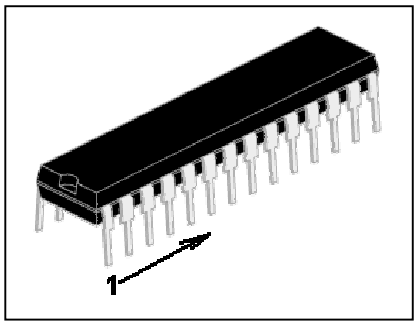
DMX710

DMX512 Transmitter with 6/8/12 digital or analoge inputs

FEATURES

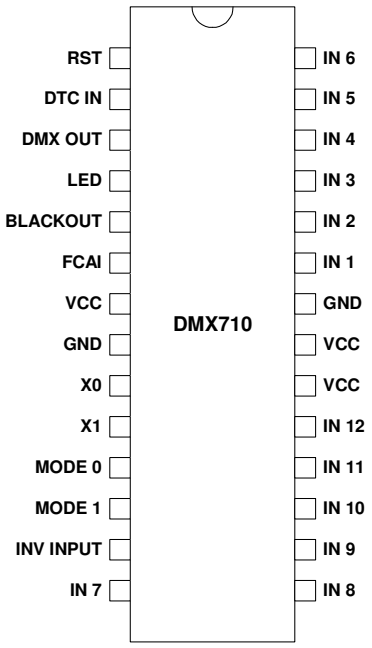
- 5V SUPPLY VOLTAGE
- TRANSMIT DMX512 SIGNAL
- CASCADEABLE FOR MORE INPUTS
- UP TO 12 DIGITAL INPUTS
- UP TO 6 ANALOGE INPUTS
- PACKAGE: DIL28S (RoHS)

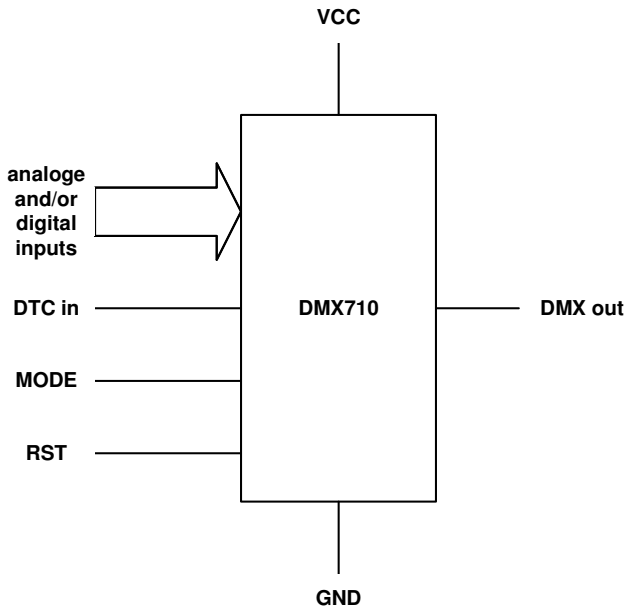


DESCRIPTION

The DMX710 is an DMX512 transmitter with digital inputs. The values of the output signal are 0 or 255 in digital mode and 0 – 255 in analoge mode, dependent on the input signal. With the BLACKOUT input it is possible to set all DMX output channels to 0.
To combine some DMX710 chips, connect the DMX output with the DTC input (DMX transmitter chain) from the next chip. More informations about the DTC you can find in the separate document.

