

SPECIFICATIONS

Overview:	The Haltech IO Expander 12 allows the user the ability to increase the functionality of their Haltech ECU by using the Haltech CAN system which is fitted to all Platinum Series ECU's, the IO Expander 12 instantly makes available 12 additional user configurable inputs and outputs. Simply plug in the CAN cable and start using your extra IO.		
Features:	4 x AVI - Analogue Voltage Inputs (0-5V)*₁ 4 x DPI - Digital Pulsed Inputs (0-5V - Max Freq 300Hz)*₁ 4 x DPO – Digital Pulsed Outputs (5v / 12v Pull ups) (Max 1A)*₁ Broadcast rate of 20mS to the Haltech ECU for each channel. User definable "Safe State" for each output in case of loss of communications or error. Switchable pull up resistors on AVI channels for use with temperature sensors. Power and Status LED's. Powered by CAN Bus. External Power only required if DPO's are to be used. Multiple IO Expander Boxes can be used on certain Haltech ECU's.		
ECU Suitability:	Sprint 500 - (maximum 1 box)*₃ Sprint RE - (maximum 1 box)*₃ Sport 1000/2000 - (maximum 1 box)*₃ Sport GM - (maximum 1 box)*₃ Pro Harness*₄ - (maximum 1 box)*₃ Pro Plug-in ECU's*₄ - (maximum 2 boxes)*₂		
Power Requirements:	Source: 8.6 to 16.5 Volts DC Consumption: 50mA @ 12Volts DC		
Physical Dimensions:			
ECU Dimensions	Length: 98mm		
	Width: 64mm		
	Height: 28mm		
Weight:			
ECU:	125g (0.28 lb)		
Harness:	630g (1.39 lb)		
Haltech IO Expander 12 Kit Includes:	Haltech IO Expander 12 CAN direct connection cable (600mm)*₂		

*₁ – Functions available may vary depending on ECU used. Full function listing on pages 2-4.

*₂ – Optional CAN Hub required to be purchased if more than one device is to be fitted to the Haltech CAN Bus. Haltech Part # HT059990

*₃ – Supports Box A Only

*₄ – Supported in 1.10 and above firmware only



ANALOGUE VOLTAGE INPUT FUNCTIONS

Functions available on the 4 x AVI - Analogue Voltage Inputs for each Haltech ECU:

Analogue Input Function	Sprint 500 & RE	Sport 1000/2000/ GM	Pro Harness System	Pro Plug-in
A/C Request	✓	✓	✓	✓
A/C Pressure Sensor	✗	✗	✗	✓
Air Flow Meter	✗	✗	✗	✓
Air Temperature Sensor 1	✗	✗	✗	✓
Air Temperature Sensor 2	✗	✗	✗	✓
Antilag Launch Switch	✗	✓	✗	✓
Aux Rev Limiter	✓	✓	✗	✓
Barometric Pressure Sensor	✗	✗	✗	✓
Boost Trim	✓	✓	✓	✓
Brake Pedal Input	✗	✗	✗	✓
Brake Pressure Sensor	✗	✗	✗	✓
Clutch Switch	✗	✗	✗	✓
Coolant Pressure Sensor	✗	✓	✗	✓
Datalog Activation Switch	✗	✓	✓	✓
Diff Oil Temp Sensor	✗	✗	✗	✓
Dual Maps Switch	✗	✓	✗	✗
Electrical Load Input	✗	✓	✗	✓
EGT Sensor 1	✓	✓	✓	✓
EGT Sensor 2	✓	✓	✓	✓
Flat Shift Input	✗	✓	✗	✓
Fuel Pressure Sensor	✓	✓	✓	✓
Fuel Temp Sensor 1	✓	✓	✗	✓
Fuel Temp Sensor 2	✗	✗	✗	✓
Fuel Trim	✓	✓	✓	✓
Gear Position Sensor	✗	✗	✗	✓
Gear Position Switch	✗	✗	✗	✓
Gearbox Oil Temp Sensor	✗	✗	✗	✓
Ignition Trim	✓	✓	✓	✓
Intercooler Spray Input	✗	✓	✗	✓
Launch Control Input	✗	✓	✗	✓
Lock Timing Input	✗	✓	✗	✗
Manifold Pressure Sensor 1	✗	✗	✗	✓
Manifold Pressure Sensor 2	✗	✗	✗	✓
Neutral Switch	✗	✗	✗	✓
Nitrous Enable Switch	✓	✓	✓	✓
Nitrous Pressure Sensor	✗	✗	✓	✓
Oil Metering Feedback	✗	✓	✗	✗
Oil Pressure Sensor	✓	✓	✓	✓
Oil Temp Sensor 1	✗	✓	✓	✓
Oil Temp Sensor 2	✗	✗	✗	✓
Power Steering Switch	✗	✓	✗	✓
Power Steering Pressure	✗	✗	✗	✓
Rally Antilag Input	✗	✓	✗	✓
Transmission Overheat	✗	✓	✗	✗
Turbo Timer Input	✗	✓	✗	✗
Wastegate Pressure Sensor	✗	✗	✗	✓
Wideband O2 Input 1	✓	✓	✗	✓
Wideband O2 Input 2	✓	✓	✗	✓
Wideband O2 Input 3	✗	✗	✗	✓
Wideband O2 Input 4	✗	✗	✗	✓

