

IoT module https://drive.google.com/open?id=0B-tRE3V0u_KmWmhic1JnMTdoZWc

J1.1 connector

Pin #	MCU Name	Type	Func1	Func2	Func3	Func4	Func5	Func6	Description
1	+5V_USB	S	-	-	-	-	-	-	Input voltage from USB +5V
2	VDD	S	-	-	-	-	-	-	+3.3V from voltage regulator
3	PB1	I/O	TIM1_CH3N TIM3_CH4 TIM8_CH3N LPTIM2_IN1	USART3_DE USART3_RTS	ADC1_IN16 ADC2_IN16	-	-	-	-
4	PC4	I/O	ADC1_IN13 ADC1_IN13	USART3_TX	-	-	-	-	-
5	PB12	I/O	SPI2_NSS	USART3_CK	TIM1_BKIN TIM15_BKIN	SWPMI1_IO	TSC_G1_IO1	SAI2_FS_A	-
6	PB13	I/O	SPI2_SCK	USART3_CTS	TIM1_CH1N TIM15_CH1N	I2C2_SCL	TSC_G1_IO2	SAI2_SCK_A	-
7	PB14	I/O	SPI2_MISO	USART3_DE USART3_RTS	TIM1_CH2N TIM8_CH2N TIM15_CH1	I2C2_SDA	TSC_G1_IO3	SAI2_MCLK_A	-
8	PC3	I/O	SPI2_MOSI	ADC1_IN14 ADC2_IN14 ADC3_IN14	LPTIM1_ETR LPTIM2_ETR	-	-	SAI1_SD_A	-
9	PA3	I/O	USART2_RX	ADC1_IN8 ADC2_IN8	TIM2_CH4 TIM5_CH4 TIM15_CH2	-	-	-	-
10	PA2	I/O	USART2_TX	ADC1_IN7 ADC2_IN7	TIM2_CH3 TIM5_CH3 TIM15_CH1	SYS_WKUP4	RCC_LSCO	-	-

11	JTCK/ SWCLK	I/O	-	-	-	-	-	-	Serial clk pin SWD
12	JTMS/ SWDAT	I/O	-	-	-	-	-	-	Serial data pin SWD
13	nReset	I	-	-	-	-	-	-	Reset pin
14	GND	S	-	-	-	-	-	-	Ground pin

J1.2 connector

Pin #	MCU Name	Type	Func1	Func2	Func3	Func4	Func5	Description
1	PB15	I/O	TIM1_CH3N TIM8_CH3N TIM15_CH2	SPI2_MOSI	TSC_G1_IO4	ADC1_EXTI15 ADC2_EXTI15 ADC3_EXTI15	SAI2_SD_A	-
2	GND	S	-	-	-	-	-	Ground pin
3	PA12	I/O	OTG_FS_DP	CAN1_TX	TIM1_ETR	-	-	CAN/USB
4	PA11	I/O	OTG_FS_DM	CAN1_RX	TIM1_CH4 TIM1_BKIN2	ADC1_EXTI11 ADC2_EXTI11 ADC3_EXTI11	-	CAN/USB
5	PA10	I/O	OTG_FS_ID	-	TIM1_CH3 TIM17_BKIN	-	-	-
6	PD2	I/O	SDMMC1_CMD	USART3_DE USART3_RTS UART5_RX	TIM3_ETR	TSC_SYNC	-	SDIO_CMD
7	PC12	I/O	SDMMC1_CK	UART5_TX USART3_CK	TSC_G3_IO4	SAI2_SD_B	SPI3_MOSI	SDIO_CLK
8	PC11	I/O	SDMMC1_D3	USART3_RX UART4_RX	TSC_G3_IO3	ADC1_EXTI11 ADC2_EXTI11 ADC3_EXTI11	SPI3_MISO	SDIO DATA3

9	PC10	I/O	SDMMC1_D2	USART3_TX UART4_TX	TSC_G3_IO2	-	SPI3_SCK	SDIO DATA2
10	PC9	I/O	SDMMC1_D1	TIM3_CH4 TIM8_CH4 TIM8_BKIN2	TSC_G4_IO4	OTG_FS_NOE	-	SDIO DATA1
11	PC8	I/O	SDMMC1_D0	TIM3_CH3 TIM8_CH3	TSC_G4_IO3	-	-	SDIO DATA0
12	PB8	I/O	I2C1_SCL	TIM4_CH3 TIM16_CH1	CAN1_RX	-	-	I2C1 bus clock. Connected to onboard sensors.
13	PB9	I/O	I2C1_SDA	TIM4_CH4 TIM17_CH1	CAN1_TX	-	SPI2_NSS	I2C1 bus data. Connected to onboard sensors.

