Table of contents

Sheet 1: Project overview (this page)
Sheet 2: mb1367_Top
Sheet 3: STM32 microcontroller I/Os
Sheet 4: STM32 microcontroller power & user buttons
Sheet 5: STM32 microcontroller RF
Sheet 6: Arduino & Morpho extension connectors
Sheet 7: ST-LINK/V3E-SWD Module
Sheet 8: ST-LINK/V3E-SWD Power Module

Legend

General comment such as function title, configuration, ...

Text to be added to silkscreen.

Warning text.

Notes to generate the board layout.

OPEN PLATFORM LICENSE AGREEMENT

The Open Platform License Agreement ("Agreement") is a binding legal contract between you ("You") and STMicroelectronics International N.V. ("ST"), a company incorporated under the laws of the Netherlands acting for the purpose of this Agreement through its Swiss branch 39, Chemin du Champ des Filles, 1228 Plan-les-Ouates, Geneva, Switzerland.

By using the enclosed reference designs, schematics, PC board layouts, and documentation, in hardcopy or CAD tool file format (collectively, the "Reference Material"), You are agreeing to be bound by the terms and conditions of this Agreement. Do not use the Reference Material until You have read and agreed to this Agreement terms and conditions. The use of the Reference Material automatically implies the acceptance of the Agreement terms and conditions.

The complete Open Platform License Agreement can be found on www.st.com/opla.
U_Arduino_extension_connectors
Arduino_extension_connectors.SchDoc

U_STM32_microcontroller_IOs
STM32_microcontroller_IOs.SchDoc

U_STLink_V3E_Module
STLink_V3E_Module.SchDoc

U_STLink_V3E_PWR
STLink_V3E_PWR.SchDoc

Board CPN
BOARD CPN
HW100
PCB

HW101
BOARD REF
MB1399D-01

HW102
BOARD CPN

HW108
ES

U_STM32_microcontroller_RF
STM32_microcontroller_RF.SchDoc

U_STM32_microcontroller_power
STM32_microcontroller_power.SchDoc

T_NRST
PA[0..15]
PB[0..15]
PC[0..15]
PH3
ARD_D0_RX
ARD_D1_TX
LED1
LED2
LED3
ARD_PB3
FE_CTRL1
FE_CTRL2
FE_CTRL3
PA[0..15]
PB[0..15]
PC[0..15]

T_VCP_TX
T_VCP_RX
T_SYSCLK
T_SYSDO
T_SYSWO
T_JTDI
T_JTDI
T_JTDI

PB0

FE_CTRL1
FE_CTRL2
FE_CTRL3

T_SWCLK
T_SWDIO
T_SWO

Title: TSD/01/REV C
Project: NUCLEO-WL5JC
Variant: Low-Sand
Revision: 1.00
Reference: MB1389
Size: A4  Date: 2020-July-24  Sheet: 2 of 8
Decoupling capacitors have to be as close as possible from the pins.
WARNING voltage applied to VIN <11.5V
STLK USB HS & 5V USB charger

STDC14 receiver connector

ESD protections for connectors

STLX communication LEDs

SV from USB STLX

**ST-LinkV3E SWD MCU**

*Connector must be on the border of the PCB*

**Impedance Constraint [Min = 85.00  Max = 95.00 ]**

*Matched Net Lengths [Tolerance = 2mm]*

STDC14. Specific constraints for T_SWDIO and T_SWCCLK (must have same length and must be Shielded).

The routing of the tracks must be done on continuity from ST-LINKV3E --> 47ohms resistors --> Target MCU,

to avoid stub noises and for EMC approach (47ohms resistors and ESDALC6V1W5 must be very close to STDC14).

Component C90 close to pin 1 of USB STLX connector.

Pin attributions on ESD can be swapped for layout optimisation.