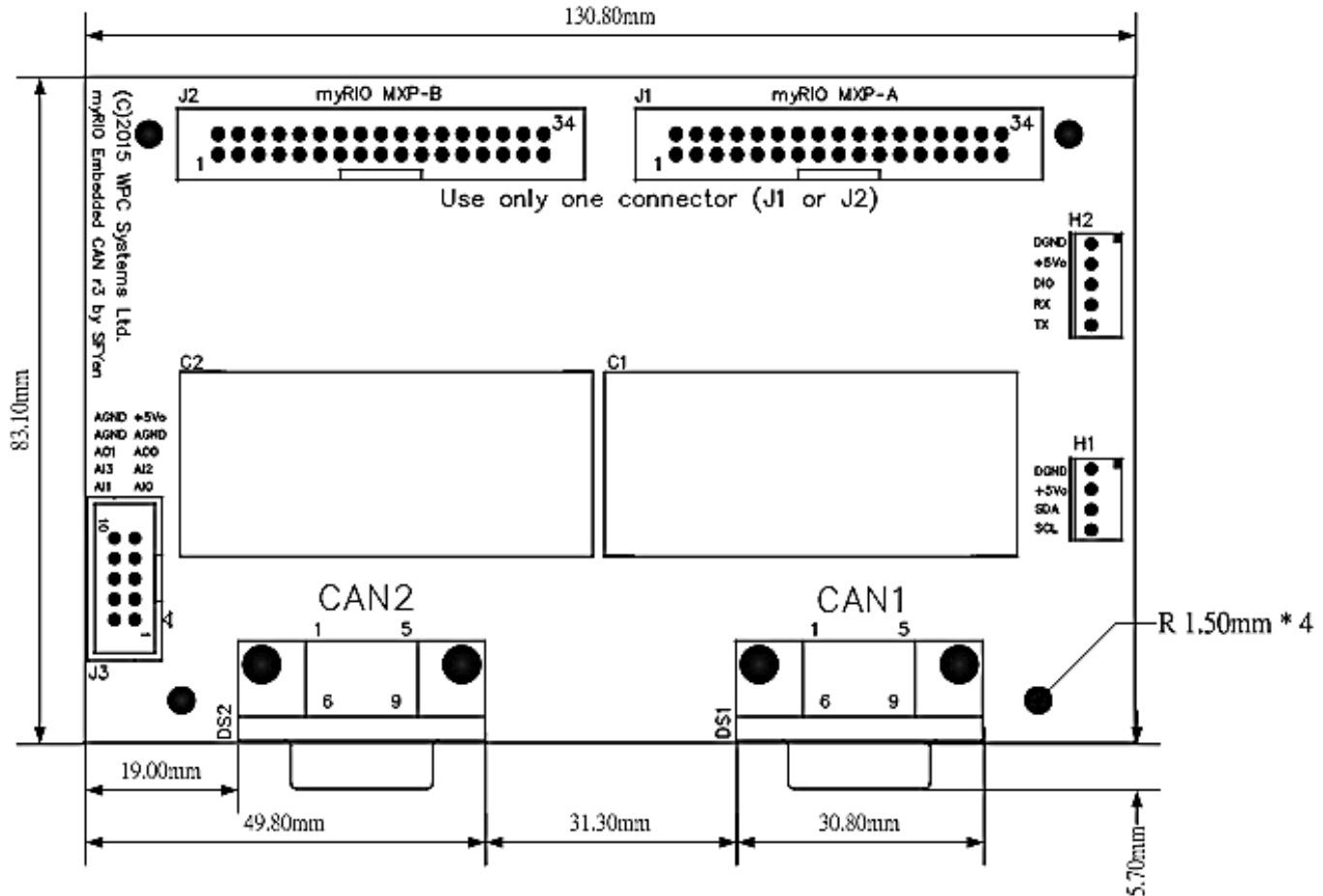
source

RT block diagram

MXP A/B
selection

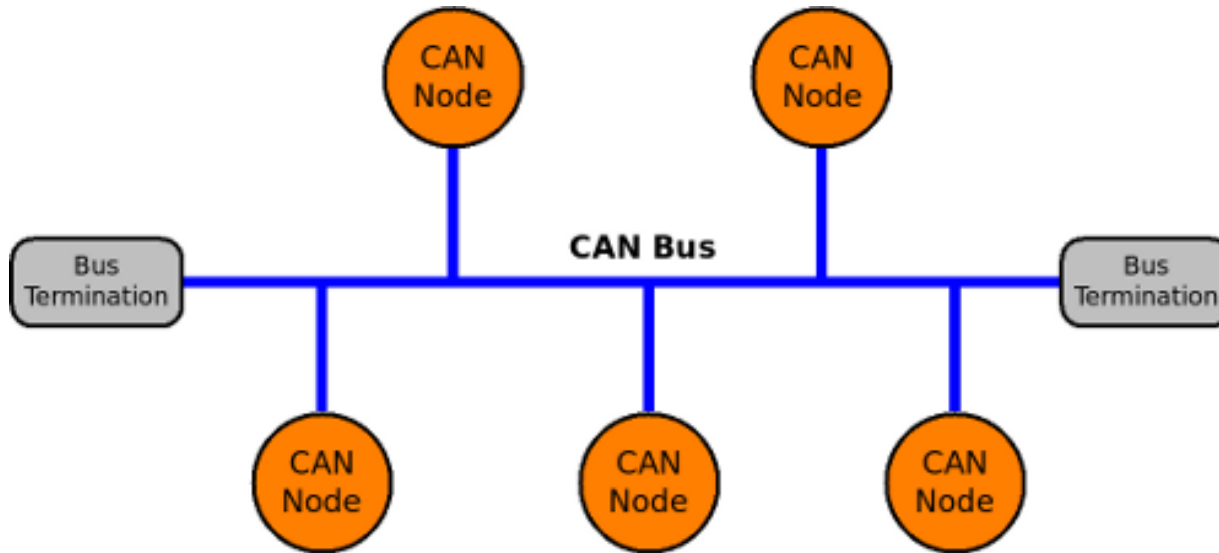


Dimensional drawing

