POWER CIRCUIT

NOTE: 5V Adapter input

J11 DC JACK

S_VCC, C26 0.1uF, D1 BZX84C5V6/SOT, Q2 S4SCT4, R27 1k, SELF_PWR

Q1 SI1433DH-T1-E3 / Si1433dh

EC2 4.3uF, VCC_5V

Q3 FDN338P, R26 4.7K, R25 510K, S_VCC, SELF_PWR, VBUS

VCC_D, R21 10K, R22 100K, R23 100K, R24 10K

nENP1, nOVRP1, nOVRP2, nENP2

U3 AIC1526-0 (CTLA OUTA, FLGA IN, FLGB GND, CTLB OUTB)

PWR1, VCC_5V, C17 0.1u, PWR2

VCC_D, R17 10K, R18 100K, R19 100K, R20 10K

nENP3, nOVRP3, nOVRP4, nENP4

U4 AIC1526-0 (CTLA OUTA, FLGA IN, FLGB GND, CTLB OUTB)

PWR3, VCC_5V, C18 0.1u, PWR4

U5 AME8805-SOT89 5V to 3.3V (Vin, Vout, TAB, GND)

VCC_5V_REG, C24 1uF, VCC_3.3, C23 1uF

JP1 HEADER_4X2

VCC_D 1, AMBER3 3, AMBER4 5, GANG 7; 2 VCC_5V, 4 VBUS, 6 TEST, 8 GND

SW1 DPDT

VCC_5V_IN 1, VCC_5V_REG 3, VCC_3.3 4, 6; 2 VCC_5V, 5 VCC_3.3_IN

PORT 1

J12 USB TYPE A

PWR1_C 1, DP1 3, DM1 2, 4; USBVDD, D+, D-, USBVSS, SHIELD1, SHIELD3, SHIELD4, SHIELD2; 5, 7, 8, 6

PART_NUMBER = 73725-0110BLF

Manufacturer = FCI

PORT 2

J15 USB TYPE A

PWR2_C 1, DP2 3, DM2 2, 4

PART_NUMBER = 73725-0110BLF

Manufacturer = FCI

PORT 3

J14 USB TYPE A

PWR3_C 1, DP3 3, DM3 2, 4

PART_NUMBER = 73725-0110BLF

Manufacturer = FCI

PORT 4

J13 USB TYPE A

PWR4_C 1, DP4 3, DM4 2, 4

PART_NUMBER = 73725-0110BLF

Manufacturer = FCI

USB Upstream Ports

J4 USBB-A

HAND1 G1, VCC 1, D- 2, D+ 3, GND 4, HAND2 G2

VBUS, FB LB1, DM0, DP0

PGB1010603MR ESD9, PGB1010603MRESD10

FB LB7: PWR1_C, C27 0.1uF, EC5 120uF, PWR1

FB LB10: PWR4_C, C29 0.1uF, EC4 120uF, PWR4

FB LB9: PWR3_C, C28 0.1uF, EC3 120uF, PWR3

FB LB8: PWR2_C, C30 0.1uF, EC6 120uF, PWR2

USB Downstream Ports

DM1, DP1, ESD1, ESD2, PGB1010603MR

PORT 3: DM2, DP2, ESD7, ESD8

DM3, DP3, ESD5, ESD6

PORT 4: DM4, DP4, ESD3, ESD4

VCC_D, R4 10K, J7 FIXED_PORT1, GREEN1, AMBER1, LED2 YELLOW, LED3 GREEN, PORT1, R7 680R

VCC_D, R5 10K, J8 FIXED_PORT2, GREEN2, AMBER2, LED4 YELLOW, LED5 GREEN, PORT2, R8 680R

VCC_D, R14 10K, J9 FIXED_PORT3, GREEN3, AMBER3, LED6 YELLOW, LED7 GREEN, PORT3, R9 680R

VCC_D, R15 10K, J10 FIXED_PORT4, GREEN4, AMBER4, LED8 YELLOW, LED9 GREEN, PORT4, R10 680R

GND

NOTE:
When SPI EEPROM is used J9 and J10 should be in position 2-3.

U1 CY7C65642 TQFP48 / CY7C65642-TQFP48

VCC_3.3_IN, VCC_3.3, AMBER#, GREEN#, VCC_D4, nENP1, nOVRP1, nENP2, nOVRP2, GANG, VCC_D3, SELF_PWR

VREG, VCC, AMBER#[1], GREEN#[1], SEL27, PWR#[1]/I2C_SDA, OVR#[1], PWR#[2], OVR#[2], GANG, VCC_D, SELFPWR

VCC_A1 1, GND 2, DM0 3, DP0 4, DM1 5, DP1 6, VCC_A2 7, GND 8, DM2 9, DP2 10, RREF 11, VCC_A3 12

VCC_A_1, GND_2, DD-0, DD+0, DD-1, DD+1, VCC_A_7, GND_8, DD-2, DD+2, RREF, VCC_A_12

AMBER#[2], GREEN#[2], VCC_D, AMBER#[3], GREEN#[3], PWR#[3], OVR#[3], PWR#[4], OVR#[4], TEST, RESET#, SEL48

36 AMBER2, 35 GREEN2_IN, 34 VCC_D2, 33 AMBER3, 32 GREEN3_IN, 31 nENP3, 30 nOVRP3, 29 nENP4, 28 nOVRP4, 27 TEST, 26 RESET#, 25 VCC_D1

GND_13, XIN, XOUT, VCC_A_16, DD-3, DD+3, VCC_A_19, GND_20, DD+4, DD-4, GREEN#[4], AMBER#[4]

GND, XIN, XOUT, VCC_A4, DM3, DP3, VCC_A5, GND, DM4, DP4, GREEN4_IN, AMBER4

VBUS, R1 10K, RESET#, C13 1uF, R16 47K, GANG, R2 100K

VCC_D, VCC_A, LB6 FB, VCC_3.3, EC1 10uF, C1 0.1uF

VCC_A1 C2 0.1uF, VCC_A2 C3 0.1uF, VCC_A3 C4 0.1uF, VCC_A3 C5 1uF, VCC_A4 C6 0.1uF, VCC_A4 C7 1uF, VCC_A5 C8 0.1uF

VCC_D1 C9 0.1uF, VCC_D2 C10 0.1uF, VCC_D3 C11 0.1uF, VCC_D4 C12 0.1uF

EC1 close to VREG

Close to CY7C65632

RREF, R3 650R 1%

XIN, XOUT, C14 20P, X1 12MHz, C15 20P

Close to CY7C65632

GANG, LED1 RED BUS_LED, R6 680R

VCC_D, J5 I2C_EEPROM_PWR, U6 24LC02B/P (A0, A1, A2, GND, VCC, WP, SCL, SDA), C25 0.1uF, TEST, nENP1, R13 10K

Note: U2 and U6 should be placed on sockets

VCC_D, J6 SPI_EEPROM_PWR, U2 AT93C46E-PU (CS, SK, DI, DO, VCC, NC2, NC1, GND)

AMBER1 1, GREEN1 2, AMBER2 3, GREEN2 4

CYPRESS SEMICONDUCTOR © 2011

Title: **HX2VL TQFP48 USB2.0 4-PORT DVK**

Size C | Document Number <Doc> | Rev **

Date: Friday, April 27, 2012 | Sheet 1 of 1