IntelliBrain™ Feature Comparison

	IntelliBrain	IntelliBrain Expansion (additions)	Handy Board	Handy Board Expansion (additions)	Sumo11 w/Expansion
CPU	Atmel ATmega128		Motorola 68HC11		Motorola 68HC11
Clock	14.7 MHz		2 MHz		2 MHz
Native MIPs	~15		~1		~1
RAM	132K		32.25K		32.25K
Flash	128K		0		0
EEPROM	4K bytes	64K bytes	0 (chip has EEPROM but it is disabled)		0 (chip has EEPROM but it is disabled
Display	16x2 LCD		16x2 LCD		16x2 LCD
Program Buttons	START/STOP		START/STOP		START/STOP
Thumbwheel	1		1		1
Buzzer	1		1		1
Host I/F	RS232 up to 115.2K		RS232 9600 baud via separate interface board		RS232 9600 baud
Secondary Serial	RS232 up to 115.2K CMUCam compatible power supply included on port header				
General Purpose I/O Pins	7 Analog/Digital In 10 Digital I/O 4 Analogs configurable as line QRB1134 line sensor ports Software selectable pull-ups on most inputs	7 Analog/Digital In 8 Digital I/O Software selectable pull-ups on analog inputs.	7 Analog In 7 Digital In 1 Digital I/O Permanent pull-ups	22 Analog In 7 Digital In 1 Digital I/O 9 Digital Out Permanent pull-ups	7 Analog In 7 Digital In 1 Digital Out 1 Digital I/O 2 analogs configured for QRB1134 line sensors 2 analogs w/no pull up for Sharp range sensors
I2C Ports	1 I2C bus w/3 headers				
Servo Ports	2	6		6	4
Motor Ports		4	4		2
IR Demodulator (receiver)	1		1		1
IR Modulator (transmitter)		1 with LED installed	1 port, no LED		1 port (2 connectors, no LEDs)

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Power Source	4 AA (NiMH, NiCad, alkaline) Regulated 6V DC wall brick 1 power switch	Optional auxiliary power source for motors and or servos Selectable motor power source Selectable servo power source and servo power regulation 1 auxiliary power switch	12V DC wall brick via interface/charger 8 NiCad battery pack 1 power switch	Auxiliary servo power with cut trace	9V for electronics 4 AA (alkaline, NiCad, NiMH) for motors and servos. 9V battery life is short 2 power switches
Dimensions	3.2" x 2.8" LCD 1.4" x 3.1" Mini-sumo compatible	2.2" x 2.8"	4.375" x 3.25"	3.5" x 2.75"	3.125" x 2.625" Mini-sumo compatible
Software	Full RoboJDE included		RoboJDE sold separately		RoboJDE sold separately