Product Change Notification

PCN No: 2010-03-03-04
Report Date: March 03, 2010
Subject: GLK24064-25 PCB 3.0 New Board Revision Release

List of New Products:
GLK24064-25 PCB 3.0 including all applicable extensions and combinations

-WB, -FGW, -YG (display colour)
-VPT, -V, -E (power and temperature options)

Reason for Change:
The GLK24064-25 PCB Rev 3.0 Matrix Orbital graphic module series have been upgraded to be able to unify display modules and offer new features and benefits.

Product Change:
The following list of hardware and firmware changes are all effective on all the variants of the GLK24064-25 as stated under 'List of New Products'.
The old PCB 2.0 is now superseded by PCB Rev 3.0, and the old firmware version v6.0 is now superseded by v7.0. The changes are stated to compare the old and the new PCB revision.

Schedule of Change:
September 1, 2010

Hardware Changes:

1) Six general purpose outputs (GPOs) are offered by PCB Rev 3.0. PCB 2.0 does not offer any general purpose outputs.

2) The 'Protocol Select Jumpers' now come with USB and RS422 selection, although the said additions are not for customer's use, they are provision for the PCB Rev 3.0 to be able to offer the -USB, -422

3) The 'Legacy Connector Jumper' (please see the PCB Rev 2.0 manual for details) offered on PCB Rev 2.0 has been eliminated on PCB Rev 3.0

4) A power LED is added to the PCB Rev 3.0 to indicate power through the display, which is good for troubleshooting and evaluation purposes.

5) A single Dallas 1-Wire connection is now offered on PCB Rev 3.0

6) A separate manual over-ride header (R5 and C1 are still manual override) is now offered on PCB Rev 3.0 such that manual over-ride will not require much disturbance of system connections.

7) A serial header (the connector is populated only upon request) is added on PCB Rev 3.0

8) Better ESD protection is offered on PCB Rev 3.0 by having extra optional ground jumps

9) Doubled EEPROM capacity is offered on PCB Rev 3.0. This means more fonts and bitmaps can be uploaded (from 16KB, we now have 32KB capacity)

10) Added piezo buzzer that runs at fixed frequency of 488Hz.

Please refer to
http://www.matrixorbital.ca/manuals/GLK_series/GLK24064-25/GLK24064-25_rev_30.pdf for the GLK24064-25 PCB 3.0 manual.

Firmware Changes:
Release v7.0 (released January xx, 2010):

1) For display verification, a new command is added:

Read Screen Command: 254 / 184

This will make the display reply 1920 bytes (30 bytes per row, 64 rows) of data that defines the current image displayed on the screen. If a host application is written such that it will accept the replied data, the host application can then draw what is written on the screen.

2) For use of the piezo buzzer, a new command is added :

Set Piezo Buzzer Command: 254 / 140 / <time in 100ms>

When this command is sent, the piezo buzzer will go off for the specified amount of time.

3) For protocol flexibility, a new command is added:

Set Flow Control Value Command: 254 / 60 / <On Value> / <Off Value>

This command opens up the capability of Xon/Xoff flow control, which are values 0x011 / 0x13. Default is still the 0xFF, 0xFE.

4) For use of the Dallas 1-wire connections, the following commands are added:

Search for Dallas 1-Wire Devices: 254 / 200 / 2

Dallas 1-Wire Transaction: 254 / 200 / 1 / <transaction>

The preceding commands can be used to determine Dallas 1-Wire (non-parasitic) slave devices connected on the bus (cmd 200 / 2); and send device specific commands (cmd 200 / 1)

5) List of New (or Changed) Commands:

<u>Display Screen Control Command:</u>

184: Read Screen

- new command, as described in item #1 under Firmware Changes

<u>Piezo Buzzer Related Command:</u>

140: Set Piezo Buzzer   - new command, as described in item # 2

<u>Protocol Related Command:</u>

60: Download File System   - new command, as described in item # 3

<u>Dallas 1-Wire Related Commands:</u>

200 / 1: Search for Devices   - new command, as described in item # 4

200 / 2: 1-Wire Transaction   - new command, as described in item # 4

Please see the manual for in depth details.

Documentation Revision

Revision	Changes	Date	Author
1.0	Initial Release	April 28/10	R Malinis

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Reference Documents/Attachments:

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

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