



KT8 V2 Can Module

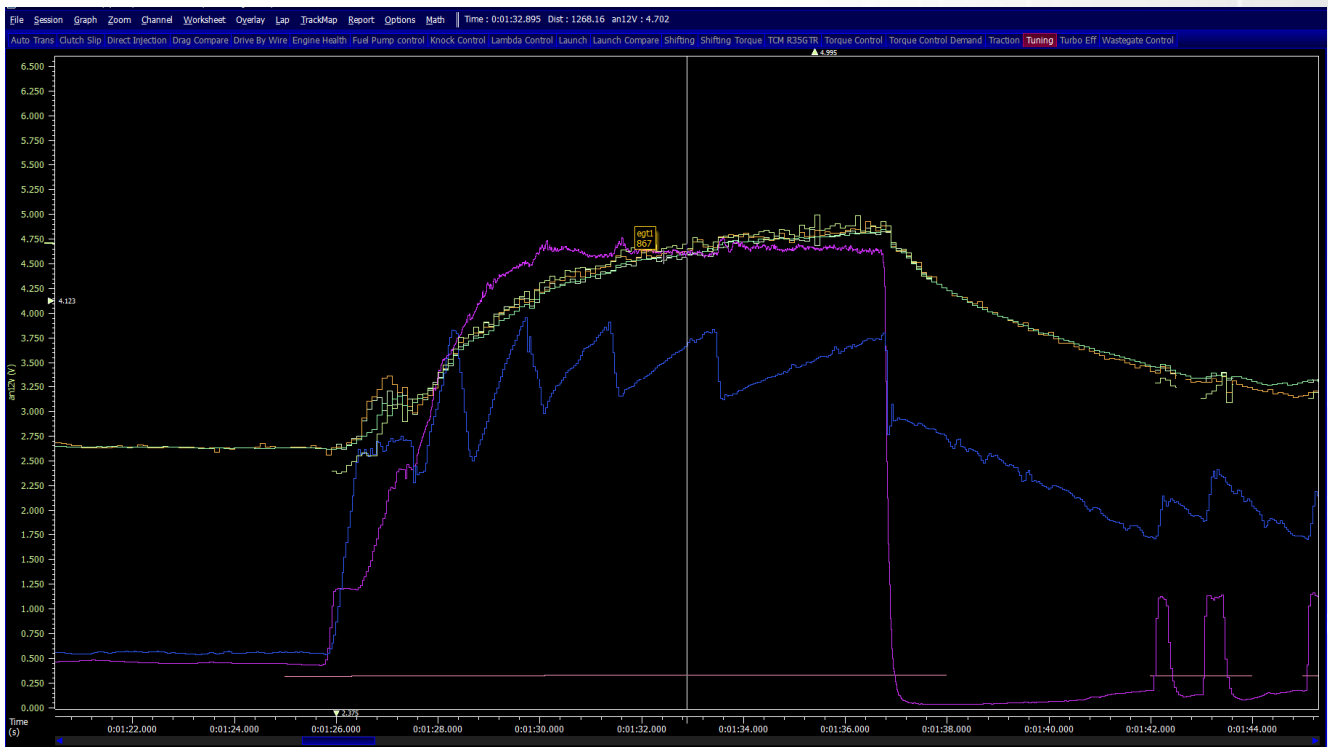


The KT8 V2 Can Module is designed to provide even more data to our engine control units with accurate K Type thermocouple sensor readings over Can-bus on either a 1mb or 500kb bus.

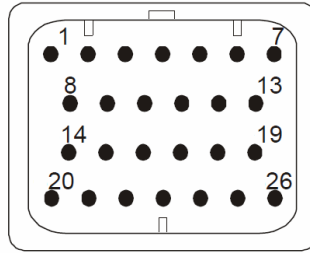
Temperature range from 0-1250c

Packaged in a lightweight CNC billet aluminum case with a 26 Position TE Connector.

