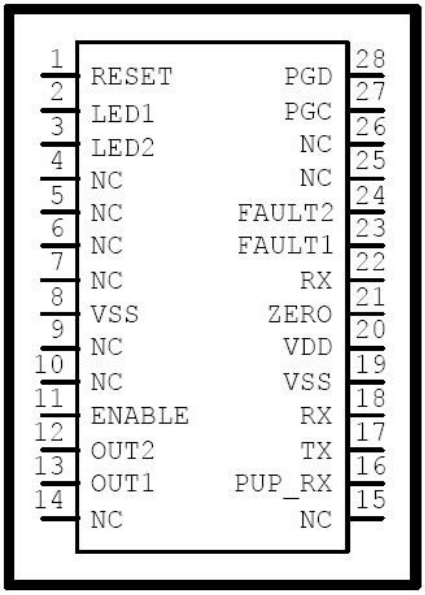
DALI DOUBLE SLAVE

- Interface between Dali bus and two power stage
- Internal Clock and Reset
- Double Input fault
- Available double output:
  - pwm synchronous – chip release A
  - pwm asynchronous – chip release B
  - on/off – chip release C
- Single supply
- 28pin ssop
- Available demo kit
- Release 1.26



The Dali dingle slave allows an easy interface between a Dali bus and a power stage.
With the Dali command it's possible:

- pwm synchronous – makes an output pulse that changes the duty cycle, respect the frequency of the power supply, when the brightness varies: it's synchronous respect the power supply. It's useful to drive a power dimmer. The power supply frequency should be 50Hz (code CHD_P_02_A).
- pwm asynchronous – makes an output pwm at frequency 500Hz (code CHD_P_02_B_05) or 2KHz (code CHD_P_02_B_20) that changes the duty cycle when the brightness varies: it's asynchronous respect the power supply. It's useful to create an analog signal.
- on/off – makes an output that toggles when the brightness switches on off. It's useful to drive relay or logic load (code CHD_R_02_C).

Pins function:

Pin Number	***Pin Name***	***Pin Type***	***Level(*)***	***Pin Function***
1	RESET	IN	ST	Chip reset, active low
2	LED1	OUT	CMOS	Led first slave, active low
3	LED2	OUT	CMOS	Led second slave, active low
4 5 6 7 9 10 12 14 15 25 26	NC	OUT	CMOS	Unconnected pins
8 19	VSS	POWER	---	Ground
11	ENABLE	OUT	CMOS	Enable pin (on/off chip specific)
12	OUT2	OUT	CMOS	Signal command second slave
13	OUT1	OUT	CMOS	Signal command first slave
16	PUP_RX	OUT	CMOS	Drive pull up resistor

Pin Number	*Pin Name*	*Pin Type*	*Level(*)*	*Pin Function*
17	TX	OUT	CMOS	Dali tx data
18	RX	IN	ST	Dali rx data
20	VDD	POWER	---	Power supply
21	ZERO	IN	ST	Zero cross input
22	RX	IN	TTL	Dali rx data (connect to pin 18)
23	FAULT1	IN	TTL	Fault first slave, active low
24	FAULT2	IN	TTL	Fault second slave, active low
27	PGC	IN	ST	Program pin
28	PGD	BIDIR	ST/CMOS	Program pin

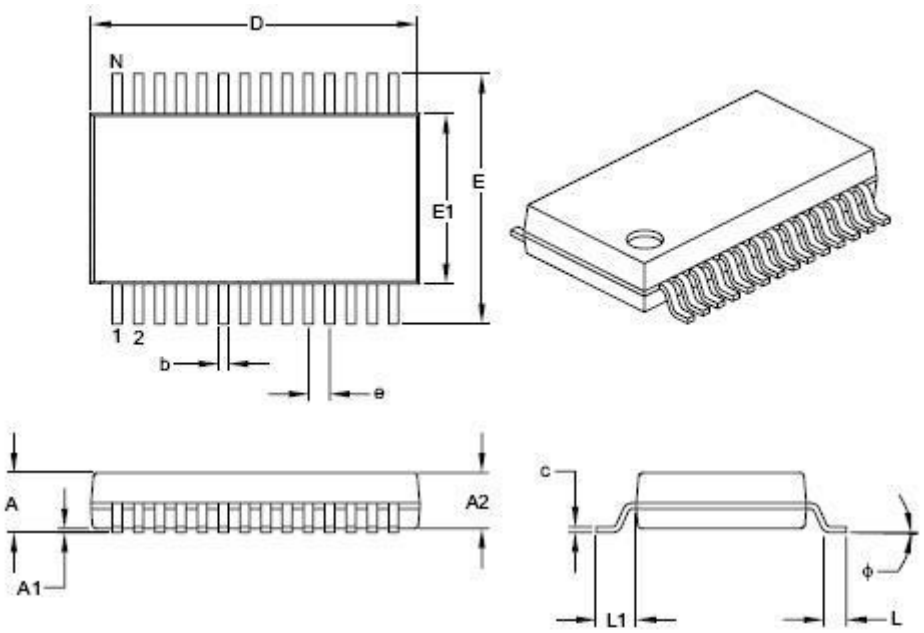
(*) ST schmitt trigger input with CMOS level
CMOS compatible CMOS input or output
TTL compatible input

To have the circuit example of connection check the demo kit manual.

Electrical specifications:

Characteristics		*Min*	*Tip*	*Max*	*Units*
Power Supply (VDD)		3	---	5.5	V
Oscillator Frequency		---	8	---	MHz
V_{IL}	ST (VDD>4.5V)	VSS	---	0.8	V
	ST (VDD<4.5V)	VSS	---	0.15VDD	V
	ST (RESET pin)	VSS	---	0.2VDD	V
	CMOS	VSS	---	0.2VDD	V
V_{IH}	ST (VDD>4.5V)	2.0	---	VDD	V
	ST (VDD<4.5V)	0.25VDD+0.8	---	VDD	V
	ST (RESET pin)	0.8VDD	---	VDD	V
	CMOS	0.8VDD	---	VDD	V
V_{OL}		VSS	---	0.6	V
V_{OH}		VDD-0.7	---	VDD	V
Operating temperature		-40	---	+85	°C

Package dimension:



Units		MILLIMETERS		
Dimension Limits		MIN	NOM	MAX
Number of Pins	N		28	
Pitch	e		0.65 BSC	
Overall Height	A	–	–	2.00
Molded Package Thickness	A2	1.65	1.75	1.85
Standoff	A1	0.05	–	–
Overall Width	E	7.40	7.80	8.20
Molded Package Width	E1	5.00	5.30	5.60
Overall Length	D	9.90	10.20	10.50
Foot Length	L	0.55	0.75	0.95
Footprint	L1		1.25 REF	
Lead Thickness	c	0.09	–	0.25
Foot Angle	ϕ	0°	4°	8°
Lead Width	b	0.22	–	0.38