# **ECUMASTER ADU**

**Application Note** 



# **DTAFast S Series**

Revision 1.01



### 1. Copyright and trademarks

All trademarks, service marks, trade names, trade dress, product names and logos appearing in this document are the property of their respective owners.

## 2. Introduction

This application note explains how to connect and configure the DTAFast S series ECU to work with the ECUMASTER ADU.

The supported models are:

- S40 and S40 Pro (firmware version 37.00 or higher)
- S60 and S60 Pro (firmware version 36.00 or higher)
- S80 and S80 Pro (firmware version 40.00 or higher)
- S100 and S100 Pro (firmware version 43.00 or higher)

### 3. Electrical connection

#### S40/S40 PRO

S40/S40 PRO	ADU CAN1	ADU CAN2	Comment
17	4	6	CAN L
16	3	5	CAN H

#### S80/S100/S100 PRO/S100 PRO (connector with two bottom keys)

S40/S40 PRO	ADU CAN1	ADU CAN2	Comment
28	4	6	CAN L
26	3	5	CAN H

Twisted pair cable is required for any CAN BUS connection.

Ensure that the CAN BUS is properly terminated.



### 4. ADU and DTAFast configuration

The first step is to enable the output protocol. This option is available in the menu titled "Other Map Settings / *Data stream*". The DTAFast standard CAN stream is send at a fixed speed of 1Mbps, so it can be connected to either CAN1 or CAN2 on the ADU.

rial Data Output For Dash*			٦×	
CAN Streams				
Standard CAN St	ream On?			
Frequency	O 10 Hz	20 Hz	O 50Hz	
RotoTest Stream	On			
Lotus Elise CAN Stream On				
VW Stream On				
RS232 Data Stre	am			
Dash RS232 Stre	am On ?			
Number of Head	er Bytes	0 - 10	0	
Header Byte Val	les	0 - 255	0	
			0	
Data Stream Specifications are			0	
from www.dtafast.co.uk		0		
			0	
			0	
			0	
			0	
Map Not Curren	t		0	

If you use the ADU CAN1 network, the speed is fixed at 1Mbps and no CAN configuration is required.

If you plan to connect the DTAFast ECU to CAN2, you will need to set proper CAN BUS speed and termination. To open CAN2 configuration, press F9 to show pane selector. Then open *General / CAN BUS Serial setup*.

	CANbus / Serial Setup		
C	7 🗖 🗖 🖓		
	CANbus / Serial Setup		
	CAN2 terminator		
	CAN2 speed	500 Kbps	
	GPS CANbus	CAN2	
	Tire temperature cameras CANb	CAN2	
	Tire temperature cameras base 1	408	
	Serial protocol	Ecumaster s	erial protocol



#### www.ecumaster.com

The next step is to load the proper CANX file with DTAFast S series channel definitions. On the Project tree, click the "Add" button and select "Import .CANX file". When the file dialog opens, select "*DTA\_S\_Series.canx* file". The following dialog will appear:

Import CANX file: DTA_5_Serie	s.canx 🗙
Name: m_DTA_SSeries	
CANbus: CAN1	
Base ID (hex): 0x00002000	Extended V
Select channels:	Show frames
<u>F</u> ilter:	
,	
equianalog2	
ecu,analog3	
C ecu.battery	
□ c ecu cam1Adv	
□ c ecu cam1Pwm	
□ c ecu cam1Trqt	
□ c_ecu_cam2Adv	
c_ecu_cam2Pwm	
c_ecu_cam2Trgt	
C_ecu_ckpErrors	
🗆 ecu.dt	
C_ecu_fuelCons	
C_ecu_fuelConsPerHour	
ecu.fuelPress	
🗌 ecu.gear	
🗖 ecu.iat	
🗌 ecu.ignAngle	
Select All Select None	
	OK Cancel

You can then select the CAN BUS that will be used for communication (CAN1 or CAN2) and which channels you want to read. In most situations all channels should be loaded (Select All). The Project tree should look like the following:

Project Tree			
~•• m.• [å] å⊶• 📰 S	n f 🙌 🗖 🛦 🖿 🔒	0	
Name	Formula	Add	
	CAN1 0x00002000 - 8 frames		
		Duplicate	
		Delete	

When "*m\_DTA\_SSeries* mob" is opened, all available CAN inputs will be visible.





# 5. Supported channels

ADU channel	Description	
ecu.analog1	Analog input #1 voltage	
ecu.analog2	Analog input #2 voltage	
ecu.analog3	Analog input #3 voltage	
ecu.battery	Battery voltage	
ecu.clt	Engine coolant temperature	
ecu.fuelPress	Fuel pressure	
ecu.gear	Current gear	
ecu.iat	Intake manifold temperature	
ecu.ignAngle	Ignition advance	
ecu.injPW	Injector pulsewidth	
ecu.lambda1	Lambda from oxygen sensor #1	
ecu.map	Manifold absolute pressure	
ecu.oilPres	Engine oil pressure	
ecu.oilTemp	Engine oil temperature	
ecu.rpm	Engine RPM	
ecu.speed	Vehicle speed	
ecu.tps	Throttle position sensor	
c_ecu_cam1Adv	VVTi CAM #1 advance	
c_ecu_cam1Pwm	VVTi CAM #1 PWM duty cycle	
c_ecu_cam1Trgt	VVTi CAM #1 advance target	
c_ecu_cam2Adv	VVTi CAM #2 advance	
c_ecu_cam2Pwm	VVTi CAM #2 PWM duty cycle	
c_ecu_cam2Trgt	VVTi CAM #2 advance target	
c_ecu_ckpErrors	Crank errors	
c_ecu_fuelCons	Fuel consumption per 100 km	
c_ecu_fuelConsPerHour	Fuel consumption per hour	
c_ecu_camErrors	Cam errors	

# 6. Revision log

1.01

- ADU CAN terminals description fixed