-32 F0-4 IN PIN	18 P0-64 I PIN		) F4-144 PIN	FMC FM		LCD	Arduino PWN	ELL-i external function	FREE Ell-i ELL-i name conn.	JTAG Ard ELL DIP MEM DDR	0 XO2 XO 32 32		115 0 <b>XO2 XO2</b> <b>32 144</b>	
0 PA 0 2 PA 2		PA 0	PA 0	FMC_NIORD PC	n <del>Card</del>			Arduino A 0 Arduino A 1 / 051: COMP2_INM	pin 11 A0 9 A1	1 1	PII	N	BANK	PIN
4 PA 4 5 PA 5	PA 5	PA 4 PA 5	PA 5					Arduino A 2 / DAC1_OUT Arduino A 3 / DAC2_OUT	7 A2 5 A3	1 1				
7 PB 9 6 PB 6 10 PA10	PB 6	PB 7 PB 6 PA10		FMC_SDNE1 SDI	DCMI_D 7) RAN <del>DCMI_D 5)</del> <del>DCMI_D 1)</del>	LCD_B7	TIM1_CH3	Arduino A 4 / <b>SDA</b> Arduino A 5 / <b>SCL</b> Arduino D 0 / <b>USART1 RX</b>	3 A4 1 A5 24 D0	1 1 1 1 1		PT8D SDA/PCLKORS PT8C SCL/PCLKORS	0 1	125 PT20D <b>SDA/PCLKC</b> 0 126 PT20C <b>SCL/PCLKT</b> 0 59 PB23A
9 PA 9 7 PA 7	PA 9	PA 9	PA 9 PD 2		DCMI_D 0) DCMI_D11)		TIM1_CH2 (TIM3_ETR)/TII	Arduino D 1 / USART1 TX	26 D1 28 D2	1 1 1			1	60 PB23B 127 PT18B <b>PCLKC0_1</b>
<ul><li>11 PA11</li><li>12 PA12</li><li>1 PB 1</li></ul>	PA12	PA11 PA12 PB 1	PA12			LCD_R4 LCD_R5 LCD_R6)++	TIM1_CH4 (TIM1_ETR) TIM3_CH4	Arduino D 3 (PWM) / CAN1_RX / USART1_CTS / DONE Arduino D 4 / CAN1_TX / USART1_RTS / INITN Arduino D 5 (PWM)	30 D3 32 D4 31 D5	1 1 1	1 2	23 PT9D <b>DONE</b> —		109 PT28D <b>DONE</b> 110 PT28C <b>INITN</b> 55 PB20A PCLKT2_1
3 PA 3 4 PB 8	PA 3	PA 3	PA 3 PB 8			LCD_B5		Arduino D 6 ( <b>PWM</b> ) / 051: COMP2_INP  Arduino D 7	29 D6 27 D7	1 1			1	56 PB20B PCLKC2_1 52 PB15A
PB 7 0 PB 0		PB 0	PB 0	FMC_INT2 NAI	DOMI_D12)	LCD_R7) LCD_R3	TIM3_CH3	Arduino D 8 (For LQFP32, PB2 also used for <b>SN</b> ) Arduino D 9 ( <b>PWM</b> )	25 D8 23 D9	1 1 1		20 PR5B PCLKC1_0	1 1	54 PB15B 133 PT14A
<ul><li>15 PA15</li><li>5 PB 5</li><li>6 PA 6</li></ul>	PB 5	PA15 PB 5 PA 6	PA15 PB 5 PA 6	FMC_SDCKE1 SDI	DCMI_ HSYNO RAN <del>DCMI_D10)</del> DCMI_PIXCLK		TIM3_CH2	Arduino D10 SPI1_SS (PWM) / JTDI<-JTDO Arduino D11 / SPI1_MOSI (PWM) / CAN2_RX IN Arduino D12 / SPI1_MISO	21 D10 19 D11 17 D12	1 1	1 1	1 PT6C <b>TDO</b> 7 PB9B <b>SI</b> 0 PB2D <b>SO</b>		137 PT13C <b>TDO</b> 71 PB30B <b>SI</b> 45 PB9B <b>SO</b>
