TODO: PA7 not assigned in TQFP-64 STM32F0.

TODO: FPGA clocks and PLLs.

													USED	6	20	20	16	59	38	22							115			
													FREE							0							0			
F0-32 PIN	**F0-48 PIN**	**P0-64 PIN**	**F4-100 PIN**	**F4-144 PIN**	**FMC**	**FMC function**	**DCMI**	**LCD**	**Arduino PWM**	**ELL-i external function**	**Ell-i conn. pin**	**ELL-i name**	**JTAG**	**Ard**	**ELL**	**DIP**	**MEM**	**DDR2**	**XO2 32**	**XO2 32 PIN**	**XO2 256 I/O**	**XO2 32 BANK**	**XO2 144**	**XO2 144 PIN**	**XO2 4000 I/O**	**XO2 144 BANK**				
PA 0	PA 0	PA 0	PA 0	PA 0						**Arduino A 0**	**11**	**A0**		1																
PA 2	PA 2	PA 2		PF 6	~~FMC_NIORD~~	~~PC Card~~				**Arduino A 1** / 051: COMP2_INM	**9**	**A1**		1																
PA 4	PA 4	PA 4	PA 4	PA 4						**Arduino A 2** / DAC1_OUT	**7**	**A2**		1																
PA 5	PA 5	PA 5	PA 5	PA 5						**Arduino A 3 /** DAC2_OUT	**5**	**A3**		1																
PB 7	PB 9	PB 9	PB 7	PB 9			DCMI_D 7)	**LCD_B7**		Arduino A 4 / **SDA**	**3**	**A4**		1					1	27	PT8D **SDA/PCLK**	0	1	125	PT20D **SDA/PCLKC0**	0			
PB 6	PB 6	PB 6	PB 6	PB 6	**FMC_SDNE1**	SDRAM	~~DCMI_D 5)--~~			Arduino A 5 / **SCL**	**1**	**A5**		1			1		1	28	PT8C **SCL/PCLKT**	0	1	126	PT20C **SCL/PCLKT0**	0			
PA10	PA10	PA10	PA10	PA10			~~DCMI_D 1)~~		TIM1_CH3	Arduino D 0 / **USART1 RX**	**24**	**D0**		1		1							1	59	PB23A	2			
PA 9	PA 9	PA 9	PA 9	PA 9			~~DCMI_D 0)~~		TIM1_CH2	Arduino D 1 / **USART1 TX**	**26**	**D1**		1		1							1	60	PB23B	2			
PA 7	PA 7	PD 2	PD 2	PD 2			**DCMI_D11)**		(TIM3_ETR)/TIM	Arduino D 2	**28**	**D2**		1		1							1	127	PT18B **PCLKC0_1**	0			
PA11	PA11	PA11	PA11	PA11				**LCD_R4**	TIM1_CH4	Arduino D 3 **(PWM)** / CAN1_RX / USART1_CTS / DONE	**30**	**D3**		1		1			1	23	PT9D **DONE**	0	1	109	PT28D **DONE**	0			
PA12	PA12	PA12	PA12	PA12				**LCD_R5**	(TIM1_ETR)	Arduino D 4 / CAN1_TX / USART1_RTS / INITN	**32**	**D4**		1		1			—	—	—		1	110	PT28C **INITN**	0			
PB 1	PB 1	PB 1	PB 1	PB 1				**LCD_R6)++**	TIM3_CH4	Arduino D 5 **(PWM)**	**31**	**D5**	1	1		1							1	55	PB20A PCLKT2_1	2			
PA 3	PA 3	PA 3	PA 3	PA 3				**LCD_B5**	TIM9_CH2/TIM	Arduino D 6 (**PWM**) / 051: COMP2_INP	**29**	**D6**		1		1							1	56	PB20B PCLKC2_1	2			
PB 4	PB 8	PB 8	PB 8	PB 8						Arduino D 7	**27**	**D7**		1		1							1	52	PB15A	2			
PB 2	PB 7	PB 7		PG 6	~~FMC_INT2~~	~~NAND~~	**DCMI_D12)**	LCD_R7)		Arduino D 8 (For LQFP32, PB2 also used for **SN**)	**25**	**D8**		1		1							1	54	PB15B	2			
