



STV8102

128 x 64 OLED passive matrix controller/driver

Data Brief

Features

- Supports 128 x 64 dot matrix panels
- Embedded DC/DC step-up converter
- Display power supply up to 20V
- Device power supply: 1.8 to 3.6V
- Low-power consumption suitable for battery-operated systems
- Column source current: 508µA, max
- Row sink current: 64mA
- On-chip oscillator
- Programmable multiplexing rate
- Self adaptive panel addressing scheme
- PowerMizer™ driving scheme
- Brightness control with built-in aging compensation
- Built-in display pattern generator
- Selectable 8-bit parallel interface (68xx, 80xx series), serial peripheral interface and I²C interface
- Embedded 128 x 64 x 1-bit display RAM
- Row and column re-mapping
- Screen saver mode

Description

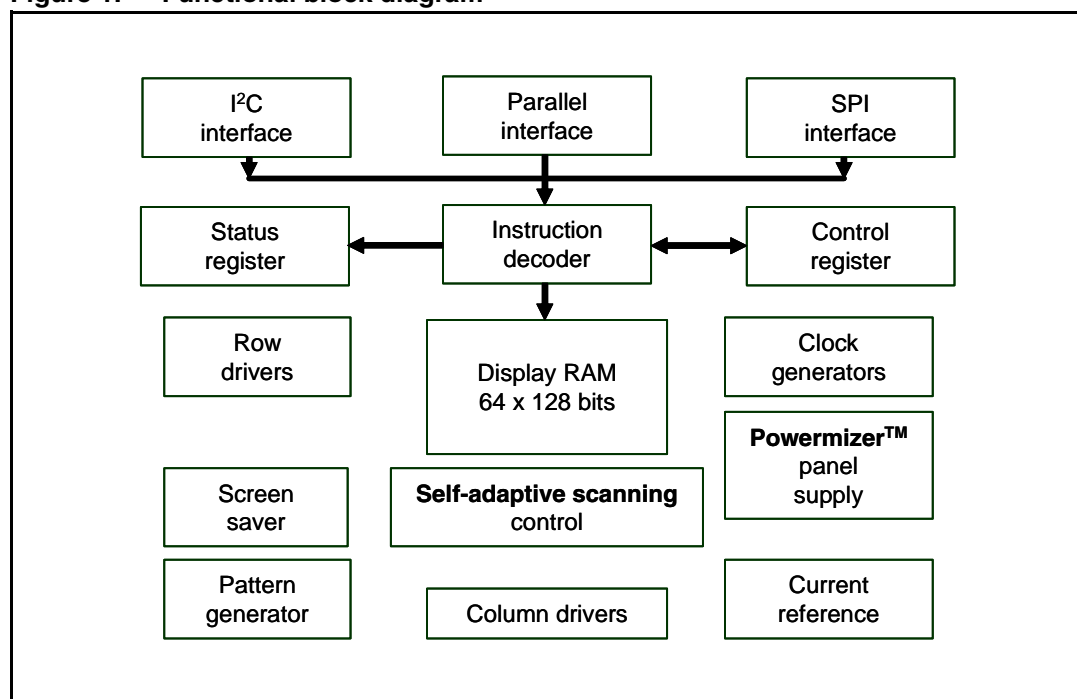
The STV8102 is a low-power, controller/driver “combo” IC for Organic Light Emitting Diode (OLED) dot passive matrix display systems. The STV8102 supports black-an-white, monochrome displays of up to 128 columns by 64 rows.

The STV8102 provides all necessary functions in a single chip, including on-chip OLED supply control and bias current generators resulting in a minimum of external components and in very low-power consumption.

The STV8102 communicates with the system via fully configurable interfaces (parallel, serial or I²C) to ease interfacing with the host microcontroller. The STV8102 has a set of control and status registers that can be addressed by the interfaces.

Table 1. Key features and benefits

Features	Benefits
PowerMizer™ automatic adjustment of VPP	Reduce power consumption
Embedded DC/DC converter on chip oscillator	Reduce system components
Self adaptive scanning	Reduce power consumption

Figure 1. Functional block diagram

Ordering information

Table 2. Order codes

Part number	Temp range, °C	Package	Packing
STV8102C/ST-A	-25 to +125	COF 35SW, 5 SH	tape-and-reel
STV8102/WPB3	-25 to +125	bumped die	waffle pack

Revision history

Table 3. Document revision history

Date	Revision	Changes
15-Jan-2007	1	Initial release.

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