3 PB 3	PF 4	PB 3	PB 3		<del>Card</del>		TIM2_CH2	Arduino D13 / SPI1_SCK/ JTDO from STM32F4 ELL-i E 0 LVDS 1T	15 D13 33 E0	1 1 1	1 1 1	9 PB2C <b>CCLK</b> 1 PB4A	2 1	44 PB9A <b>CCLK</b> 141 PT10A
	PF 5 PF 6 PF 7		PF 8 PF 9 PF10	FMC_CD PC	Card Card Card Card DCMI_D11)	LCD_DE)		ELL-i E 1 LVDS 1C ELL-i E 2 LVDS 2T ELL-i E 3 LVDS 2C	35 E1 37 E2 39 E3	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1	2 PB4B 3 PB4C 4 PB4D	2 1	140 PT10B 139 PT11A 138 PT11B
	PC 0 PC 1 PC 2		XX XX					ELL-i E 4 LVDS 3T ELL-i E 5 LVDS 3C ELL-i E 6 LVDS 4T	41 E4 43 E5 45 E6	1			1	122 PT21A 121 PT21B 112 PT27A
	PC 3 PC 4		XX XX PG 7	FMC_INT3 NAI	NÐ DCMI_D13)	LCD_CLK)		ELL-i E 7 LVDS 4C ELL-i E 8 LVDS 5T	47 E7 49 E8	1 1 1			1	111 PT27B 114 PT25A
_		PC 6 PC 7	PC 6		DCMI_D 0) DCMI_D 1)	LCD_HSYNC	;	ELL-i E 9 LVDS 5C ELL-i E10 LVDS 6T ELL-i E11 LVDS 6C	51 E9 53 E10 55 E11	1 1			1	113 PT25B 143 PT9A 142 PT9B
PB11		_	PB11 PB10			LCD_G5 LCD_G4		ELL-i E12 <b>I2C2 SDA</b> ELL-i E13 <b>I2C2 SCL</b>	57 E12 59 E13	1 1 1 1		4 PL5C 5 PL5D	3 1 3 1	115 PT24B 117 PT24A
PB15	PB12 PB15 PB14	PB15						ELL-i E14 SPI2 SS / CAN2_RX ELL-i E15 SPI2 MOSI ELL-i E16 SPI2 MISO	60 E14 58 E15 56 E16	1 1			1	65 PB27A 69 PB29B 68 PB29A
PB13	B PB13		PB13		DCMI_D-4			ELL-i E17 SPI2 SCK / CAN2_TX ELL-i E18 USART3 RX (F4-only)	54 E17 52 E18	1			1	67 PB27B 58 PB21B
1 PA 1		PC10 - PA 7	_		DCMI_D 8	LCD_R2		ELL-i E19 USART3 TX (F4-only) ETH ENC28J60 intrerrupt	50 E19 ETH_INT	1			1	57 PB21A
- - -	_ _ _	PC 1 PA 2	PC 1			<del>LCD_R6)</del>		ETH_RMII_CRS_DV ETH_RMII_MDC ETH_RMII_MDIO	ETH_CRS ETH_MDC ETH_MDIO					
_ 	-	PA 1 PC 4 PC 5	PC 4					ETH_RMII_REF_CLK ETH_RMII_RXD0 ETH_RMII_RXD1	ETH_CLK ETH_RXD0 ETH_RXD1					
		PB12 PB13	PG13 PG14					ETH_RMII_TXD0 ETH_RMII_TXD1	ETH_TXD0 ETH_TXD1					
– 8 PA8		PC12	PC12	FMC_NCE4_2 Chi	p se DCMI_D 3) DCMI_D 9	LCD_B3) LCD_R6)	TIM1_CH1	Internal CSSPIN / DMCI_D9 Internal MCO	ETH_TXEN  CSSPIN  MCO			8 PB2A <b>CSSPIN</b> 21 PR5A <b>PCLKT1_0</b>	2 1	40 PB4A <b>CSSPIN</b> 128 PT18A <b>PCLKT0_1</b>
- 2 PB 2	PC 8		PC 8		<del>DCMI_D 2)</del> DCMI_D 6)	LCD_B6	TIIWIT_OTTI	Internal <b>PROGRAMN</b> Internal <b>SN</b> / DMCI_D6 / LCD_B6 (Arduino D8 for LQFP32	PROGRAMN		1 2	25 PT9B <b>PROGRAM</b> 6 PB9A <b>SN</b>	0 1 2 1	119 PT23D <b>PROGRAMN</b> 70 PB30A <b>SN</b>