Mating Socket Connector - 3-1437290-8



Wiring



1 - Ground	14 - Can0 High (1mb)
2 - KT1+	15 - Can0 Low (1mb)
3 - KT1-	16 - Low Side Output2
4 - KT2+	17 - Can1 High (500kb)
5 - KT2-	18 - Can1 Low (500kb)
6 - Low Side Output 1	19 - Low Side Output 3
7 - 12V	20 - KT6+
8 - KT3+	21 - KT6-
9 - KT3-	22 - KT7+ / AN4
10 - KT4+	23 - KT7- / AN3
11 - KT4-	24 - KT8+ / AN2
12 - KT5+	25 - KT8- / AN1
13 - KT5-	26 - Low Side Output 4

KT8 V2 Low Side Outputs are for low current tasks only, max of 1amp. They are just On/Off Outputs suited for Switching Relays or LED's.

KT7 and KT8 Pins can also be used for Analog inputs if they are not being used for Thermo-coupler sensors. To enable this option solder switches on the board need adjusting.

SB1 - 1/2 = KT8 | 2/3 = AN1
SB2 - 1/2 = KT8 | 2/3 = AN2
SB3 - 1/2 = KT7 | 2/3 = AN3
SB4 - 1/2 = KT7 | 2/3 = AN4

CanBus Connections

S6Plus with PNP Kits connect KT8 Can1 to S6Plus Can1 (C8/C9) - Generic S6+ ECU Speak to Support@Syvecs.com

S7Plus connect KT8 Can0 to S7Plus Can2 (B2/B3) - if X10 Expander is wired to Can2 then speak to Support@Syvecs.com

S8 & S12 connect KT8 Can0 to Either ECU Can1 or Can2

No Termination Resistor is set on the KT8 Module so the KT8 needs to be wired as a Node on the Canbus

Thermo-coupler Wiring

Pin1 = K-Type + (Green Or Yellow)
Pin2 = K-Type - (White Or Red)

CAN Output Description - All in Big Endian Format

Can0 - 1MB Speed (S7 / S8 / S12)

0x0000 = 0c
0x30D0 = 1250c

Transmit - Frame ID 0xF6 - KT1-4

Byte0	Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7
KT1 (Signed Value) Big Endian - DegC - Divide by 10		KT2 (Signed Value) Big Endian - DegC - Divide by 10		KT3 (Signed Value) Big Endian - DegC - Divide by 10		KT4 (Signed Value) Big Endian - DegC - Divide by 10	

Transmit - Frame ID 0xF7 - KT5-8

Byte0	Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7
KT5 (Signed Value) Big Endian - DegC - Divide by 10		KT6 (Signed Value) Big Endian - DegC - Divide by 10		KT7 (Signed Value) Big Endian - DegC - Divide by 10		KT8 (Signed Value) Big Endian - DegC - Divide by 10	

Transmit - Frame ID 0xF8 - AN1-4 (KT7/KT8) not available when this is Setup

Byte0	Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7
AN1 (Signed Value) Big Endian - DegC - Divide by 10		AN2 (Signed Value) Big Endian - DegC - Divide by 10		AN3 (Signed Value) Big Endian - DegC - Divide by 10		AN4 (Signed Value) Big Endian - DegC - Divide by 10	

Receive - Frame ID 0xF9 - Low Side Outputs

Byte0	Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7
	LowSide 1 - 0x00 - Off 0x01 - On		LowSide 2 - 0x00 - Off 0x01 - On		LowSide 3 - 0x00 - Off 0x01 - On		LowSide 4 - 0x00 - Off 0x01 - On

Can1 - 500kb Speed (S6Plus / S7plus Can1)

0x0000 = 0c
0x30D0 = 1250c

Transmit - Frame ID 0xF6 - KT1-4

Byte0	Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7
KT1 (Signed Value) Big Endian - DegC - Divide by 10		KT2 (Signed Value) Big Endian - DegC - Divide by 10		KT3 (Signed Value) Big Endian - DegC - Divide by 10		KT4 (Signed Value) Big Endian - DegC - Divide by 10	