PB 0	PB 0	PB 0	PB 0	PB 0				**LCD_R3**	TIM3_CH3	Arduino D 9 (**PWM**)	**23**	**D9**		1		1			1	20	PR5B PCLKC1_0	1	1	133	PT14A	0			
PA15	PA15	PA15	PA15	PA15			**DCMI_ HSYNC**	**LCD_VSYNC**	TIM2_CH1	Arduino D10 **SPI1_SS** (**PWM**) / **JTDI<-JTDO**	**21**	**D10**		1					1	1	PT6C **TDO**	0	1	137	PT13C **TDO**	0			
PB 5	PB 5	PB 5	PB 5	PB 5	**FMC_SDCKE1**	SDRAM	~~DCMI_D10)--~~		TIM3_CH2	Arduino D11 / **SPI1_MOSI** (**PWM**) / CAN2_RX	**19**	**D11**		1			1		1	17	PB9B **SI**	2	1	71	PB30B **SI**	2			
PA 6	PA 6	PA 6	PA 6	PA 6			**DCMI_PIXCLK**	**LCD_G2**	TIM13_CH1/TIM	Arduino D12 / **SPI1_MISO**	**17**	**D12**		1					1	10	PB2D **SO**	2	1	45	PB9B **SO**	2			
PB 3	PB 3	PB 3	PB 3	PB 3					TIM2_CH2	Arduino D13 / **SPI1_SCK/ JTDO from STM32F4**	**15**	**D13**	1	1					1	9	PB2C **CCLK**	2	1	44	PB9A **CCLK**	2			
		PF 4		PF 7	~~FMC_NREG~~	~~PC Card~~				ELL-i E 0 LVDS 1T	**33**	**E0**			1	1			1	11	PB4A	2	1	141	PT10A	0			
		PF 5		PF 8	~~FMC_NIOWR~~	~~PC Card~~				ELL-i E 1 LVDS 1C	**35**	**E1**			1	1			1	12	PB4B	2	1	140	PT10B	0			
		PF 6		PF 9	~~FMC_CD~~	~~PC Card~~				ELL-i E 2 LVDS 2T	**37**	**E2**			1	1			1	13	PB4C	2	1	139	PT11A	0			
		PF 7		PF10	~~FMC_INTR~~	~~PC Car~~	DCMI_D11)--	LCD_DE)		ELL-i E 3 LVDS 2C	**39**	**E3**			1	1			1	14	PB4D	2	1	138	PT11B	0			
		PC 0		XX						ELL-i E 4 LVDS 3T	**41**	**E4**			1								1	122	PT21A	0			
		PC 1		XX						ELL-i E 5 LVDS 3C	**43**	**E5**			1								1	121	PT21B	0			
		PC 2		XX						ELL-i E 6 LVDS 4T	**45**	**E6**			1								1	112	PT27A	0			
		PC 3		XX						ELL-i E 7 LVDS 4C	**47**	**E7**			1								1	111	PT27B	0			
		PC 4		PG 7	~~FMC_INT3~~	~~NAND~~	**DCMI_D13)**	LCD_CLK)		ELL-i E 8 LVDS 5T	**49**	**E8**			1								1	114	PT25A	0			
		PC 5		XX						ELL-i E 9 LVDS 5C	**51**	**E9**			1								1	113	PT25B	0			
—	—	PC 6	PC 6	PC 6			**DCMI_D 0)**	**LCD_HSYNC**		ELL-i E10 LVDS 6T	**53**	**E10**			1				1				1	143	PT9A	0			
—	—	PC 7	PC 7	PC 7			**DCMI_D 1)**	**LCD_G6**		ELL-i E11 LVDS 6C	**55**	**E11**			1				1				1	142	PT9B	0			
—	PB11	PB11	—	PB11				**LCD_G5**		ELL-i E12 **I2C2 SDA**	**57**	**E12**			1	1			1	4	PL5C	3	1	115	PT24B	0			
—	PB10	PB10	—	PB10				**LCD_G4**		ELL-i E13 **I2C2 SCL**	**59**	**E13**			1	1			1	5	PL5D	3	1	117	PT24A	0			
—	PB12	PB12	PB 9	PB12						ELL-i E14 **SPI2 SS / CAN2_RX**	**60**	**E14**			1								1	65	PB27A	2			
