

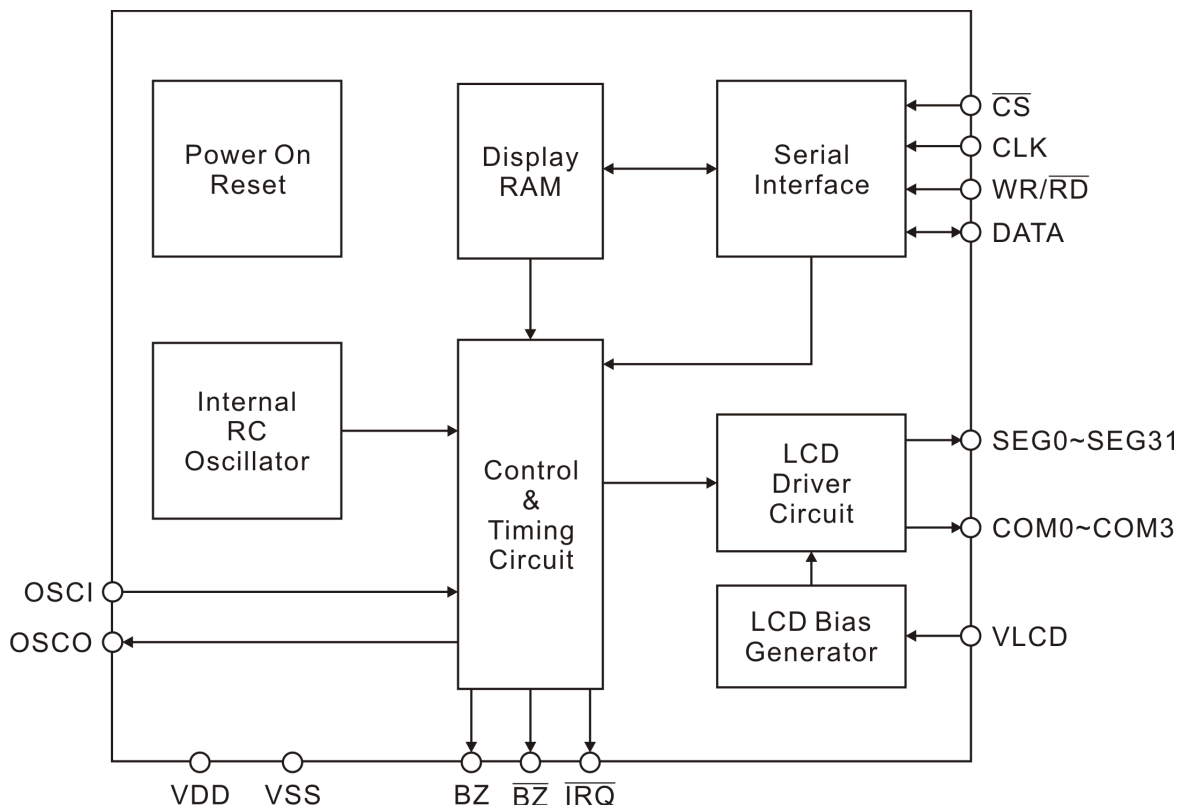
DESCRIPTION

The PT1621 is a RAM mapping, 128 dots (32x4) and multi-function LCD driver. The host can program PT1621 easily by three or four lines interface. Many S/W configuration features make PT1621 suitable for multiple LCD applications. PT1621 also includes S/W power down command to reduce power consumption.

