

Document Number		RG_SPEC_0034	
Title		Generation II HAYABUSA Adaptor Board	
Revision	Date	Prepared By	Change History
1.0	5/6/2013	Hannah Westbrook	Initial release.
1.1	11/14/2014	Hannah Westbrook	Updated Description Section

Introduction

The RaceGrade adaptor is used to interface a Suzuki Generation II Hayabusa (2008-2013) factory harness with a MoTeC M130 ECU. The adaptor box plugs directly in the factory harness replacing the factory ECU. Optional on board header allows for Communications module to send factory dash Engine Temperature, Gear and indicator lights.

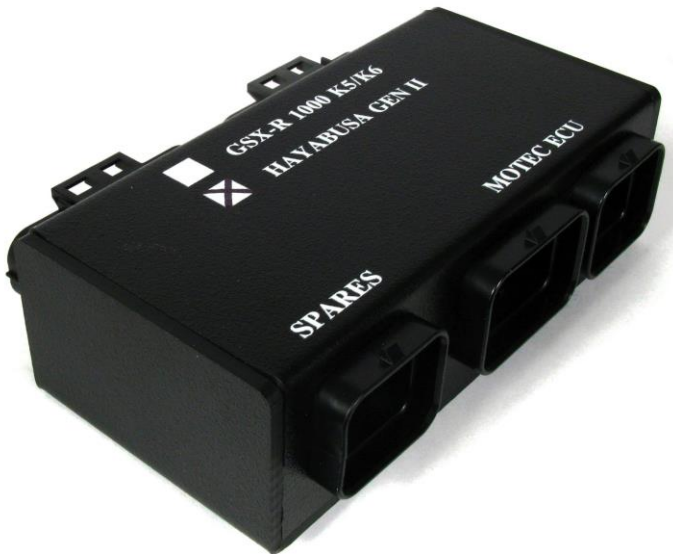


Figure 1: Adaptor Box

Specifications:

- Weight: 7.072 ounces
- Dimensions: 4.70 L x 1.972 W x 1.14 H in (119.4 x 50.1 x 29.0 mm)
- Key and Thumb switch power voltage supply through 30A fuse and 30A Relay
- Spares power supplied through 15A fuse
- 1 kΩ pull-up resistor to 5V on pin 23(Gear)
- 1 kΩ pull-up resistor to 12V on pin 38 (Tachometer)

Connection:

- GEN II Hayabusa Stock wiring harness
- MoTeC ECU
M130 Adaptor Loom
M H 130PNP 401A
- Spares
M PNP 26P Kit
26 Pin Header with alternate Keyway

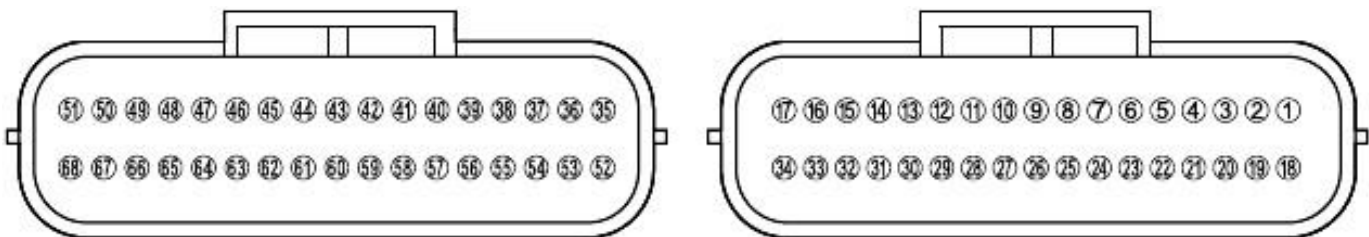


Figure 2: Generation II Hayabusa Connector Pin out
Connector Mating View (wire entry view on harness)

Generation II Hayabusa ECU Pin out

PIN NO.	Hayabusa Parameter
1	N/A
2	N/A
3	N/A
4	N/A
5	N/A
6	K-Line
7	N/A
8	TPS
9	MAP
10	COOLANT
11	5V
12	N/A
13	SYNC
14	REF
15	N/A
16	N/A
17	12V
18	N/A
19	N/A
20	N/A
21	N/A
22	TIP-OVER
23	GEAR
24	N/A
25	N/A
26	BARO
27	IAT
28	N/A
29	0V
30	N/A
31	0V
32	N/A
33	N/A
34	GROUND

PIN NO.	Hayabusa Parameter
35	N/A
36	N/A
37	DMS 1
38	TACHO
39	FUEL PUMP
40	N/A
41	N/A
42	STARTER
43	FAN
44	N/A
45	INJ #4
46	INJ #3
47	INJ #2
48	INJ #1
49	IGN #3
50	IGN #2
51	IGN #1
52	N/A
53	N/A
54	DMS 2
55	N/A
56	N/A
57	N/A
58	N/A
59	NEUTRAL
60	CLUTCH
61	INJ #8
62	INJ #7
63	INJ #6
64	INJ #5
65	N/A
66	GROUND
67	GROUND
68	IGN #4

MoTeC Spares Connector

Not all of the M130 ECU channels are used on the Generation II Hayabusa harness. A spares connector is included with all other ECU resources for expansion. See MoTeC M130 manual for I/O Specifications.

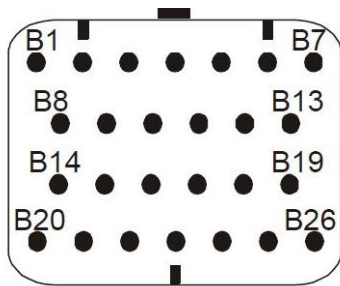


Figure 3: Spares Connector Pin out

Connector Mating View (wire entry view on harness)

Note: The following factory controls are not available in the Adaptor Box kit:

- Subthrottle Throttle valve actuator (STVA) and Secondary throttle position sensor (STP)
- PAIR control solenoid
- Idle Stepper control (ISC)
- EVAP system

PIN NO.	SPARES CONNECTOR
1	5V
2	5V
3	OUT_HB2
4	ECU 6.3V
5	OUT_HB6
6	0V
7	0V
8	AV #6
9	AV #5
10	12V
11	GROUND
12	OUT_LS2
13	OUT_HB1
14	U DIG6
15	U DIG7
16	12V
17	GROUND
18	KNOCK 2
19	BATTERY BACKUP
20	AT #3
21	AV #8
22	AT #4
23	ECU 6.3 V
24	SWITCH/DMS2
25	CAN LO
26	CAN HI