—	PB15	PB15	PB15	PB15						ELL-i E15 **SPI2 MOSI**	**58**	**E15**			1								1	69	PB29B	2			
—	PB14	PB14	PB14	PB14						ELL-i E16 **SPI2 MISO**	**56**	**E16**			1								1	68	PB29A	2			
—	PB13	PB13	PB10	PB13						ELL-i E17 **SPI2 SCK / CAN2_TX**	**54**	**E17**			1								1	67	PB27B	2			
—	—	PC11	PC11	PC11			~~DCMI_D 4~~			ELL-i E18 **USART3 RX** (F4-only)	**52**	**E18**			1								1	58	PB21B	2			
—	—	PC10	PC10	PC10			**DCMI_D 8**	**LCD_R2**		ELL-i E19 **USART3 TX** (F4-only)	**50**	**E19**			1								1	57	PB21A	2			
PA 1	PA 1	PA 1	—	—						**ETH ENC28J60 intrerrupt**		**ETH_INT**																		
—	—	—	PA 7	PA 7				~~LCD_R6)--~~		**ETH_RMII_CRS_DV**		**ETH_CRS**																		
—	—	—	PC 1	PC 1						**ETH_RMII_MDC**		**ETH_MDC**																		
—	—	—	PA 2	PA 2						**ETH_RMII_MDIO**		**ETH_MDIO**																		
—	—	—	PA 1	PA 1						**ETH_RMII_REF_CLK**		**ETH_CLK**																		
—	—	—	PC 4	PC 4						**ETH_RMII_RXD0**		**ETH_RXD0**																		
—	—	—	PC 5	PC 5						**ETH_RMII_RXD1**		**ETH_RXD1**																		
			PB12	PG13						**ETH_RMII_TXD0**		**ETH_TXD0**																		
			PB13	PG14						**ETH_RMII_TXD1**		**ETH_TXD1**																		
			PB11	PG11	~~FMC_NCE4_2~~	~~Chip se~~	~~DCMI_D 3)--~~	~~LCD_B3)--~~		**ETH_RMII_TXEN**		**ETH_TXEN**																		
—	—	PC12	PC12	PC12			**DCMI_D 9**			Internal **CSSPIN** / DMCI_D9		CSSPIN							1	8	PB2A **CSSPIN**	2	1	40	PB4A **CSSPIN**	2			
PA 8	PA 8	PA 8	PA 8	PA 8				~~LCD_R6)--~~	TIM1_CH1	Internal **MCO**		MCO							1	21	PR5A **PCLKT1_0**	1	1	128	PT18A **PCLKT0_1**	0			
—	—	PC 8	PC 8	PC 8			~~DCMI_D 2)~~			Internal **PROGRAMN**		PROGRAMN							1	25	PT9B **PROGRAM**	0	1	119	PT23D **PROGRAMN**	0			
PB 2	PB 2	PB 2	PB 2	PB 2			DCMI_D 6)	**LCD_B6**		Internal **SN** / DMCI_D6 / LCD_B6 (Arduino D8 for LQFP32)		FPGA_SN							1	16	PB9A **SN**	2	1	70	PB30A **SN**	2			
PA14	PA14	PA14	PA14	PA14						**JTAG JTCK / SWCLK**		**JTCK**	1						1	30	PT7A **TCK**	0	1	131	PT15C **TCK**	0			
—	—	PC 9	PC 9	PC 9						**JTAG JTDI to MachXO2**		**JTDI**	1						1	32	PT6D **TDI**	0	1	136	PT13D **TDI**	0			
PA13	PA13	PA13	PA13	PA13						**JTAG JTMS / SWDIO**		**JTMS**	1						1	29	PT7B **TMS**	0	1	130	PT15D **TMS**	0			
PB 4	PB 4	PB 4	PB 4	PB 4					—	**JTAG NJTRST/JTAGENB**		**JTRST**	1						1	26	PT9A **JTAGENB**	0	1	120	PT23C **JTAGENB**	0			