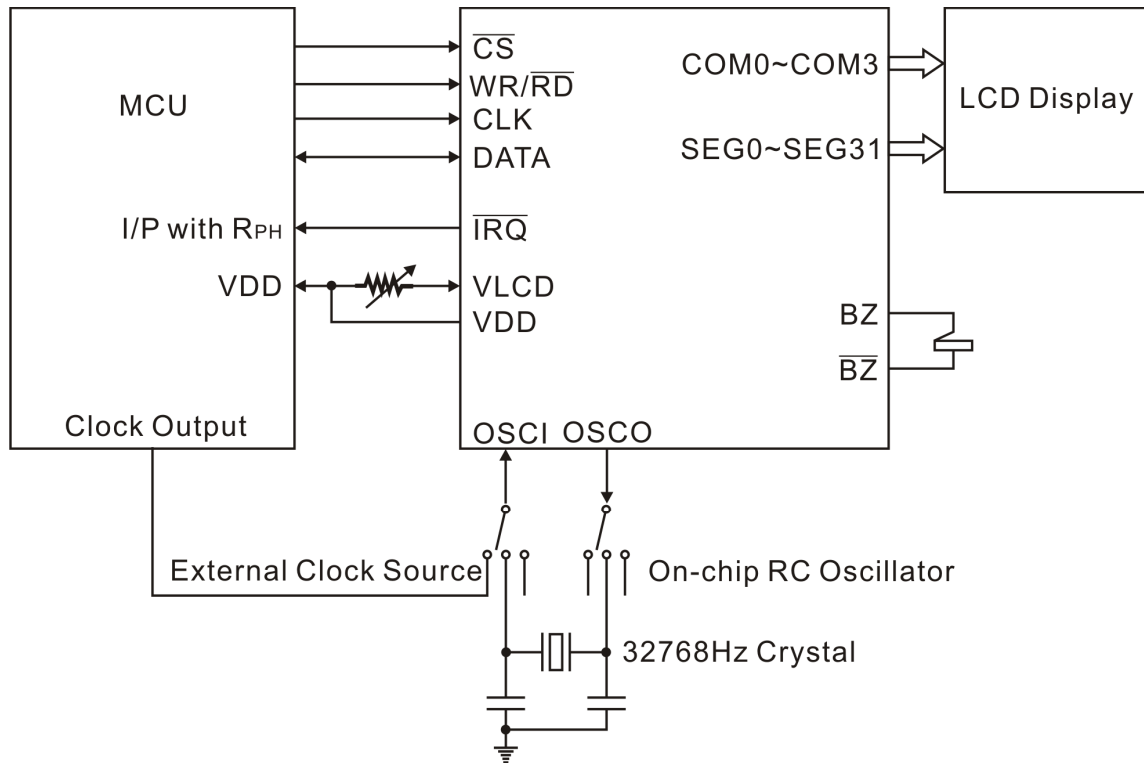
FEATURES

- Operating voltage: 2.2V~5.5V
- LCD operating voltage can be adjusted by VLCD pin
- Built-in 256KHz RC oscillator
- External 32.768KHz crystal or 256KHz frequency source input
- Two selectable tone (buzzer) frequencies (2KHz/4KHz)
- Built-in time base generator and WDT
- Time base or WDT overflow output
- 8 kinds clock sources of time base/WDT
- Internal LCD driving frequency source
- Selection of 1/2 or 1/3 bias, and selection of 1/2 or 1/3 or 1/4 duty LCD applications
- 32 x 4 LCD driver
- Built-in POR circuit
- Built-in 32 x 4 bit display RAM
- 3 or 4-wire serial interface
- Power down command reduces power consumption
- Software configuration feature
- Data mode and command mode instructions
- R/W address auto increment
- Three data accessing modes
- Package type:
 - PT1621-LQ: 44pin LQFP
 - PT1621-X: 48pin SSOP
 - PT1621-G: Gold bumped chip

