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## Product Change Notification

**PCN No: 2006-08-24-02**

**Report Date: August 24, 2006**

**Subject: VK202-25 PCB 3.0 Feature Enhancement**

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### List of New Products:

VK162-12 PCB R3.0 including all applicable extensions and combinations:

-VPT, -V, -E (power and temperature options)
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### Reason for Change:

To enhance the features of the VK162-12 and to parallel some of the functionalities offered by PCB 2.3 we have made changes on the firmware.

### Product Change:

The VK162-12 PCB 3.0 firmware v5.1 is now superseded by firmware v5.2.

### Hardware Changes:

- 1) The 8MHz crystal on the module has now been replaced by 16MHz crystal.

### Firmware Changes:

- 1) The VK162-12 PCB 3.0 v5.2 now offers higher RS232 baud rate such as 76800 and 115200.

To change the module's baud rate to 76800, send command 254 / 57 / 12.

To change the module's baud rate to 115200, send command 254 / 57 / 8.

- 2) Control character “\n” now offer the functionality that was offered in the last version, also the functionality it used to have in PCB 2.3. In order for

the control character “\n” to function like the PCB 2.3 firmware v3.1 (and older), the host needs to make sure the scrolling is off before sending “\n”. This is done by sending command 254 / 82. When the display is at the last row (2<sup>nd</sup> row) and “\n” is sent, the next text insertion point is the home position (col 1, row 1). For the control character “\n” to function like PCB 3.0 firmware v5.0 and v5.1, the host needs to make sure that scrolling is on before sending “\n”. This is done by sending command 254 / 81. When the display is at the last row (2<sup>nd</sup> row) and “\n” is sent, the module will scroll the text up and create a new line.

- 3) The I2C implementation on the last version (v5.0 and v5.1) have issues regarding speed. We have made changes to make sure that the VK162-12 now can run reliably at 100KHz.

**Contact Information:**

Adam Lintott (Sales Manager): [alintott@matrixorbital.ca](mailto:alintott@matrixorbital.ca)

**Reference Documents/Attachments:**

Location: <http://www.matrixorbital.ca/manuals/>

**PCN Revision History:**

**Release of PCBs for the changes in this PCN:**  
September 4, 2006

**Approvals:**

Engineering: **James McTavish (Senior Engineer)**

Sales: **Adam Lintott (Sales Manager)**

Production: **Mike McTavish (Production Manager)**