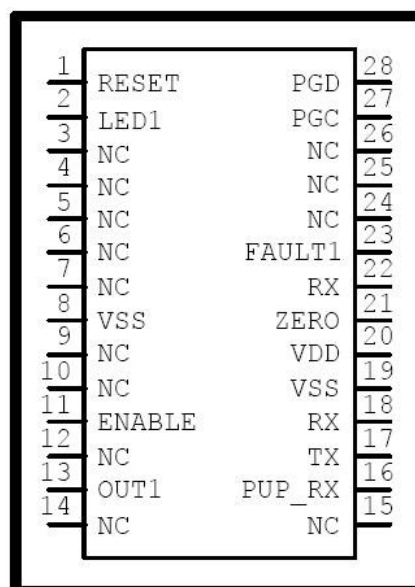# DALI SINGLE SLAVE

- Interface between Dali bus and a power stage
- Internal Clock and Reset
- Input fault
- Available output:
    - pwm synchronous – chip release A
    - pwm asynchronous – chip release B
    - on/off – chip release C
- Single supply
- 28pin ssop
- Available demo kit
- Release 1.24

```
 1   RESET        PGD    28
 2   LED1         PGC    27
 3   NC            NC    26
 4   NC            NC    25
 5   NC            NC    24
 6   NC         FAULT1   23
 7   NC            RX    22
 8   VSS          ZERO   21
 9   NC           VDD    20
10   NC           VSS    19
11   ENABLE        RX    18
12   NC            TX    17
13   OUT1       PUP_RX   16
14   NC            NC    15
```

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.
- pwm asynchronous – makes an output pwm at 1KHz frequency 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 or off. It's useful to drive relay or logic load.

Pins function:

Pin Number	Pin Name	Pin Type	Level(*)	Pin Function
1	RESET	IN	ST	Chip reset, active low
2	LED1	OUT	CMOS	Led slave, active low
3 4 5 6 7 9 10 12 14 15 24 25 26	NC	OUT	CMOS	Unconnected pins
8 19	VSS	POWER	---	Ground
11	ENABLE	OUT	CMOS	Enable pin (on/off chip specific)
13	OUT1	OUT	CMOS	Signal command slave
16	PUP_RX	OUT	CMOS	Drive pull up resistor
17	TX	OUT	CMOS	Dali tx data
18	RX	IN	ST	Dali rx data

Pin Number	Pin Name	Pin Type	Level(*)	Pin Function
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 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		---	4	---	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:
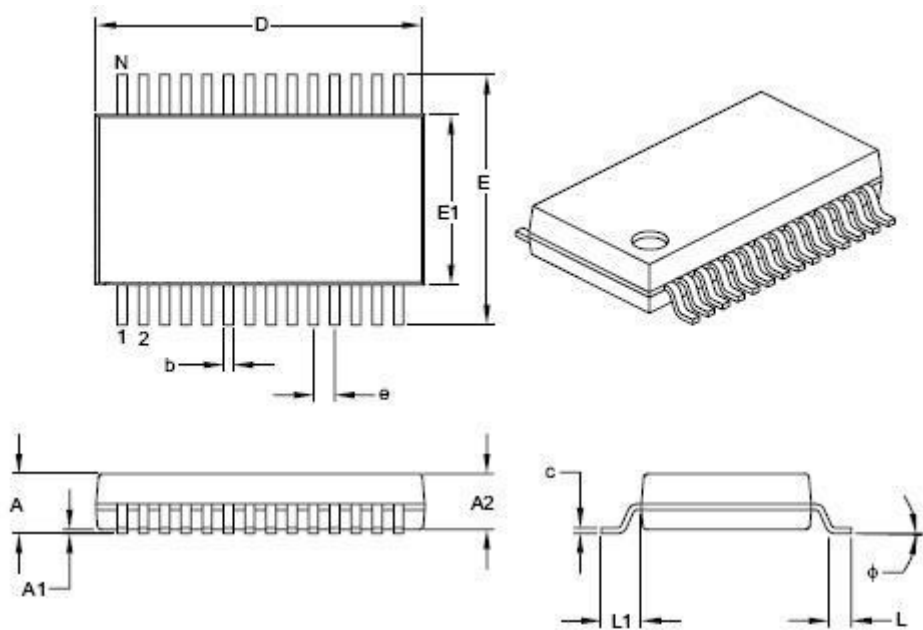
	Units	MILLIMETERS		
Dimension Limits		MIN	NOM	MAX
Number of Pins	N		28	
Pitch	e		0.65 BSC	
Overall Height	A	–	–	2.00
Molded Package Thickness	A2	1.65	1.75	1.85
Standoff	A1	0.05	–	–
Overall Width	E	7.40	7.80	8.20
Molded Package Width	E1	5.00	5.30	5.60
Overall Length	D	9.90	10.20	10.50
Foot Length	L	0.55	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