			PD14	PD14	**FMC_D 0**					MEM ADDR / DATA 0		MEM_D0					1						1	1	PL3A	5			
			PD15	PD15	**FMC_D 1**					MEM ADDR / DATA 1		MEM_D1					1						1	2	PL3B	5			
			PD 0	PD 0	**FMC_D 2**					MEM ADDR / DATA 2		MEM_D2					1						1	3	PL4A	5			
			PD 1	PD 1	**FMC_D 3**					MEM ADDR / DATA 3		MEM_D3					1						1	4	PL4B	5			
			PE 7	PE 7	**FMC_D 4**					MEM ADDR / DATA 4		MEM_D4					1						1	5	PL6A	5			
			PE 8	PE 8	**FMC_D 5**					MEM ADDR / DATA 5		MEM_D5					1						1	6	PL6B	5			
			PE 9	PE 9	**FMC_D 6**					MEM ADDR / DATA 6		MEM_D6					1						1	9	PL7A	5			
			PE10	PE10	**FMC_D 7**					MEM ADDR / DATA 7		MEM_D7					1						1	10	PL7B	5			
			PE11	PE11	**FMC_D 8**			**LCD_G3**		MEM ADDR / DATA 8		MEM_D8					1						1	11	PL8A	5			
			PE12	PE12	**FMC_D 9**			**LCD_B4**		MEM ADDR / DATA 9		MEM_D9					1						1	12	PL8B	5			
			PE13	PE13	**FMC_D10**			**LCD_DE)**		MEM ADDR / DATA10		MEM_D10					1						1	20	PL10D PCLKC4_0	4			
			PE14	PE14	**FMC_D11**			**LCD_CLK)**		MEM ADDR / DATA11		MEM_D11					1						1	19	PL10C **PCLKT4_0**	4			
			PE15	PE15	**FMC_D12**			**LCD_R7**)++		MEM ADDR / DATA12		MEM_D11					1						1	15	PL10A	4			
			PD 8	PD 8	**FMC_D13**					MEM ADDR / DATA13		MEM_D12					1						1	17	PL10B	4			
			PD 9	PD 9	**FMC_D14**					MEM ADDR / DATA14		MEM_D13					1						1	13	PL9A	4			
			PD10	PD10	**FMC_D15**			**LCD_B3)**		MEM ADDR / DATA15		MEM_D14					1						1	14	PL9B	4			
				PF 0	FMC_A 0					MEM ADDR 0		MEM_A0					1														
				PF 1	FMC_A 1					MEM ADDR 1		MEM_A1					1														
				PF 2	FMC_A 2					MEM ADDR 2		MEM_A2					1														
				PF 3	FMC_A 3					MEM ADDR 3		MEM_A3					1														
				PF 4	FMC_A 4					MEM ADDR 4		MEM_A4					1														
				PF 5	FMC_A 5					MEM ADDR 5		MEM_A5					1														
				PF12	FMC_A 6					MEM ADDR 6		MEM_A6					1														
				PF13	FMC_A 7					MEM ADDR 7		MEM_A7					1														
				PF14	FMC_A 8					MEM ADDR 8		MEM_A8					1														
				PF15	FMC_A 9					MEM ADDR 9		MEM_A9					1														
				PG 0	FMC_A10					MEM ADDR10		MEM_A10					1														
				PG 1	FMC_A11					MEM ADDR11		MEM_A11					1														
				PG 2	FMC_A12					MEM ADDR12		MEM_A12					1														
				PG 3	FMC_A13					MEM ADDR13		MEM_A13					1														
				PG 4	FMC_A14					MEM ADDR14		MEM_A14					1														
				PG 5	FMC_A15					MEM ADDR15		MEM_A15					1														