Transmit - Frame ID 0xF7 - KT5-8

Byte0	Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7
KT5 (Signed Value) Big Endian - DegC - Divide by 10		KT6 (Signed Value) Big Endian - DegC - Divide by 10		KT7 (Signed Value) Big Endian - DegC - Divide by 10		KT8 (Signed Value) Big Endian - DegC - Divide by 10	

Transmit - Frame ID 0xF8 - AN1-4 (KT7/KT8) not available when this is Setup

Byte0	Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7
AN1 (Signed Value) Big Endian - DegC - Divide by 10		AN2 (Signed Value) Big Endian - DegC - Divide by 10		AN3 (Signed Value) Big Endian - DegC - Divide by 10		AN4 (Signed Value) Big Endian - DegC - Divide by 10	

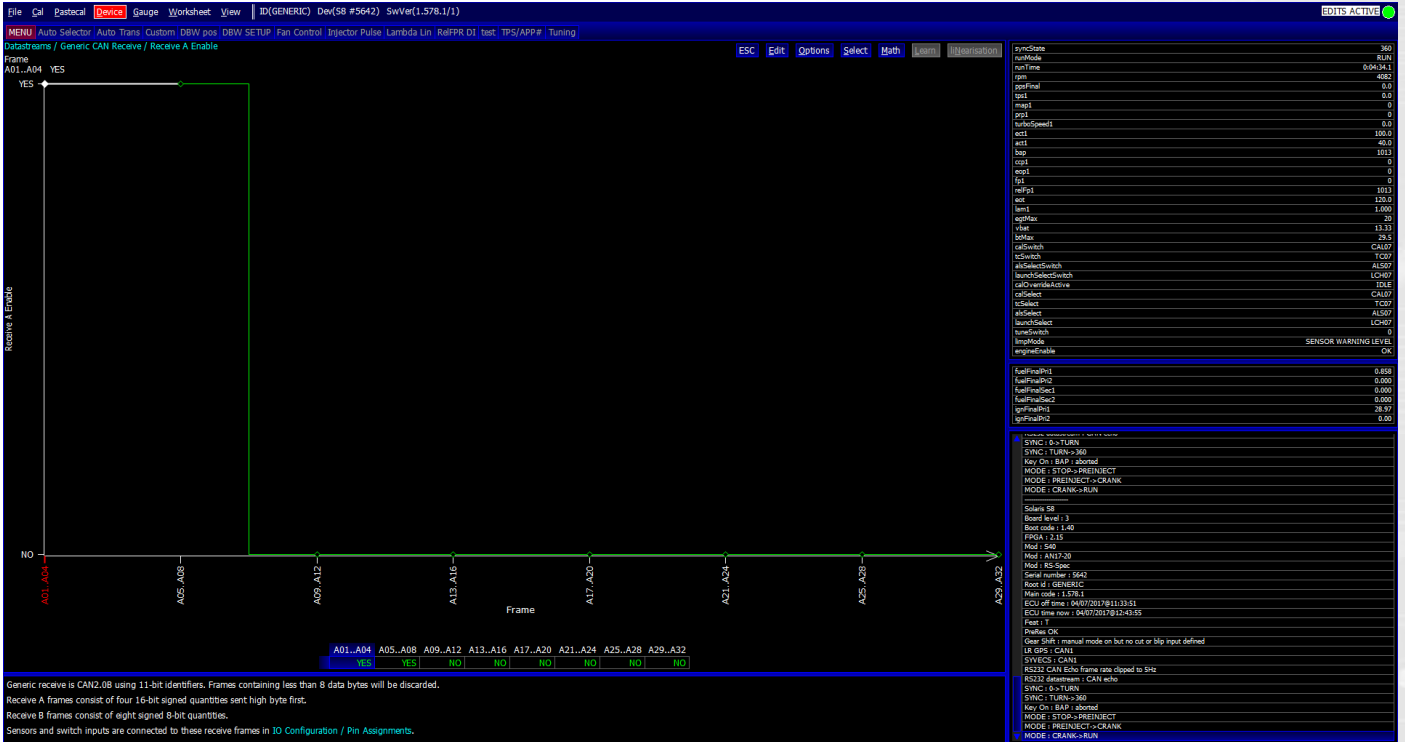
Receive - Frame ID 0xF9 - Low Side Outputs

