DEBUG

TX RX

DEBUG 1 2 3 4 5 6

TTL
RXD TXD
Header 2
1 2

VCC5V VCC3.3V VCC3.3V VCC3.3V
C3 104 C4 104 C6 104 C5 10UF

U1 PL2303

TXD 1 — TXD   OSC2 28
2 — DTR#   OSC1 27
3 — RTS#   PLL_TEST 26
VCC3.3V 4 — VCCIO   AGND 25
RXD 5 — RXD   NC 24
6 — RI#   GP1 23
GND 7 — GND   GP0 22
NC 8 — NC   GND 21
DSR# 9 — DSR#   VCC_5 20 VCC5V
DCD# 10 — DCD#   NC 19
CTS# 11 — CTS#   GND 18
SHTD# 12 — SHTD#   3V3OUT 17 VCC3.3V
EE_CLK 13 — EE_CLK   DM 16 R3 22R D-
EE_DATA 14 — EE_DATA   DP 15 R5 22R D+

VCC5V R2 10K R4 10K

C1 22P
Y1 12M
C2 22P

VCC5V USB TO UART
D- VBUS 1
D+ D- 2
D- 3
ID 4
GND 5
SHIELD1 6
SHIELD2 7
SHIELD3 8
SHIELD4 9
VCC3.3V R1 1K5
MINI USB
GND

POWER_JMP

VDD_5V 1 2 VDD_5V
3 4
VDD_3V3B 5 6 VDD_3V3B
Header 3X2

BUZ_JMP

1 2 EHRPWM1B
Header 2
VDD_3V3B
R6 100R
R7 100R Q1 PNP 8550
Buzzer

J2 Header 17X2

3.3V VDD_3V3B   VDD_5V 5V
GND 34 33 GND
G1_29 32 31 G1_28
G3_19 30 29 G3_21
G1_17 28 27 G1_16
G0_31 26 25 G0_30
G3_17 24 23 G3_14
G3_15 22 21 G3_16
G2_5 20 19 G2_4
G2_3 18 17 G2_2
G0_13 16 15 G0_12
G0_5 14 13 G0_4
G2_1 12 11 G1_19
G0_14 10 9 G0_15
G0_7 8 7 TX
G0_3 6 5 RX
G0_2 4 3 GND
2 1

GPIO1_29 GPIO1_28
GPIO3_19 GPIO3_21
GPIO1_17 GPIO1_16
UART4_TXD UART4_RXD
SPI1_CS0 SPI1_SCLK
SPI1_D0_MOSI SPI1_D1_MISO
TIMER5 TIMER6
TIMER7 TIMER4
I2C2_SCL I2C2_SDA
I2C1_SCL I2C1_SDA
GPIO2_1 EHRPWM1B
UART1_RXD UART1_TXD
GPIO0_7
UART2_TXD
UART2_RXD

8 I/O Header 10

VDD_3V3B 1
2
UART4_RXD 3
UART4_TXD 4
GPIO1_16 5
GPIO1_17 6
GPIO3_21 7
GPIO3_19 8
GPIO1_28 9
GPIO1_29 10

JOYSTICK_JMP Header 5X2

UART4_RXD 1 2 JOY_A
UART4_TXD 3 4 JOY_B
GPIO1_16 5 6 JOY_C
GPIO1_17 7 8 JOY_D
GPIO3_21 9 10 JOY_PRESS

JOYSTICK Joystick

JOY_A 1 A   B 4 JOY_B
JOY_PRESS 2 CTR COM 5
JOY_C 3 C   D 6 JOY_D
7 Shield1 Shield2 8

VDD_3V3B C8 104
VDD_3V3B C9 10UF

J6 Header 17X2

3.3V VDD_3V3B   VDD_5V 5V
GND 34 33 GND
G1_29 32 31 G1_28
G3_19 30 29 G3_21
G1_17 28 27 G1_16
G0_31 26 25 G0_30
G3_17 24 23 G3_14
G3_15 22 21 G3_16
G2_5 20 19 G2_4
G2_3 18 17 G2_2
G0_13 16 15 G0_12
G0_5 14 13 G0_4
G2_1 12 11 G1_19
G0_14 10 9 G0_15
G0_7 8 7 TX
G0_3 6 5 RX
G0_2 4 3 GND
2 1