			PD11	PD11	**FMC_A16**					MEM ADDR16		MEM_A16					1						1	21	PL13A	4			
			PD12	PD12	**FMC_A17**					MEM ADDR17		MEM_A17					1						1	22	PL13B	4			
			PD13	PD13	**FMC_A18**					MEM ADDR18		MEM_A18					1						1	23	PL14A	4			
			PE 3	PE 3	**FMC_A19**					MEM ADDR19		MEM_A19					1						1	24	PL14B	4			
			PE 4	PE 4	**FMC_A20**		**DCMI_D 4**	**LCD_B0**		MEM ADDR20		MEM_A20					1						1	41	PB4B	2			
			PE 5	PE 5	**FMC_A21**		DCMI_D 6)	**LCD_G0**		MEM ADDR21		MEM_A21					1						1	42	PB7A	2			
			PE 6	PE 6	**FMC_A22**		DCMI_D 7)	**LCD_G1**		MEM ADDR22		MEM_A22					1						1	61	PB24A	2			
			PE 2	PE 2	**FMC_A23**					MEM ADDR23		MEM_A23					1						1	62	PB24B	2			
			PD 7	PD 7	**FMC_NE1**/~~NCE2~~	Chip select				MEM CHIP SELECT 1		MEM_CS1					1						1	50	PB13B	2			
				PG 9	**FMC_NE2**/~~NCE3~~	Chip select				MEM CHIP SELECT 2		MEM_CS2					1														
				PG10	**FMC_NE3**/~~NCE4~~	Chip se	~~DCMI_D 2)~~	~~LCD_B2)--~~		MEM CHIP SELECT 3		MEM_CS3					1														
				PG12	**FMC_NE4**	Chip select		**LCD_B1**		MEM CHIP SELECT 4		MEM_CS4					1						1	63	PB24D	2			
—	—	—	PC 0	PC 0	**FMC_SDNWE**	SDRAM				MEM CTRL SDRAM		MEM_SDWNE					1														
—	—	—	PC 2	PC 2	**FMC_SDNE0**	SDRAM (opt)			—	MEM CTRL SDRAM		MEM_SDNE0					1														
—	—	—	PC 3	PC 3	**FMC_SDCKE0**	SDRAM (opt)				MEM CTRL SDRAM		MEM_SDCKE0					1														
				PF11	**FMC_SDNRAS**	SDRAM	~~DCMI_D12)~~			MEM CTRL SDRAM		MEM_SDNRAS					1														
				PG 8	**FMC_SDCLK**	SDRAM				MEM CTRL SDRAM		MEM_SDCLK					1														
				PG15	**FMC_SDNCAS**	SDRAM	~~DCMI_D13)~~			MEM CTRL SDRAM		MEM_SDNCAS					1														
—	—	—	—	PB 7	**FMC_NL/NADV**	NOR/PS	**DCMI_VSYNC**			MEM CTRL SRAM		MEM_NADV					1						1	43	PB7B	2			
			PD 3	PD 3	**FMC_CLK**	NOR/PS	**DCMI_D 5)**++	**LCD_G7**		MEM CTRL SRAM		MEM_CLK					1						1	49	PB13A **PCLKT2_0**	2			
			PD 4	PD 4	**FMC_NOE**	NOR/PSRAM/SDRAM				MEM CTRL SRAM/SDRAM		MEM_NOE					1						1	47	PB10A	2			
			PD 5	PD 5	**FMC_NWE**	NOR/PSRAM/SDRAM				MEM CTRL SRAM/SDRAM		MEM_NWE					1						1	48	PB10B	2			
			PD 6	PD 6	**FMC_NWAIT**	NOR/PS	**DCMI_D10)++**	**LCD_B2)++**		MEM CTRL SRAM/SDRAM		MEM_NWAIT					1						1	132	PT14B	0			
			PE 0	PE 0	**FMC_NBL0**	SRAM/I	**DCMI_D 2)**			MEM CTRL SRAM/SDRAM		MEM_NBL0					1						1	38	PB3A	2			
			PE 1	PE 1	**FMC_NBL1**	SRAM/I	**DCMI_D 3)**			MEM CTRL SRAM/SDRAM		MEM_NBL1					1						1	39	PB3B	2			
