Hummingbird Z7.2.3

Cannot open file M:\Control Systems\Hummingbird\418px-Hummingbird_wake_Pengo.bmp

Hummingbird Z7.2.3

Designer : SM/GJH
Date : 08/08/2014
Board revision : 7.2.3
Board description : Small Displays Evaluation PCB. Mimimum PCB area. TI PMIC. Interface to Bracelet type display, no components on MPWB

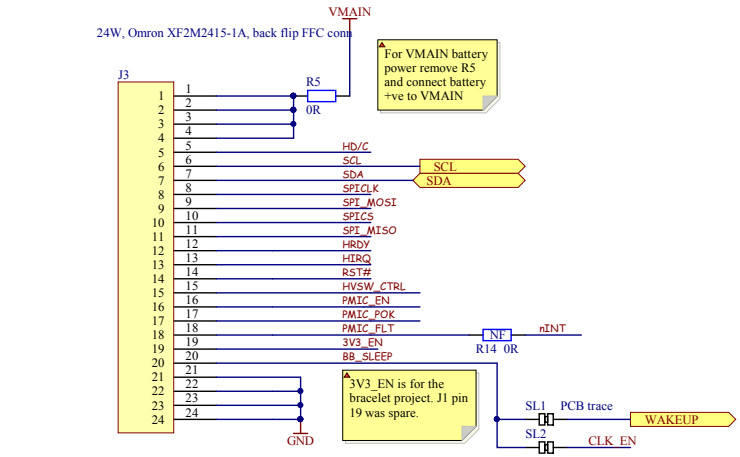
Table of contents

Revision History

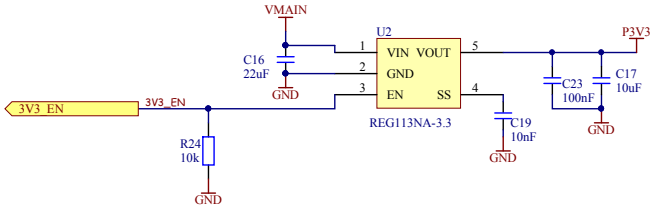
Revision number		Date	Engineer	Description
Major	Minor			
Z7.1		16 Aug 2013	SM	Incorporates changes found in 7.0
Z7.2		29 Oct 2013	SM	U3 EN input now connected to HVEN
	Z7.2.1	10 Dec 2013	GJH	R19 and R20 changed to position 2-3 and value changed to 0R
	Z7.2.2	14th May 14	GJH	I2C pullup resistors changed to 2k2 R8 + R9
	Z7.2.3	8 Aug 2014	SM	HVPSU: R1 now 31k6. R4 now 1k02.

PLASTIC LOGIC
Confidential & Proprietary Technical Information
U34 Cambridge Science Park
Milton Road
Cambridge
CB4 0FX

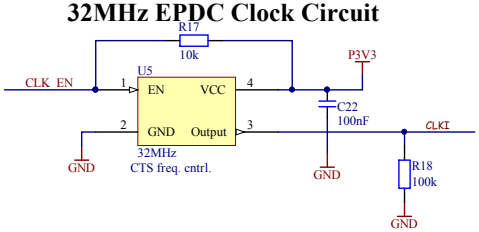
Title: Front Page | Revision:7.2.3
Author: SM
Date: 8 Aug 2014
Sheet: 1 of 3 | Document Number: | Sheet Size:A3

