



Capabilities

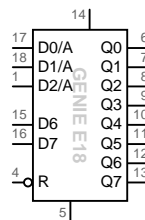
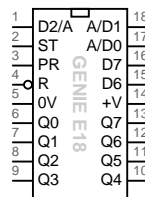
The following table outlines the capabilities of this GENIE device:

Type	ELITE
Version	1
Signals	
Pins	18
Analogue inputs	3
ADC resolution	8 bits
Digital inputs	5
Digital outputs	9
Features	
Parallel processing	Yes
Plug and play	Yes
Debug live	Yes
Device control	Yes
Sensor calibration	Yes
RTTTL music	Yes
16 channel MIDI music	No
Sound effects	Yes
PWM outputs	1
Servo motor control	8
Infra-red control	Yes
1-Wire® and I ² C	Yes
Ultrasonic sensing	Yes
Events and interrupts	Yes
1-second clock	Yes
Programming	
Program memory	3.2 K bytes
Variables	10 (A-J)
Data (array) memory	0
EEPROM locations	16
Program start limit	4
Subroutine limit	No limit
Call stack limit	32
Electrical	
PICmicro® device	16F88
Power supply	2-5.5V
Pin current limit	25mA
Total current limit	100mA

Component

Note: This is a older (v1) GENIE microcontroller, which has been replaced the the more powerful v2 GENIE 18 device.

The GENIE E18 microcontroller has 18 legs (known as pins) and these are used as follows (a simplified view is also shown):



Pin	Description
1	Analogue input A2 or digital input D2
2	Status output (ST)
3	Programming input (PR)
4	Reset (when pin goes low)
5	Ground (zero volt) supply voltage
6	Digital output Q0
7	Digital output Q1
8	Digital output Q2
9	Digital output Q3
10	Digital output Q4
11	Digital output Q5
12	Digital output Q6
13	Digital output Q7
14	Power supply voltage (2-5.5V only)
15	Digital input D6
16	Digital input D7
17	Analogue input A0 or digital input D0
18	Analogue input A1 or digital input D1

The required circuit for a GENIE E18 is shown below. It includes a reset switch, download socket and three resistors.

