

CM-1 to CM-2 Migration Considerations

Steve Gray, Cirrus Logic, Inc.

Detailed information on points referred to in this document are available in the CobraNet™ Programmer's Reference and the CobraNet™ Hardware User's Manual available for download at <http://www.cirrus.com>.

- There is an additional address line on the CM-2. See schematic for connector pin out. This line should always be driven or tied low. It can be left unconnected on the host side as a pull-down is present on the CM-2.
- CM-2 uses a single 3.3V supply. It does not use 5V. If a 5V supply exists on the connector it can be left in place in order to gain an additional AC return path.
- Placement of bypass caps on the supply lines close to the connector is recommended, even on the unused 5V line.
- Four of the serial I/O (SSI) lines (See CM-2 schematic) have pull-ups/downs used by the processor to determine boot mode. If you have pull ups/downs on the host side of the connector to terminate unused SSI lines, make sure the values are high (> 50k) so they do not overpower the on-board resistors.
- The HMI SOFTWARE interface has changed. There is a code example in the data sheet that shows how to auto-detect presence of a CM-1 or CM-2. This code can be used to determine module type and appropriate interface protocol to use. There are also examples showing how to properly use the CM-2 interface. The most significant command change involves use of the Translate Address and Goto Address commands recommended in lieu of the Set Address command.
- Polarity of HREQ has changed depending on transfer direction. See data sheet.
- The HMI interface on CM-2 is 32 bits wide but most data is still contained within a 24 bit window of that 32 bits. There are some exceptions. Check Programmer's Reference and Hardware Manual for possible changes to variables that will be used. The MSB Must be nulled if not used.
- The setup and hold timing has changed between the modules. This could be an issue if the processor connected to the HMI is fast. Please review the timing diagrams in the Hardware's User's Manual to insure HMI interface timing compliance.
- The same FLASH memory is used for CM-1 and CM-2. No issues here related to programming.