STM32F407VET6 Arm Cortex-M4 core with DSP and FPU Pinout Diagram

NRF2401 module wireless socket

USB-Slave interface

5V reservation

8M and 32.768k crystal oscillator

JTAG/SWD debug interface

CPU master chip STM32F407VET6

Serial port 1 (ISP serial port)

SD card holder

Data FLASH-W25Q16

3.3V reservation

2 LEDs

Boot selects TTL serial port

3.3V regulator

TFT LCD interface

48P-2.54mm I/O interface

TFT LCD interface

M3 fixing hole

2 USER buttons

Pin							Pin
+3.3V							+3.3V
+3.3V							+3.3V
BOOT0							BOOT1
GND							GND
GND							GND
PE_1							PE_0
PB_9	I2C1 SDA	CAN1 TD	PWM	PWM	CAN1 RD	I2C1 SCL	PB_8
PB_7	I2C1 SDA	Serial1 RX	PWM	CAN2 TD	Serial1 TX	I2C1 SCL	PB_6
PB_5		SPI1 MOSI	CAN2 RD	PWM	SPI1 SCK		PB_3
PD_7							PD_6
PD_5							PD_4
PD_3							PD_2
PD_1		CAN1 TD		CAN1 RD			PD_0
PC_12		SPI3 MOSI			SPI3 MISO		PC_11
PC_10		SPI3 SCK		PWM	SPI1 NSS		PA_15
PA_12	USB DP	Serial6 RX	CAN1 TD	CAN1 RD	Serial6 TX	USB DM	PA_11
PA_10		Serial1 RX	PWM	PWM	Serial1 TX		PA_9
PA_8	I2C3 SCL		PWM	PWM		I2C3 SDA	PC_9
PC_8			PWM	PWM	Serial6 RX		PC_7
PC_6		Serial6 TX	PWM				PD_15
PD_14							PD_13
PD_12							PD_11
PD_10							PD_9
PD_8				PWM	SPI2 MOSI		PB_15

STM32F4XX Pinout

Top connector — left side

Pin	Function
+5V	
+5V	
+3.3V	
+3.3V	
GND	
PE_2	
PE_4	BTN K0
PE_6	
PC_0	Analog In
PC_2	SPI2 MISO / Analog In
VR-	
PA_0	Analog In / PWM
PA_2	Serial2 TX / Analog In / PWM
PA_4	Analog Out / Analog In
PA_6	LED1 / Analog In / PWM
PC_4	Analog In
PB_0	Analog In / PWM
PE_7	
PE_9	
PE_11	
PE_13	
PE_15	PWM
PB_11	I2C2 SCL
PB_13	SPI2 SCK / CAN2 TD / PWM

Top connector — right side

Pin	Function
+5V	
+5V	
+3.3V	
+3.3V	
GND	
PE_3	BTN K1
PE_5	
PC_13	
PC_1	Analog In
PC_3	Analog In / SPI2 MOSI
VR+	
PA_1	PWM / Analog In
PA_3	PWM / Analog In / Serial2 RX
PA_5	PWM / Analog In / Analog Out
PA_7	PWM / Analog In / LED2
PC_5	Analog In
PB_1	PWM / Analog In
PE_8	
PE_10	
PE_12	
PE_14	
PB_10	PWM / I2C2 SCL / SPI2 SCK
PB_12	CAN2 RD / SPI2 NSS
PB_14	PWM / SPI2 MISO

STM32F4XX

Bottom board — SPI / nRF header

+3.3V	PB_7	PB_5	PB_8
	CS	SPI1 MOSI	IRQ
	CE	SPI1 SCK	SPI1 MISO
GND	PB_6	PB_3	PB_4

| GND |
| SWDIO | SWCLK |

| NRST |
| Serial1 TX | Serial1 RX |
| PA_9 | PA_10 | GND | +5V |

STM32F4XX

Bottom connector (TFT / LCD)

+3.3V	NC	PC_5	PB_15	PB_13	PD_13	PD_4	PD_15	PD_1	PE_8	PE_10	PE_12	PE_14	PD_8	PD_10	GND
		INT	SI (MOSI)	SCK	RS	RD	DB01	DB03	DB05	DB07	DB09	DB11	DB13	DB15	
		LCD_BL	SO (MISO)	SCS	CS_M	WR	DB00	DB02	DB04	DB06	DB08	DB10	DB12	DB14	RST
GND	GND	PB_1	PB_14	PB_12	PD_7	PD_5	PD_14	PD_0	PE_7	PE_9	PE_11	PE_13	PE_15	PD_9	NRST