✓ = Function Available ✗ = Function Unavailable

DIGITAL PULSED INPUT FUNCTIONS

Functions available on the 4 x DPI - Digital Pulsed Inputs for each Haltech ECU:

Digital Pulsed Input Function	Sprint 500 / RE	Sport 1000/2000/ GM	Pro Harness System	Pro Plug-in
A/C Request	✓	✓	✓	✓
Air Flow Meter (Freq)	✗	✗	✗	✓
Aux Rev Limiter	✓	✓	✗	✓
Brake Pedal Input	✗	✗	✗	✓
Cam Timing Input	✗	✗	✗	✗
Clutch Switch	✗	✗	✗	✓
Datalog Activation Switch	✗	✓	✓	✓
Dual Maps Switch	✗	✓	✗	✗
Electrical Load Input	✗	✓	✗	✓
Flat Shift Input	✗	✓	✗	✓
Fuel Flow Sensor	✗	✓	✗	?
Gear Position Switch	✗	✗	✗	✓
Intercooler Spray Input	✗	✓	✗	✓
Launch Control Input	✗	✓	✗	✓
Lock Timing Input	✗	✓	✗	✗
Neutral Switch	✗	✗	✗	✓
Nitrous Enable Switch	✓	✓	✓	✓
Power Steering Switch	✗	✓	✗	✓
Rally Antilag Input	✗	✓	✗	✗
Transmission Overheat	✗	✓	✗	✗
Turbo Timer Input	✗	✓	✗	✗
Timed Duty Switch	✗	✓	✗	✗
Vehicle Speed Input	✗	✓	✗	✓
Vehicle Speed Input - LF	✗	✗	✗	✓
Vehicle Speed Input - RF	✗	✗	✗	✓
Vehicle Speed Input - LR	✗	✗	✗	✓
Vehicle Speed Input - RR	✗	✗	✗	✓

✓ = Function Available ✗ = Function Unavailable

DIGITAL PULSED OUTPUT FUNCTIONS

Functions available on the 4 x DPO - Digital Pulsed Outputs for each Haltech ECU:

Digital Pulsed Output Function	Sprint 500 / RE	Sport 1000/2000/ GM	Pro Harness System	Pro Plug-in
A/C Output	✓	✓	✓	✓
Air Temp Switch	✓	✓	✓	✓
Air Temp Switch 2	✓	✗	✓	✓
Alternator Control	✗	✓	✗	✓
Aux Cam Function	✗	✗	✗	✓
Aux Fuel Pump	✓	✓	✓	✓
BAC Idle Control Output	✓	✓	✗	✓
BAC Slave Idle Output	✗	✗	✗	✗
Battery Light	✓	✓	✓	✓
Boost Control	✗	✓	✗	✓
Cam Control	✗	✗	✗	✗
Coolant Temp Switch 1	✓	✓	✓	✓
Coolant Temp Switch 2	✓	✓	✓	✓
Check Engine Light	✓	✓	✓	✓
Dual Intake Runner Output	✓	✓	✗	✓
Engine Control Relay	✓	✓	✗	✓
Engine Running Time	✓	✓	✗	✓
Generic Duty Output 1	✓	✓	✓	✓
Generic Duty Output 2	✗	✗	✓	✓
Generic Switch Output 1	✗	✗	✓	✓
Generic Switch Output 2	✗	✗	✓	✓
Intercooler Fan Output	✓	✓	✓	✓
Intercooler Spray	✓	✓	✓	✓
Knock Light	✗	✗	✓	✓
MAP Sensor Switch	✓	✓	✓	✓
Nitrous Activation	✓	✓	✓	✓
O2 Heater Control	✓	✓	✗	✓
RPM Switch	✓	✓	✓	✓
Shift Light	✓	✓	✗	✓
Stall Saver	✓	✓	✗	✗
Stepper Motor Output	✗	✗	✗	✗
Tacho Output	✓	✓	✓	✓
Thermo Fan Switch 1	✓	✓	✓	✓
Thermo Fan Switch 2	✓	✓	✓	✓
Thermo Fan PWM 1	✓	✓	✗	✓
Thermo Fan PWM 2	✓	✓	✗	✓
Timed Duty Output	✗	✓	✗	✓
Torque Convertor Output	✓	✓	✗	✗
Torque Reduction Output	✗	✗	✗	✓
TPS Switch	✓	✓	✓	✓
Turbo Timer Output	✗	✓	✗	✗
Vehicle Speed Switch	✓	✓	✓	✓
VTEC Output	✓	✓	✗	✗
Water Injection Output	✓	✓	✓	✓

✓ = Function Available ✗ = Function Unavailable