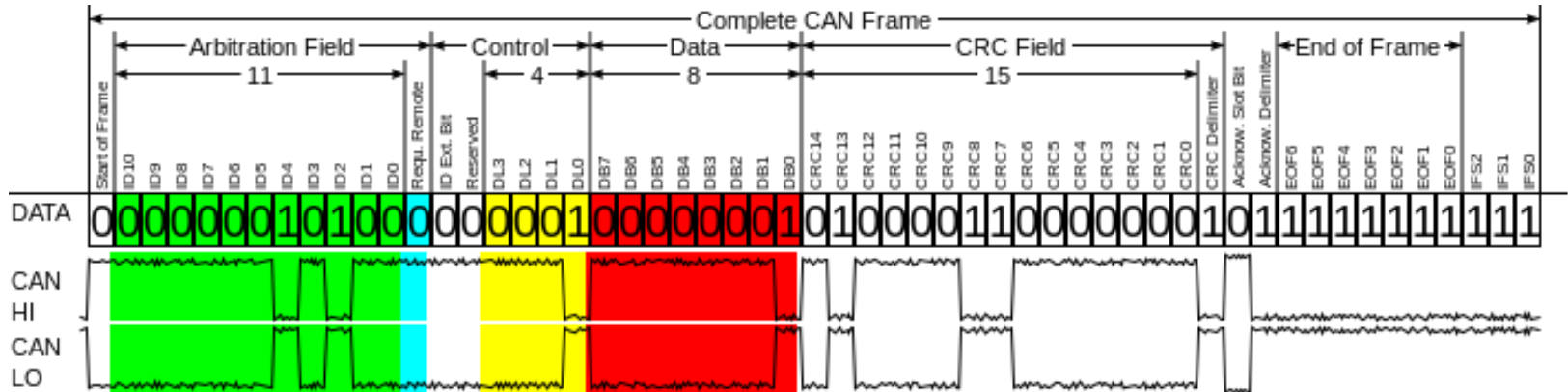


myRIO-Embedded-CAN模組的外觀尺寸、螺絲孔位都與myRIO相同，方便使用者堆疊模組板。

CAN network topology



CAN frame signal



Connection of CAN network

