

Serial I/O Standards

	RS-232	RS-485	I²C	Microwire/SPI	USB	CAN
Data rate	50-19,200 bps (more with short cable)	Up to 35 Mbps	100 kHz standard 400 kHz fast mode 3.4 MHz high-speed	Up to 10 Mbps or so	Low 1.5 Mbps Full 12 Mbps Hi 480 Mbps	1 Mbps
Max. bus length	15 meters	10 meters (1200 m at 100 kbps)	1 meter or so	1 meter or so	5 meters	30 meters (1000 m at 62 kbps)
I/O signal pins	2-20	2x equivalent RS-232	2	3, plus 1 per peripheral	2 plus power	2
Signalling method	single-ended, bipolar voltage	Differential	Single-ended	Single-ended	Differential	Differential
Devices per bus	2	Many	127, 1023 with fast mode	Limited only by bus loading	127 per controller	2048
Interface method	Hardware (UART)	Hardware	Software, or HW ICs are available	Dedicated hardware or can be done in SW	HW and SW for protocol stack	HW and SW
Flow control	HW or SW handshake	HW or SW handshake	Acknowledge signal from slave	None	Polling by controller	CSMA/CD-AMP