# Color LCD Breakout
## Breakout Board for Nokia 6100
### 1/27/2006

## 1  Overview

This breakout board allows quick and easy development for the Nokia 6100 color LCD. Only six connections are needed for complete operation of the LCD. The built in voltage booster converter powers the LED backlight, allowing single supply operation at 3.3 volts.
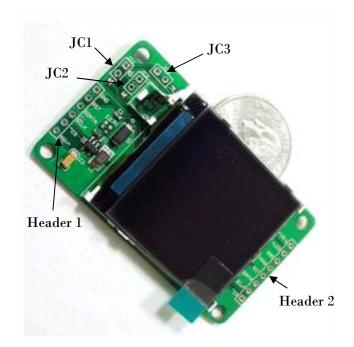
## 2  Hardware description

Using this breakout board is fairly simple. It contains a connector for the LCD, two headers and three solder jumpers. Initially the device is configured for single supply 3.3 volt operation. Connections should be made to Header 1. Snap on an LCD, apply +3.3 volts across +Vin and GND, and you should see the display light up. RST, SDATA, SCLK, and CS attach to your microcontroller. (check out our example code).
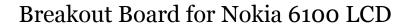
Alternatively, Header 2 allows for direct access to the LCD connector. Be sure to remove the solder jumpers JC1, JC2, and JC3 for direct access to the LCD connector. The three jumpers make the following connections:

JC1: Vdig (pin 1 on LCD connector) -> Vdsp (pin 6 on LCD connector).

JC2: Vdig  -> Vin

JC3: LED+ (pin 10 on LCD connector) -> Voltage from booster circuit.

## 3  External Capacitor

We noticed that the latest shipment of LCD screens are more sensitive to noise on the power supply.  The booster circuit introduces some noise that causes the display to flicker, changing brightness randomly.  To suppress this noise so that the display does not flicker, the included 100uF capacitor can be soldered between GND and Vdsp of Header 2.  (watch polarity on the cap!).  If you are not using the booster circuit, the cap might not be needed.