ST8016

160 Output LCD Common/Segment driver IC

1. DESCRIPTION

The ST8016 is a 160-output segment/common driver IC suitable for driving large/medium scale dot matrix LCD panels, and is used in personal computers/work stations. Through the use of SST (Super Slim TCP) technology, it is ideal for substantially decreasing the size of the frame section of the LCD module. The ST8016 is good both as a segment driver and a common driver, and it can create a low power consuming, high-resolution LCD.

2. FEATURES

- Number of LCD drive outputs: 160
- Supply voltage for LCD drive: +15.0 to +40.0 V
- Supply voltage for the logic system: +2.5 to +5.5 V
- Low power consumption
- Low output impedance

Package: 186-pin TCP (Tape Carrier Package)

(Segment mode)
- Shift clock frequency
  - 20 MHz (MAX.): V_{DD} = +5.0 ± 0.5 V
  - 15 MHz (MAX.): V_{DD} = +3.0 to + 4.5 V
  - 12 MHz (MAX.): V_{DD} = +2.5 to + 3.0 V
- Adopts a data bus system
- 4-bit/8-bit parallel input modes are selectable with a mode (MD) pin
- Automatic transfer function of an enable signal
- Automatic counting function which, in the chip selection mode, causes the internal clock to be stopped by automatically counting 160 bits of input data

- Line latch circuits are reset when $\overline{\text{DISPOFF}}$ active

(Common mode)
- Shift clock frequency: 4 MHz (MAX.)
- Built-in 160-bit bi-directional shift register (divisible into 80 bits x 2)
- Available in a single mode (160-bit shift register) or in a dual mode (80-bit shift register x 2)
- Y_1->Y_{160} Single mode
- Y_{160}->Y_1 Single mode
- Y_1->Y_{80}, Y_{81}->Y_{160} Dual mode
- Y_{160}->Y_{81}, Y_{80}->Y_1 Dual mode

The above 4 shift directions are pin-selectable
- Shift register circuits are reset when $\overline{\text{DISPOFF}}$ active

3. PIN CONNECTIONS

186 PIN TCP