Byte0	Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7
	LowSide 1 - 0x00 - Off 0x01 - On		LowSide 2 - 0x00 - Off 0x01 - On		LowSide 3 - 0x00 - Off 0x01 - On		LowSide 4 - 0x00 - Off 0x01 - On

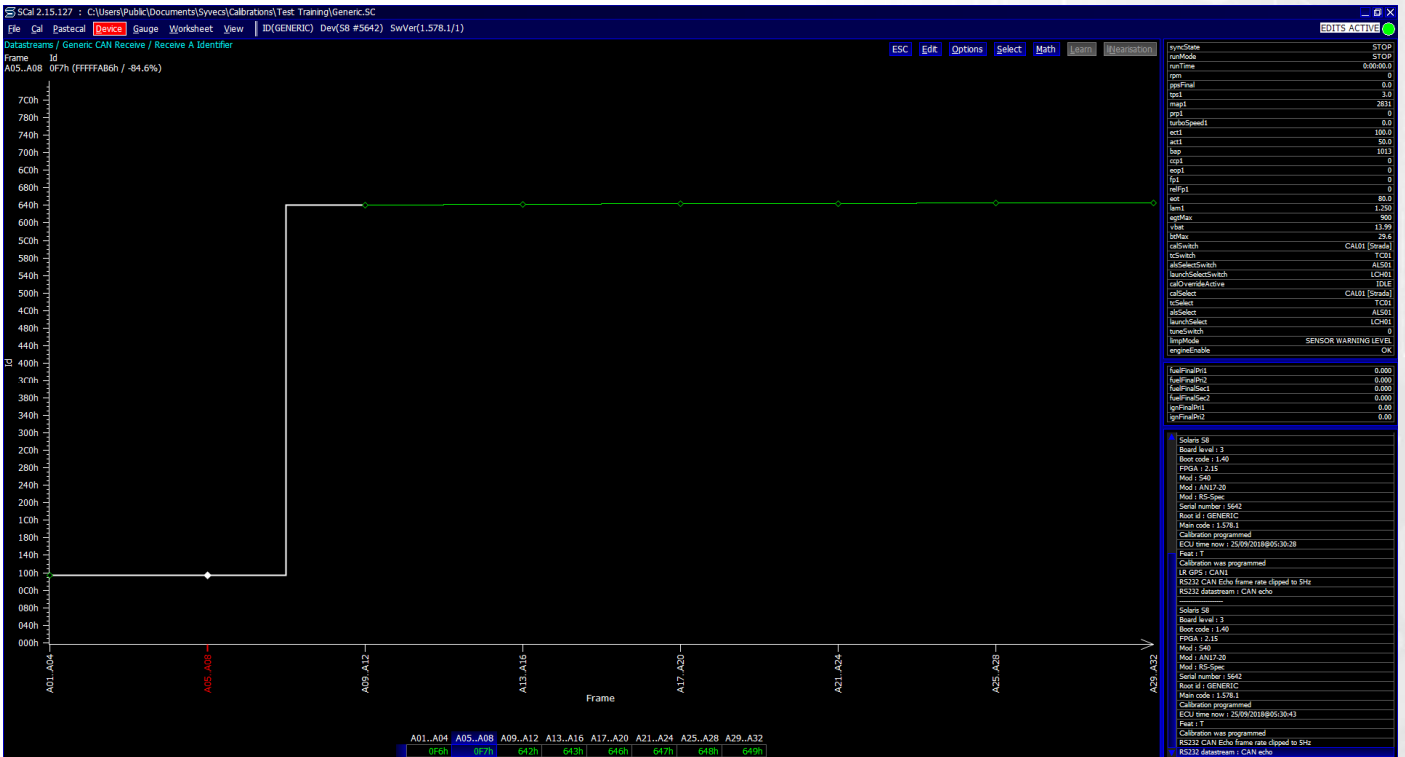
Syvecs Calibration Setup - Receive Signals

