

## G2C1 Module EMC Testing Details

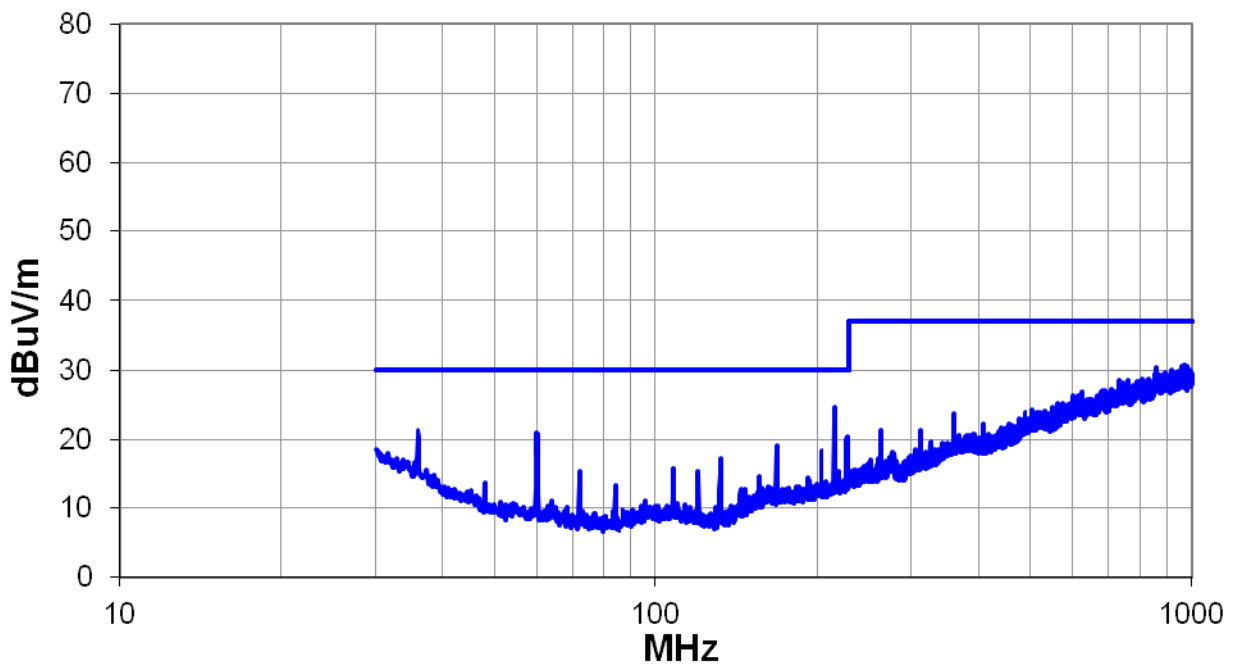
July 22, 2013

### Notes:

1. The G2C1 display module was designed to pass the FCC Class B radiated emissions standard without an enclosure. This was done by burying all high speed signals and following best practice layout rules.
2. "Prescan" type radiated emissions tests of the module were performed on 02/29/2012 at EMC Northwest in Hillsboro, Oregon. The test specification was Class B using test method CISPR 22:2005 (amended by A1:2005 and A2:2006). All tests had the screen running with a numeric up/down demo displayed.
3. Testing was done in two configurations:
  - a. as a combined production module (note it has metal tape on the edges from ESD tests; we believe this has little effect on EMC results), and,
  - b. as an "open" system where the controller and panel are not coplanar.
4. A double wrap ferrite was used on the USB cable (used to provide power) to ensure that only the board emissions were measured.
5. The emissions in the "open" configuration were lower than for the production module. This could be because in the open configuration the LCD metal case is floating, while in the production module case it is grounded. Grounding is provided internal to the module by metal fingers between the LCD case and the PCB. The added metal tape for ESD testing we believe does not add to grounding as far as EMC is concerned.

## Test Configuration and Results

### A. Production Module



## B. "Open" Display Module