Carrier Board https://drive.google.com/open?id=0B-tRE3V0u_Kmd1gxSGhVcmZjQzg

J2.1 connector

Pin #	MCU Name	Type	Func1	Func2	Func3	Func4	Description
1	NC	S	-	-	-	-	Not connected
2	VDD	S	-	-	-	-	+3.3V from voltage regulator
3	nReset	I	-	-	-	-	Reset pin
4	VDD	S	-	-	-	-	+3.3V from voltage regulator
5	Vin	S	-	-	-	-	Input voltage 5-8V
6	GND	S	-	-	-	-	Ground pin
7	GND	S	-	-	-	-	Ground pin
8	Vin	S	-	-	-	-	Input voltage 5-8V

J2.2 connector

Pin #	MCU Name	Type	Func1	Func2	Func3	Func4	Func5	Description
1	PA10	I/O	TIM1_CH3 TIM17_BKIN	OTG_FS_ID	-	-	-	-
2	PB15	I/O	TIM1_CH3N TIM8_CH3N TIM15_CH2	SPI2_MOSI	SAI2_SD_A	TSC_G1_IO4	ADC1_EXTI15 ADC2_EXTI15 ADC3_EXTI15	-
3	PB1	I/O	TIM1_CH3N TIM3_CH4 TIM8_CH3N LPTIM2_IN1	USART3_DE USART3_RTS	ADC1_IN16 ADC2_IN16	-	-	-
4	PC4	I/O	ADC1_IN13 ADC1_IN13	USART3_TX	-	-	-	-
5	I2C1_SDA	I/O	I2C1_SDA	TIM4_CH4 TIM17_CH1	CAN1_TX	SPI2_NSS	-	I2C1 bus clock
6	I2C1_SCL	I/O	I2C1_SCL	TIM4_CH3 TIM16_CH1	CAN1_RX	-	-	I2C1 bus data

J2.3 connector

Pin #	MCU Name	Type	Func1	Func2	Func3	Func4	Func5	Func6	Description
1	PA12	I/O	OTG_FS_DP	CAN1_TX	TIM1_ETR	–	–	–	CAN/USB
2	PA11	I/O	OTG_FS_DM	CAN1_RX	TIM1_CH4 TIM1_BKIN2	ADC1_EXTI11 ADC2_EXTI11 ADC3_EXTI11	–	–	CAN/USB
3	PB12	I/O	SPI2_NSS	USART3_CK	TIM1_BKIN TIM15_BKIN	SWPMI1_IO	TSC_G1_IO1	SAI2_FS_A	–
4	PC3	I/O	SPI2_MOSI	–	LPTIM1_ETR LPTIM2_ETR	ADC1_IN14 ADC2_IN14 ADC3_IN14	–	SAI1_SD_A	–
5	PB14	I/O	SPI2_MISO	USART3_DE USART3_RTS	TIM1_CH2N TIM8_CH2N TIM15_CH1	I2C2_SDA	TSC_G1_IO3	SAI2_MCLK_A	–
6	PB13	I/O	SPI2_SCK	USART3_CTS	TIM1_CH1N TIM15_CH1N	I2C2_SCL	TSC_G1_IO2	SAI2_SCK_A	–
7	GND	S	–	–	–	–	–	–	Ground pin
8	AVDD	S	–	–	–	–	–	–	Analog supply 3.3V
9	I2C1_SDA	I/O	I2C1_SDA	CAN1_TX	TIM4_CH4 TIM17_CH1	SPI2_NSS	–	–	I2C1 bus clock
10	I2C1_SCL	I/O	I2C1_SCL	CAN1_RX	TIM4_CH3 TIM16_CH1	–	–	–	I2C1 bus data

J2.4 connector

Pin #	MCU Name	Type	Func1	Func2	Func3	Func4	Func5	Description
1	PA3	I/O	USART2_RX	ADC1_IN8 ADC2_IN8	TIM2_CH4 TIM5_CH4 TIM15_CH2	-	-	-
2	PA2	I/O	USART2_TX	ADC1_IN7 ADC2_IN7	TIM2_CH3 TIM5_CH3 TIM15_CH1	SYS_WKUP4	RCC_LSCO	-
3	PC9	I/O	SDMMC1_D1	TIM3_CH4 TIM8_CH4 TIM8_BKIN2	TSC_G4_IO4	OTG_FS_NOE	-	SDIO DATA1
4	PC8	I/O	SDMMC1_D0	TIM3_CH3 TIM8_CH3	TSC_G4_IO3	-	-	SDIO DATA0
5	PC12	I/O	SDMMC1_CK	UART5_TX USART3_CK	TSC_G3_IO4	SAI2_SD_B	SPI3_MOSI	SDIO_CLK
6	PD2	I/O	SDMMC1_CMD	USART3_DE USART3_RTS UART5_RX	TIM3_ETR	TSC_SYNC	-	SDIO_CMD
7	PC10	I/O	SDMMC1_D2	USART3_TX UART4_TX	TSC_G3_IO2	-	SPI3_SCK	SDIO DATA2
8	PC11	I/O	SDMMC1_D3	USART3_RX UART4_RX	TSC_G3_IO3	ADC1_EXTI11 ADC2_EXTI11 ADC3_EXTI11	SPI3_MISO	SDIO DATA3