S7Plus / S8 / S12

The EGT frames can be picked up on any of the Generic Recieve A assignments, Below its enabled on A01-A08



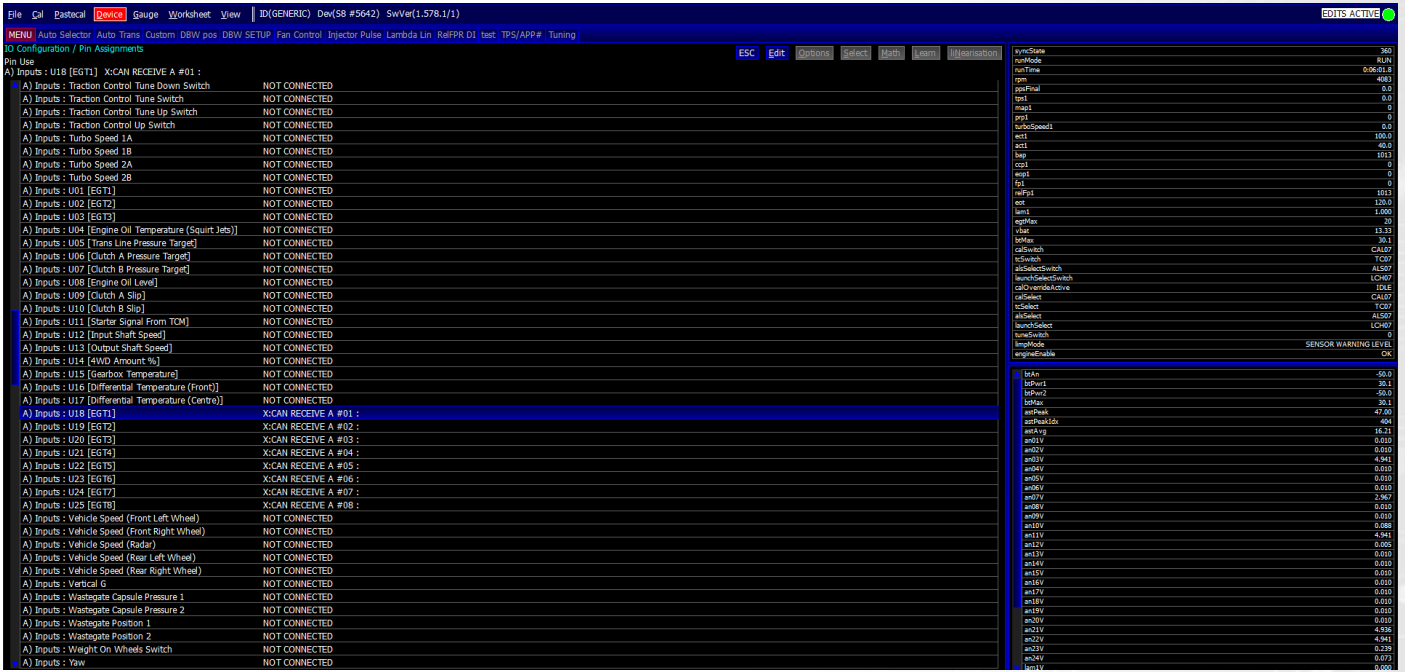
The frames are set for A01-04 as F6h and A05-06 on F7h



8 User Defined sensors are setup for EGT1-EGT8, a help video on this can be found below <https://www.youtube.com/watch?v=IVIdYESOuOQ&t=252s>

A example calibration can also be provided by support@syvecs.com

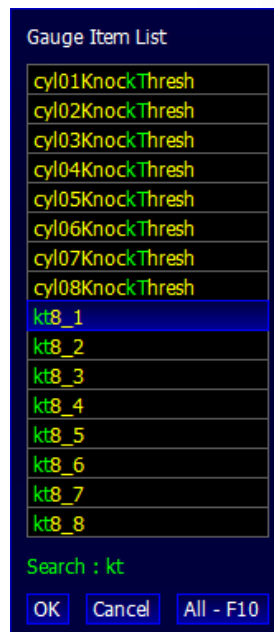
The X:Can Recieve items are then set in the pin assignments to the Inputs



S6-I & S6Plus / S7-I & S7Plus

The KT8 Data is picked up automatically on the S6-I/S6Plus & S7-I after wiring onto the Can Wires on C8 & C9 which is the 500kb Canbus in PNP Kits.

