PWR SEL
Default: 1-2
DC5V IN
AC Adapter
J3
FU1
2A
D1
RB160M-60
V_JTAG
V_OB
JP1
+5V
GND
5V/3.3V
Default: 2-3
(3.3V)
JP2
JP3
Default: closed
VCC
MCUVCC
R1
2k
LED2
BL-HG636D
GREEN
U2
LT1117CST-3.3
SOT-223
IN
TAB
OUT
3.3V 800mA
C1
10uF/10V
C2
0.1uF
C3
0.1uF
C4
100uF/10V
SW2
PTCFGP2
R2
100
U3
STM1001TWX6F
RST
nRES
C6
1uF
SOT-23
Near MCUVCC pins
C7
C8
C9
C10
C11
0.1uF
MCUVCC
P1-60
30x2 HEADER
J1
MDO
MD1
nRES
nBLFLG
USER LED
LED1
BL-HUB36A
RED
R6
680
USER SW
SW1
R7
10k
MB9BF516R
120-pin LQFP
U1
Near pins 41&42
ABS07-32.768KHZ-T
32.768KHz
X2
C12
12pF
C13
12pF
X0A
X1A
C14
4.7uF
10V
C
VSS
VCC
P46/X0A
P47/X1A
INITX
P48/DTTI1X_1/INT14_1/SIN3_2/MAD02_0
P49/TIOB0_0/IC10_1/AIN0_1/SOT3_2/MAD03_0
P4A/TIOB1_0/IC11_1/BIN0_1/SCK3_2/MAD04_0
P4B/TIOB2_0/IC12_1/ZIN0_1/MAD05_0
P4C/TIOB3_0/IC13_1/SCK7_1/AIN1_2/MAD06_0
P4D/TIOB4_0/FRCK1_1/SOT7_1/BIN1_2/MAD07_0
P4E/TIOB5_0/INT06_2/SIN7_1/ZIN1_2/MAD08_0
P70/TX0_0/TIOA4_2
P71/RX0_0/INT13_2/TIOB4_2
P72/SIN2_0/INT14_2/TIOA6_0
P73/SOT2_0/INT15_2/TIOB6_0
P74/SCK2_0
PE0/MD1
MD0
PE2/X0
PE3/X1
VSS
JP7 & JP8
Default: Open
DSW1
JP8
JP7
P22
P21
Default:
1: ON
2: ON
3: OFF
4: OFF
R3
1M
R4
0
X1
ABLS-4.000MHZ-B4-T
4MHz
C15
20pF
C16
20pF
Near pins 58&59
USB/GPIO
Default: 1-2
JP4
USBVCC0
C5
0.1uF
P81/UDP0
P80/UDM0
USBVCC
P60/SIN5_0/TIOA2_2/INT15_1/MRDY_0
P61/SOT5_0/TIOB2_2/UHCONX
P62/SCK5_0/ADTG_3/TX0_2/MOEX_0
P63/INT03_0/SIN5_1/RX0_2/RTO20_0/MWEX_0
P64/TIOA7_0/SOT5_1/INT10_2/FRCK2_1/RTO21_0
P65/TIOB7_0/SCK5_1/IC23_1/RTO22_0
P66/SIN3_0/ADTG_8/INT11_2/IC22_1/RTO23_0
P67/SOT3_0/TIOA7_2/IC21_1/RTO24_0
P68/SCK3_0/TIOB7_2/INT12_2/IC20_1/RTO25_0
P0F/NMIX/CROUT_1/RTCCO_0/DTTI2X_0/DTTI2X_1/SUBOUT_0
P0E/CTS4_0/TIOB3_2/IC13_0/IC23_0/RTO25_1/MDQM1_0
P0D/RTS4_0/TIOA3_2/IC12_0/IC22_0/RTO24_1/MDQM0_0
P0C/SCK4_0/TIOA6_1/IC11_0/IC21_0/RTO23_1/MALE_0
P0B/SOT4_0/TIOB6_1/IC10_0/IC20_0/RTO22_1/MCSX0_0
P0A/SIN4_0/INT00_2/FRCK1_0/FRCK2_0/RTO21_1/MCSX1_0
P09/TRACECLK/TIOB0_2/RTS4_2/RTO20_1/MCSX2_0
P08/TRACED3/TIOA0_2/CTS4_2/ZIN2_1/MCSX3_0
P07/TRACED2/ADTG_0/SCK4_2/BIN2_1/MCLKOUT_0
P06/TRACED1/TIOB5_2/SOT4_2/INT01_1/AIN2_1/MCSX4_0
P05/TRACED0/TIOA5_2/SIN4_2/INT00_1/MCSX5_0
P04/TDO/SWO
P03/TMS/SWDIO
P02/TDI/MCSX6_0
P01/TCK/SWCLK
P00/TRSTX/MCSX7_0
TRACECLK
TRACE3
