



26, 18, 10 & 2 MUX LCD Controller and Driver Character Generator ROM and RAM inside

Description

EM6121 is controller and driver for character monochrome for TN and STN LCD displays. The driving capability is **26 rows x 80 columns (3x16, 2x24 or 1x48 rows of 16 characters + 160 icons)** addressed by I²C or 3-wire interface. The chip includes a character generator CGROM of 240 characters and CGRAM of 16 characters. V_{LCD} internally generated up to 9.35V without external components or with external capacitors.

Key Features

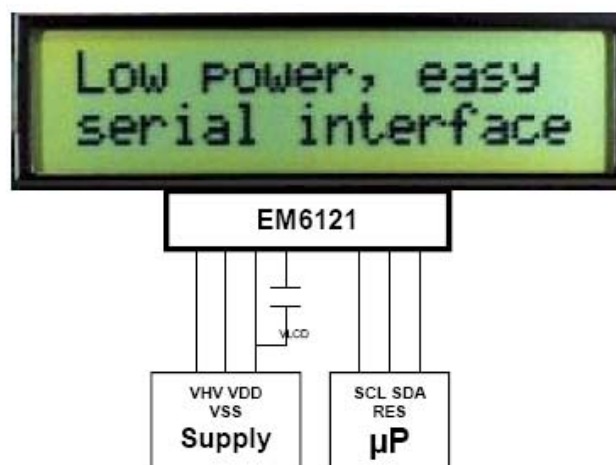
- OTP
- Character Generator ROM and RAM
- No external components
- Lower power with external capacitors option
- I²C and 3-wire interfaces
- Vertical Scrolling of 1, 2 or 3 lines of characters
- Horizontal Scrolling of 1 line of characters
- Partial or icon Display programmable
- LCD voltage digitally programmable 3V to 9V
- Selectable x4, x3, x2 multiplier factor for V_{LCD}
- Selectable Bias voltages:
 - 1/3, 1/3.5, 1/4, 1/4.5, 1/5, 1/5.5, 1/6
- Supply voltage from low 1.8V up to 3.3V
- True Low Current:
 - I_{HV} = 30/60μA
 - I_{DD} = 15μA (active)
 - I_{DD} = 1μA (sleep)
- Temperature compensation of V_{LCD} (4 coefficients)
- Oscillator for LCD refresh on chip
- Intermediate bias voltage generation on chip
- Available in die with/without gold bumps, COG, COF and COB

& BENEFITS

Flexibility and easy to design-in
Uniformity of contrast of all dies in production
Usable with a wide range of modules
No flickering
Ideal for portable and mobile phones applications
Save PCB space
Cost effective

Character Sets

- Alphanumeric
- Japanese, Chinese on request



Typical Applications

- DECT and Mobile phones
- Point-of-sale terminals
- Desktop displays
- Smart cards
- Portable, battery operated products
- Balances and scales, utility meters
- Printers
- Fax