PIN CONFIGURATION





PIN DESCRIPTION

MNEMONIC	PIN	TYPE	NAME AND FUNCTION
RST	1	I	**RESET** Reset input. A low level on this pin for more then 50ns will generate a reset, even if the clock is not running. Shorter pulses are not guaranteed to generate a reset
DTC IN	2	I	**DTC-SIGNAL** Input for the DMX Transmitter Chain (DTC). If not used, this pin must connect to GND.
DMX OUT	3	O	**DMX-SIGNAL** Output for the DMX512 signal
VCC	7;20;21	I	**POWER** This is the power supply
GND	8;22	I	**GROUND** 0V reference
X0	9	I	**XTAL0** Input from the inverting oscillator amplifier
X1	10	O	**XTAL1** Output from the inverting oscillator amplifier
LED	4	O	**STATUS LED** LED output. This pin can sink 20mA to drive a LED.
IN 1	23	IN	**DIGITAL/ANALOG INPUT 1** Input for the DMX value 1
IN 2	24	IN	**DIGITAL/ANALOG INPUT 2** Input for the DMX value 2
IN 3	25	IN	**DIGITAL/ANALOG INPUT 3** Input for the DMX value 3
IN 4	26	IN	**DIGITAL/ANALOG INPUT 4** Input for the DMX value 4
IN 5	27	IN	**DIGITAL/ANALOG INPUT 5** Input for the DMX value 5
IN 6	28	IN	**DIGITAL/ANALOG INPUT 6** Input for the DMX value 6
IN 7	14	IN	**DIGITAL INPUT 7** Input for the DMX value 7
IN 8	15	IN	**DIGITAL INPUT 8** Input for the DMX value 8
IN 9	16	IN	**DIGITAL INPUT 9** Input for the DMX value 9
IN 10	17	IN	**DIGITAL INPUT 10** Input for the DMX value 10
IN 11	18	IN	**DIGITAL INPUT 11** Input for the DMX value 11
IN 12	19	IN	**DIGITAL INPUT 12** Input for the DMX value 12
BLACKOUT	5	IN	**BLACKOUT** Input to set **all** DMX-Outputs to 0
MODE 0,1	11;12	IN	**MODE 0 ; MODE 1** Select number of inputs (11: 6 channels / 10: 8 channels / 01: 12 channels)
FCAI	6	IN	**FIRST CHANNELS ANALOGE INPUTS** Input to set IN1-6 to analoge inputs (H→analog/L→digital)
INV INPUT	13	IN	**INVERT INPUTS** Input to select the polarity of the digital inputs 1-12 **and** BLACKOUT

ELECTRICAL CHARACTERISTICS

Parameter	Description	Min	Typ	Max	Units	Conditions
VCC	Operating Supply Voltage	3,5	5	5,5	V	
ICC	Operating Sypply Current				mA	
VIH1	Input High Voltage	0,6		VCC+0,5	V	
VIH2	Input High Voltage	0,9		VCC+0,5	V	RESET Pin
VIL	Input Low Voltage	-0,5		0,2	V	
fOSZ	Oszillator Frequency		8		MHz	

Absolute Maximum Ratings

Operating Temperature	-55°C to +125°
Storage Temperature	-65°C to +150°C
Voltage on any Pin except RESET with respect to Ground	-0.5V to VCC+0.5V
Voltage on RESET with respect to Ground	-0.5V to +13.0V
Maximum Operating Voltage	6.0V
DC Current per I/O Pin	40.0 mA
DC Current VCC and GND Pins	200.0 mA

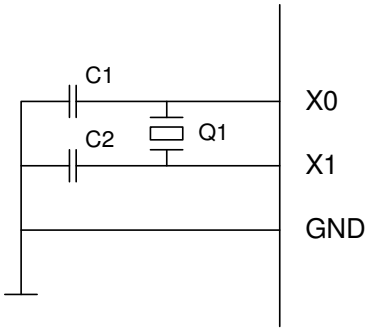
Error-Codes

The LED display internal errors. The error code is the number of flashes between 2 long times the LED is off.

Error-Code	Description
3	No valid DTC signal is recognize at the DTC INPUT.

