Feature	IntelliBrain™ 2	IntelliBrain w/Expansion	IntelliBrain
CPU	▪ Atmel ATmega128	▪ Atmel ATmega128	▪ Atmel ATmega128
Clock	▪ 14.7 MHz	▪ 14.7 MHz	▪ 14.7 MHz
RAM	▪ 132K	▪ 132K	▪ 132K
Flash	▪ 128K	▪ 128K	▪ 128K
EEPROM	▪ 4K bytes	▪ 68K bytes	▪ 4K bytes
Display	▪ 16x2 LCD	▪ 16x2 LCD	▪ 16x2 LCD
Program Buttons	▪ START/STOP	▪ START/STOP	▪ START/STOP
Thumbwheel	▪ 1	▪ 1	▪ 1
Buzzer	▪ 1	▪ 1	▪ 1
LEDs	▪ 1 power ▪ 7 programmable (1 modulated infrared)	▪ 1 power ▪ 11 programmable (1 modulated infrared)	▪ 1 power ▪ 2 programmable
Serial Ports	▪ 2 RS232 (up to 115.2K) ▪ COM1 host port or general purpose ▪ COM2 includes +6V to power CMUcam	▪ 2 RS232 (up to 115.2K) ▪ COM1 host port or general purpose ▪ COM2 includes +6V to power CMUcam	▪ 2 RS232 (up to 115.2K) ▪ COM1 host port or general purpose ▪ COM2 includes +6V to power CMUcam
General Purpose I/O Pins	▪ 7 analog / digital inputs ▪ 13 digital I/O	▪ 14 analog / digital inputs ▪ 18 digital I/O	▪ 7 analog / digital inputs ▪ 10 digital I/O
I^2C Ports	▪ 1 I^2C bus ▪ 5 headers with +5V and ground	▪ 1 I^2C bus ▪ 3 headers with +5V and ground	▪ 1 I^2C bus ▪ 3 headers with +5V and ground
Servo Ports	▪ 5 with power and ground ▪ 3 signal only	▪ 8 with power and ground	▪ 2 with power and ground
Motor Ports	▪ 2 (up to 9V, maximum 1A each)	▪ 4 (up to 15V, maximum 1A each)	
Modulated Infrared (38 kHz)	▪ 1 transmitter LED ▪ 1 receiver	▪ 1 transmitter LED ▪ 1 receiver	▪ 1 receiver
Powering	▪ 3V to 9V (battery not included) ▪ 4 cell AA battery holder included ▪ Coaxial DC power supply jack (power supply not included)	▪ Flexible powering options using 1 or 2 batteries ▪ 4.5V to 15V (batteries not included) ▪ 4 cell AA battery holder included ▪ Coaxial DC power supply jack (power supply not included)	▪ 4.5V to 9V (battery not included) ▪ 4 cell AA battery holder included ▪ Coaxial DC power supply jack (power supply not included)
Dimensions	▪ 4.0" x 3.05" ▪ LCD module: 1.4" x 3.1"	▪ 3.2" x 2.8" ▪ LCD module: 1.4" x 3.1"	▪ 3.2" x 2.8" ▪ LCD module: 1.4" x 3.1"
Mounting	▪ 4 1/8" screw-down mounting holes 3.70" x 2.75" rectangular pattern (IntelliBrain-Bot compatible) ▪ 4 Lego® grid compatible mounting holes	▪ 4 1/8" mounting holes in 1 7/8" (48 mm) square ▪ Lego® grid compatible ▪ Mark III mini sumo compatible	▪ 4 1/8" mounting holes in 1 7/8" (48 mm) square ▪ Lego® grid compatible ▪ Mark III mini sumo compatible
Software	▪ Full RoboJDE license included	▪ Full RoboJDE license included	▪ Full RoboJDE license included