TRACE2
TRACE1
TRACE0
TDO
TMS
TDI
TCK
TRST
R5
0
C17
10uF/10V
L1
MMZ2012Y202B
L2
MMZ2012Y202B
AVCC
AGND
P1-120
30x2 HEADER
USBVCC0
C18
4.7uF
10V
C19
0.1uF
C20
0.1uF
C21
0.1uF
C22
0.1uF
C23
0.1uF
C24
0.1uF
U4
AT91SAM7S64
64-pin LQFP
ADVREF
VDDIO
VDDIO
VDDIO
VDDFLASH
VDDIN
VDDIN
VDDCORE
VDDCORE
VDDCORE
VDDOUT
C25
12pF
C26
12pF
X3
ABM3-18.432MHZ-B2-T
18.432MHz
XOUT
XIN/PGMCK
RN4
100 x4
TRSTout
TRSTin
TDIout
TDIin
TMSout
TMSin
TCKout
TCKin
RTCKin
TESTRCK
SWOin
TRESin
TRESout
TDIclk
TDOclk
TDOin
R8
47k
R9
47k
R10
100
R11
390
PA8/PGMM0/ADTRG/CTS0
PA22/PGMD10/TXD1/NPCS3
PA17/PGMD5/AD0/TD/PCK1
PA26/PGMD14?TIOA2/DCD1
PA13/PGMD1/PWM2/MOSI
PA10/PGMM2/NPCS2/DTXD
PA14/PGMD2/PWM3/SPCK
PA25/PGMD13/PWM2/CTS1
PA6/PGMNOE/PCK0/TXD0
PA24/PGMD12/PWM1/RTS1
PA12/PGMD0/PWM1/MISO
PA5/PGMRDY/NPCS3/RXD0
PA21/PGMD9/RXD1/PCK1
PA7/PGMNVALID/PWM3/RTS0
PA23/PGMD11PA23/SCK1/PWM0
PA16/PGMD4/RK/FIQ/AD2/TIOB1/TK
PA19/PGMD7/AD2/RK/FIQ
PA18/PGMD6/RD/PCK2/AD1
PA0/PGMEN0/PWM0/TIOA0
VDDPLL
PLLRC
ERASE
PA31/NPCS1/PCK2
JTAGSEL
TDO
PA1/PGMEN1/PWM1/TIOB0
PA2/PGMEN2/SCK0/PWM2
PA3/NPCS3/TWD
PA30/NPCS2/IRQ1
PA29/TCLK2/RI1
TST
NRST
PA28/TCLK1/DSR1
PA27/PGMD15/TIOB2/DTR1
PA4/PGMNCMD/TCLK0/TWCK
PA9/PGMM1/NPCS1/DRXD
PA15/PGMD3/TIOA1/TF
AD7
AD6
AD5
AD4
DDP
DDM
PA11/PGMM3/PWM0/NPCS0
PA20/PGMD8/AD3
TDI
R12
2.2k
LED3
BL-HG636D
GREEN
R13
1.5k
C31
0.1uF
C32
1000pF
C33
0.1uF
R14
1.5k
R15
27
R16
27
C34
15pF
C35
15pF
C37
33pF
USB3
USB3_P
USB3_N
R17
1M
C36
4700pF
USB3
6 SHIELD
5 GND
4 NC
3 Data+
2 Data-
1 VBus
USB-JTAG OB
D2
RB160M-60
FB1
BLM18PG121SN1D
2A 120ohm 100MHz
JTAG SEL
Default: Open
(Use J-Link OB)
JP5
P61
TR1
DTA113ZKAT146
Base=1k/BE=10k
R20
1.5k
R21
1M
C38
4700pF
USB1
USB1_P
USB1_N
R18
27
R19
27
C39
33pF
USB Mini B
USB Device
P60
R22
20k
R23
22k
DNP
R24
10k
Device
SW3
UDP0
UDM0
HOST
R25
10k
U5
AP2141WG-7
SOT25-5
IN
nFLG
nEN
OUT
GND
nUFLG
nUBPON
C40
0.1uF
C41
10uF/10V
C42
4.7uF
10V
C43
220uF/16V
USB2
USB2_N
USB2_P
R26
27
R27
27
R28
15k
R29
15k
L3
MMZ2012Y202B
USB A
USB HOST
RN2
10k x4
RN3
10k x4
V_JTAG
JTAG
JTAG/SWD
TRACE
TRACE
DDK12045T 2012-05-29.SchDoc
DDK12008T 2012-04-05.SchDoc
Rev1.1
Rev1.0
Title MB9BF516R-SK
Size: A2
PCB No: DDK12045T
Rev. 1.1
Date: 2012/05/29
Time: 11:13:17
Sheet 1 of 1