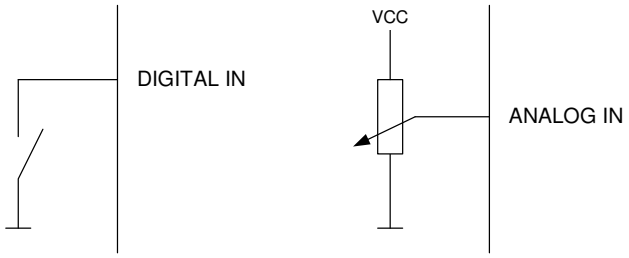
DEVICE CONFIGURATION EXAMPELS

Oscilator Configurations



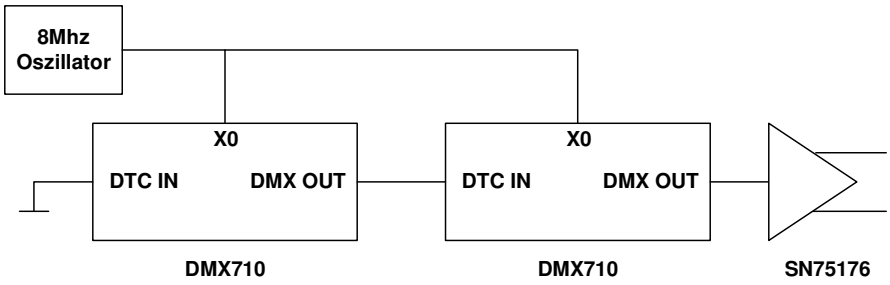
This example illustrates how to use the DMX710 with a 8MHz crystal. The value of the capacitors should be in the range of 12-33pF.

Digital And Analog Input Configuration



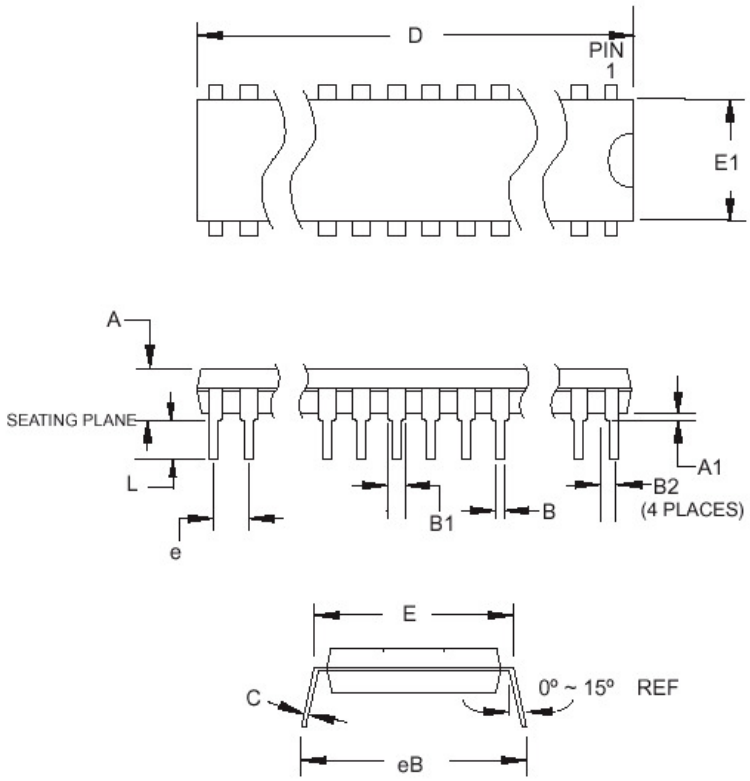
Some of the pins of the DMX710 can be used as digital or analog inputs. In the digital mode you have to connect a switch to GND. The analoge mode permit a signal from GND to VCC.

DMX Interface Configuration



The DMX710 is cascadeable, as the DMX exit is connected with the DTC entrance of the next component. The last DMX exit goes to a line driver. It is possible to use one oszillator for all DMX710.

PACKAGING INFORMATIONS



COMMON DIMENSIONS
(Unit of Measure = mm)

SYMBOL	MIN	NOM	MAX	NOTE
A	–	–	4.5724	
A1	0.508	–	–	
D	34.544	–	34.798	Note 1
E	7.620	–	8.255	
E1	7.112	–	7.493	Note 1
B	0.381	–	0.533	
B1	1.143	–	1.397	
B2	0.762	–	1.143	
L	3.175	–	3.429	
C	0.203	–	0.356	
eB	–	–	10.160	
e	2.540 TYP			

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