Errata Document

Concerning I2C Communications with LPC Controlled Displays

This document outlines an unexpected electrical behaviour in I2C mode when interfacing to a display containing an LPC controller. A work-around for this issue is outlined below.

Issue Description

The RS232 transceiver used with displays employing an LPC controller features an internal pull-down resistance on the Rx input pin of approximately 5 kilo-ohms. Due to PCB space constraints, a protocol select resistor is not available to disconnect this pull-down from the Rx/SCL line.

As a result, in I2C mode, the SCL line will feel the effect of a 5 kilo-ohm pull-down resistor. The user should choose a pull-up resistor that will overcome this resistance to pull SCL to a high logic level.

If changes are not made, the display will hold the SCL line low should the I2C bus enter a state of contention, effectively preventing any communication on the bus until the host undergoes a reset.

Displays Affected

The following units are affected in I2C mode only:

- GLK24064R-25-1U and GLT24064R-1U PCB Rev1.0
- GLK24064-25 and GLT24064 PCB Rev4.0
- GLK240128-25 and GLT240128 PCB Rev4.0