				XX						MEM DDR2 ADDR		DDR_A0						1					1	73	PR19B	1			
				XX						MEM DDR2 ADDR		DDR_A1						1					1	74	PR19A	1			
				XX						MEM DDR2 ADDR		DDR_A2						1					1	75	PR18B	1			
				XX						MEM DDR2 ADDR		DDR_A3						1					1	76	PR18A	1			
				XX						MEM DDR2 ADDR		DDR_A4						1					1	77	PR16B	1			
				XX						MEM DDR2 ADDR		DDR_A5						1					1	78	PR16A	1			
				XX						MEM DDR2 ADDR		DDR_A6						1					1	81	PR15B	1			
				XX						MEM DDR2 ADDR		DDR_A7						1					1	82	PR15A	1			
				XX						MEM DDR2 ADDR		DDR_A8						1					1	83	PR14B	1			
				XX						MEM DDR2 ADDR		DDR_A9						1					1	84	PR14A	1			
				XX						MEM DDR2 ADDR		DDR_A10						1					1	85	PR13B	1			
				XX						MEM DDR2 ADDR		DDR_A11						1					1	86	PR13A	1			
				XX						MEM DDR2 ADDR		DDR_A12						1					1	87	PR10D	1			
				XX						MEM DDR2 ADDR		DDR_A13						1					1	89	PR10C	1			
				XX						MEM DDR2 ADDR		DDR_A14						1					1	95	PR8B DQ0	1			
				XX						MEM DDR2 ADDR		DDR_A15						1					1	96	PR8A DQ0	1			
				XX						MEM DDR2 CTRL								1					1	25	PL16A	3			
				XX						MEM DDR2 CTRL								1					1	26	PL16B	3			
				XX						MEM DDR2 CTRL								1					1	27	PL17A PCLKT3_0	3			
				XX						MEM DDR2 CTRL								1					1	28	PL17B PCLKTC_0	3			
				XX						MEM DDR2 CTRL								1					1	31	PL18D	3			
				XX						MEM DDR2 CTRL								1					1	32	PL19A	3			
				XX						MEM DDR2 CTRL								1					1	33	PL19B	3			
				XX						MEM DDR2 CTRL								1					1	34	PL20A	3			
				XX						MEM DDR2 CTRL								1					1	35	PL20B	3			
				XX						MEM DDR2 CTRL								1					1	103	PR4C	1			
				XX						MEM DDR2 CTRL CLK		DDR_CLKN						1					1	91	PR10B PCLKC1_0	1			
				XX						MEM DDR2 CTRL **CLK**		DDR_CLK						1					1	92	PR10A **PCLKT1_0**	1			
				XX						MEM DDR2 DATA		DDR_DQS0						1					1	93	PR9B DQS0	1			
				XX						MEM DDR2 DATA		DDR_DQS0N						1					1	94	PR9A DQS0N	1			
				XX						MEM DDR2 DATA		DDR_DQ1						1					1	97	PR6B DQ0	1			
				XX						MEM DDR2 DATA		DDR_DQ0						1					1	98	PR6A DQ0	1			
				XX						MEM DDR2 DATA		DDR_DQ3						1					1	99	PR5B DQ0	1			
				XX						MEM DDR2 DATA		DDR_DQ2						1					1	100	PR5A DQ0	1			
				XX						MEM DDR2 DATA		DDR_DQ5						1					1	104	PR3B DQ0	1			
				XX						MEM DDR2 DATA		DDR_DQ4						1					1	105	PR3A DQ0	1			
				XX						MEM DDR2 DATA		DDR_DQ7						1					1	106	PR2B DQ0	1			
				XX						MEM DDR2 DATA		DDR_DQ6						1					1	107	PR2A DQ0	1			