GPIO1_29 GPIO1_28
GPIO3_19 GPIO3_21
GPIO1_17 GPIO1_16
UART4_TXD UART4_RXD
SPI1_CS0 SPI1_SCLK
SPI1_D0_MOSI SPI1_D1_MISO
TIMER5 TIMER6
TIMER7 TIMER4
I2C2_SCL I2C2_SDA
I2C1_SCL I2C1_SDA
GPIO2_1 EHRPWM1B
UART1_RXD UART1_TXD
GPIO0_7
UART2_TXD
UART2_RXD

TEM_JMP Header 2

2 1 GPIO2_1
VDD_3V3B
R8 10K C7 104

1-WIRE DS18B20

3 VDD
2 DQ
1 GND

CAN1 CAN

VDD_3V3B 1
2
UART1_TXD 3
UART1_RXD 4

UART2 Header 5

VDD_3V3B 1
2
UART2_RXD 3
UART2_TXD 4
GPIO0_7 5

I2C

VDD_3V3B 1
VDD_3V3B 2
3
4
I2C1_SDA 5
I2C2_SDA 6
I2C1_SCL 7
I2C2_SCL 8

SPI1

VDD_3V3B 1
2
SPI1_D1_MISO 3
SPI1_D0_MOSI 4
SPI1_SCLK 5
SPI1_CS0 6

LED_JMP Header 4X2

TIMER4 1 2 L1
TIMER7 3 4 L2
TIMER6 5 6 L3
TIMER5 7 8 L4

VDD_3V3B
R9 1K
R10 1K
R11 1K
R12 1K

PWR_LED

R13 1K VDD_3V3B

Title

Size A2 Number Revision
Date: 2014/2/18 Sheet of
File: E:\BB-Black\..\DVK531.SchDoc Drawn By:

Comment	Description	Designator	Footprint	LibRef	Quantity
waveshare_logo			WS_symbol_XL	waveshare_logo	1
DS18B20		1-WIRE	SIP3	ds18b20	1
Header 10	Header10	8I/O	SIP10_LyingMoth	Header 10	1
Buzzer		Buzzer	BUZZER2	Buzzer	1
Header 2	Header, 2-Pin	BUZ_JMP, TEM_JMP, TTL	SIP2	Header 2	3
22P	Capacitor	C1, C2	0603	Cap	2
104	Capacitor	C3, C4, C6, C8	0603	Cap	4
10UF 钽电容		C5, C9	ws_3225_1	Cap2	2
Cap	Capacitor	C7	0603	Cap	1
CAN	Header 4	CAN1	SIP4_LyingMother	Header 4	1
DEBUG	Header 6	DEBUG	SIP6	Header 6	1
I2C	Header 8	I2C	SIP4_LyingMother X2	Header 8	1
Header 17X2	Header 17X2	J2	ISP_34	Header 17X2	1
Header 17X2	Header 17X2	J6	DIP17X2	Header 17X2	1
Joystick	Joystick	JOYSTICK	Joystick2	Joystick	1
Header 5X2	Header 5X2	JOYSTICK_JMP	SIP5 X2	Header 5X2	1
LED_0805		L1, L2, L3, L4, PWR_LED	0805_LED	LED_0805	5
Header 4X2		LED_JMP	SIP4X2	Header 4X2	1
luosihole L		luosihole L5, luosihole L6, luosihole L7, luosihole L8	luosikong L	luosihole L	4
Header 3X2		POWER_JMP	SIP3X2	Header 3X2	1
PNP 8550		Q1	SOT-23	PNP	1
1K5	Resistor	R1	0603	Res1	1
10K	Resistor	R2, R4	0603	Res1	2
22R	Resistor	R3, R5	0603	Res1	2
Res Semi	Semiconductor Resistor	R6, R7, R8, R9, R10, R11, R12, R13	0603	Res Semi	8
SPI1	Header 6	SPI1	SIP6_LYINGMOTHER	Header 6	1
PL2303		U1	SSOP28	PL2303	1
Header 5	Header, 5-Pin	UART2	SIP5_LyingMother	Header 5	1
MINI USB		USB TO UART	USB2	USB	1
12M	Crystal Oscillator	Y1	CRYSTAL2	XTAL0	1