BLOCK DIAGRAM



APPLICATION CIRCUIT

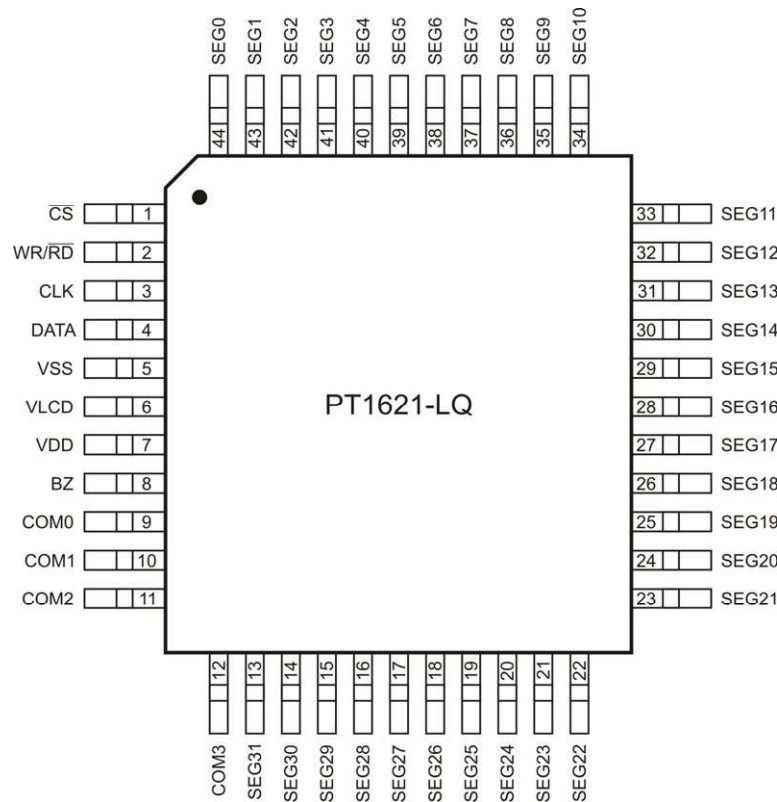


ORDER INFORMATION

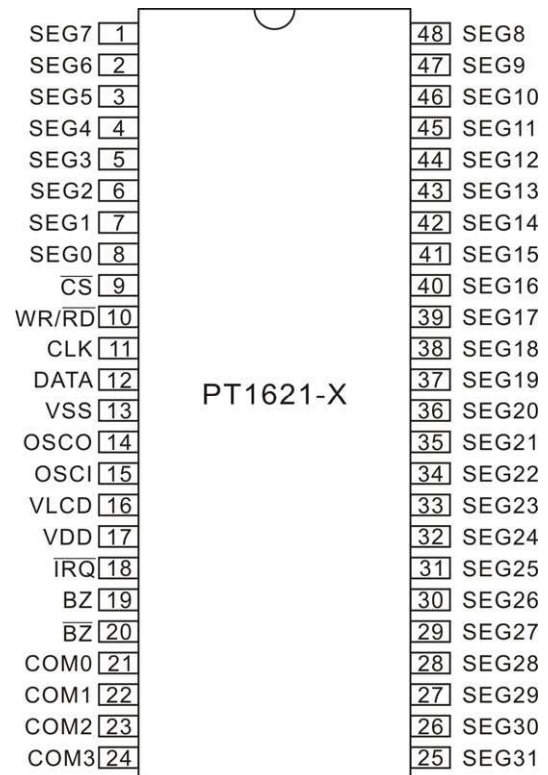
Valid Part Number	Package Type	Top Code
PT1621-LQ	44 Pins, LQFP	PT1621-LQ
PT1621-X	48 Pins, SSOP, 300MIL	PT1621-X
PT1621-G	COG	-

PIN CONFIGURATION

44 PINS, LQFP



48 PINS, SSOP



PIN DESCRIPTION

Pin Name	I/O	Function	Pin No.	
			44pin LQFP	48pin SSOP
SEG7~SEG0	O	LCD segment outputs	37~44	1~8
\overline{CS}	I	Chip selection input with pull-high resistor. When the \overline{CS} is logic high, the data and command read/write are disabled. The communication be enabled only \overline{CS} is logic low.	1	9
$\overline{WR/RD}$	I	Write and read control with internal pull-high resistor	2	10
CLK	I	Data and command write/read clock input with internal pull-high resistor.	3	11
DATA	I/O	Serial data input/output with internal pull-high resistor.	4	12
VSS	-	IC negative power supply, ground.	5	13
OSCO	O	32.768KHz crystal oscillator for system clock. When clock set as external clock, the external clock source should be connected to the OSCI pin. The OSCI and OSCO pins can be opened when the internal RC OSC is selected.	-	14
OSCI	I		-	15
VLCD	-	LCD power supply.	6	16
VDD	-	IC positive power supply.	7	17
\overline{IRQ}	O	Time base or WDT overflow interrupt output. (NMOS open drain output)	-	18
BZ	O	Buzzer outputs (2KHz or 4KHz)	8	19
\overline{BZ}	O	Buzzer outputs (2KHz or 4KHz)	-	20
COM0~COM3	O	LCD common outputs	9~12	21~24
SEG31~SEG8	O	LCD segment outputs	13~36	25~48

IMPORTANT NOTICE

Princeton Technology Corporation (PTC) reserves the right to make corrections, modifications, enhancements, improvements, and other changes to its products and to discontinue any product without notice at any time.

PTC cannot assume responsibility for use of any circuitry other than circuitry entirely embodied in a PTC product. No circuit patent licenses are implied.

Princeton Technology Corp.
2F, 233-1, Baociao Road,
Sindian, Taipei 23145, Taiwan
Tel: 886-2-66296288
Fax: 886-2-29174598
<http://www.princeton.com.tw>