KT1-8 parameters can then be found in Scal with firmware version 1.82+



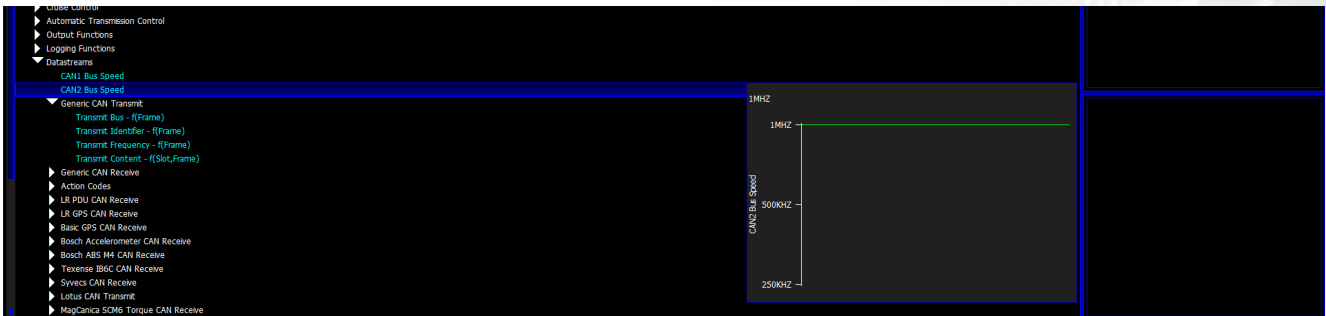
Please email support@syvecs.com for additional help or custom can requests

Syvecs Calibration Setup - Transmit Signals

The 4 x Low Side Outputs are triggered using the ID Frame 0xF9

Use the Generic Transmit Function of Scal to send out Can signals to turn the Outputs on, Values Great than or Equal to 0x01 will Active the Output, so you can send a Duty or 0:1 Signal via custom can content and anything greater than or equal to 1 will cause the output to turn on 100%.

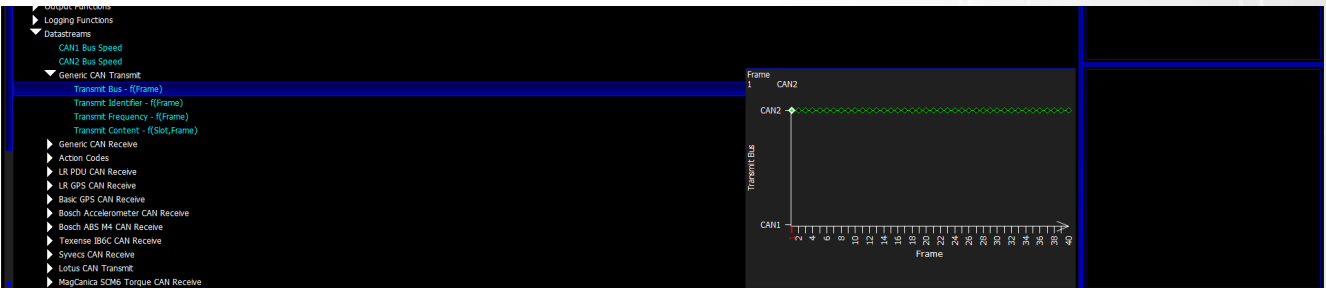
Define the CanBus Speed



Select the Transmit Bus

Set One frame to 0xF9h

Set Transmit Frequency for that frame at 50hz



Assign Functions to the Frame used that will trigger the Outputs like Fuel Pump1



You will need to in I/O Configuration - Pin Assignments set the functions used to Run Strategy without pin if the assigned function is not allocated to a Output.