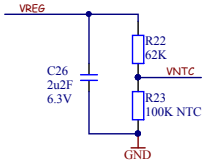


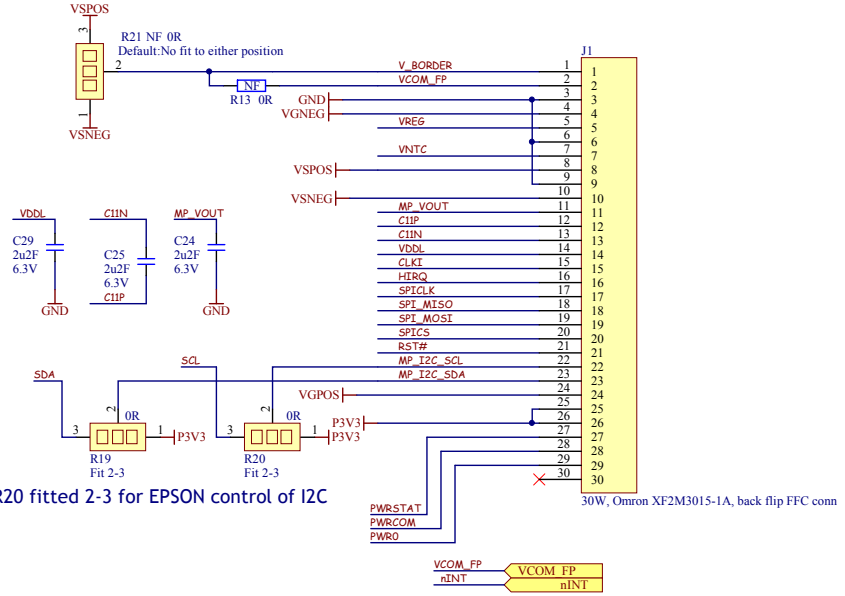
Serial input connector.
Same pinout as Raven.
MOSI and MISO assume CPU is the master and display controller is slave.



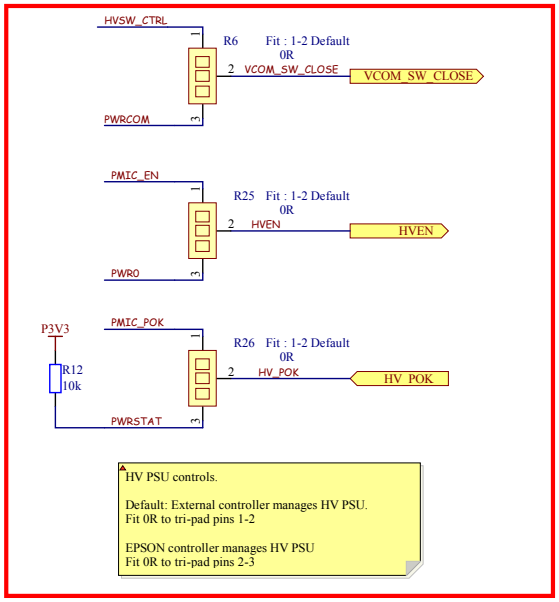
32MHz EPDC Clock Circuit







R19+R20 fitted 2-3 for EPSON control of I2C



Cannot open file M:\Control Systems\Hummingbird\418px-Hummingbird_wake_Pengo.bmp

Change from 7.0: 3V3_EN taken out to PMIC WAKEUP input .

Hummingbird Z7.2.3

PLASTIC LOGIC
Confidential & Proprietary Technical Information
Platic Logic Ltd.
U34 Science Park
Milton Road
Cambridge CB4 0FX UK

Title: Connectors & LVPSU
Revision:7.2.3
Author: SM/GJH
Date: 8 Aug 2014
Sheet: 2 of 3
Document Number: *
Sheet Size:A3

Cannot open file M:\Control Systems\Hummingbird\418px-Hummingbird_wake_Pengo.bmp

Hummingbird Z7.2.3

D1 BAS40-07

D2 BAS40-07

D3 MMBD4448HSDW

D4 MMBD4448HSDW

D5 MMBD4448HSDW

D6 BAS40-07

D7 BAS40-07

U1 TPS65185RSLR 6x6mm 0.4 pitch QFN

U3 ADG1419BCPZ

U6 24LC014H-I/MS

U7 LM321MF

R2 & R3 set VGPOS
VGPOS=1x(1+R2/R3)

R1 & R4 set VGNEG
VGNEG=- 1x(1+R1/R4)

I2C base address 0x68

PWRUP is equivalent to HV enable.
WAKEUP causes device to exit very low power sleep mode
VCOM_CTRL closes the internal VCOM switch

Change from Z7.0: WAKEUP now connected to 3V3_EN. PMIC wakes up with 3.3V supply coming on.

Use of these inputs and pull-up fitments are application dependent.

COM calibration storage
I2C address 0x50

R31 and R32 set VCOM range to 0 to +10V

Test points for VCOM calibration

PLASTIC LOGIC	Plastic Logic Ltd. 34 Science Park Milton Road Cambridge CB4 0FX UK
Confidential & Proprietary Technical Information	

Title: HVPSU
Revision: 7.2.3
Author: SM/GJH
Date: 8 Aug 2014
Sheet: 3 of 3
Document Number: *
Sheet Size: A3