_		PC 9	PC 9					JTAG JTCK / SWCLK JTAG JTDI to MachXO2	JTDI	1	1 3	30 PT7A <b>TCK</b> 32 PT6D <b>TDI</b>	0 1	131 PT15C <b>TCK</b> 136 PT13D <b>TDI</b>
13 PA13 4 PB 4		PB 4	PB 4	FMC_D 0			_	JTAG JTMS / SWDIO  JTAG NJTRST/JTAGENB  MEM ADDR / DATA 0	JTMS JTRST MEM_D0	1 1		29 PT7B <b>TMS</b> 26 PT9A <b>JTAGENB</b>	0 1 0 1	130 PT15D <b>TMS</b> 120 PT23C <b>JTAGENB</b> 1 PL3A
		PD15 PD 0	PD15 PD 0	FMC_D 1 FMC_D 2				MEM ADDR / DATA 1 MEM ADDR / DATA 2	MEM_D1 MEM_D2	1 1			1	2 PL3B 3 PL4A
		PD 1 PE 7 PE 8	PE 7	FMC_D 3 FMC_D 4 FMC_D 5				MEM ADDR / DATA 3 MEM ADDR / DATA 4 MEM ADDR / DATA 5	MEM_D3 MEM_D4 MEM_D5	1 1			1 1	4 PL4B 5 PL6A 6 PL6B
		PE 9 PE10	PE10	FMC_D 6 FMC_D 7		100.00		MEM ADDR / DATA 6 MEM ADDR / DATA 6	MEM_D6 MEM_D7	1			1	9 PL7A 10 PL7B
		PE12	PE12	FMC_D 8 FMC_D 9 FMC_D10		LCD_G3 LCD_B4 LCD_DE)		MEM ADDR / DATA 8 MEM ADDR / DATA 9 MEM ADDR / DATA10	MEM_D8 MEM_D9 MEM_D10	1 1			1	11 PL8A 12 PL8B 20 PL10D PCLKC4_0
		PE15	PE15	FMC_D11 FMC_D12		LCD_CLK) LCD_R7)++		MEM ADDR / DATA11 MEM ADDR / DATA12	MEM_D11 MEM_D12	1			1	19 PL10C <b>PCLKT4_0</b> 15 PL10A
		PD 8 PD 9 PD10	PD 9	FMC_D13 FMC_D14 FMC_D15		LCD_B3)		MEM ADDR / DATA13 MEM ADDR / DATA14 MEM ADDR / DATA15	MEM_D13 MEM_D14 MEM_D15	1 1				17 PL10B 13 PL9A 14 PL9B
			PF 1	FMC_A 0 FMC_A 1 FMC_A 2				MEM ADDR 0 MEM ADDR 1 MEM ADDR 2	MEM_A0 MEM_A1 MEM_A2	1				
			PF 3	FMC_A 3 FMC_A 4				MEM ADDR 3 MEM ADDR 4	MEM_A3 MEM_A4	1 1				
			PF12	FMC_A 5 FMC_A 6 FMC_A 7				MEM ADDR 5 MEM ADDR 6 MEM ADDR 7	MEM_A5 MEM_A6 MEM_A7	1 1				
			PF14 PF15	FMC_A 8 FMC_A 9				MEM ADDR 8 MEM ADDR 9	MEM_A8 MEM_A9	1 1				
			PG 1	FMC_A10 FMC_A11 FMC_A12				MEM ADDR10 MEM ADDR11 MEM ADDR12	MEM_A10 MEM_A11 MEM_A12	1 1				
			PG 3 PG 4	FMC_A13 FMC_A14				MEM ADDR13 MEM ADDR14	MEM_A13 MEM_A14	1 1				
			PD11	FMC_A15 FMC_A16 FMC_A17				MEM ADDR15 MEM ADDR16 MEM ADDR17	MEM_A15 MEM_A16 MEM_A17	1 1 1			1 1	21 PL13A 22 PL13B
		PD13 PE 3	PE 3	FMC_A18 FMC_A19	DOM: D.4	1 OD . DO		MEM ADDR18 MEM ADDR19	MEM_A18 MEM_A19	1 1			1	23 PL14A 24 PL14B
		PE 4 PE 5 PE 6	PE 5	FMC_A20 FMC_A21 FMC_A22	DCMI_D 4 DCMI_D 6) DCMI_D 7)	LCD_B0 LCD_G0 LCD_G1		MEM ADDR20 MEM ADDR21 MEM ADDR22	MEM_A20 MEM_A21 MEM_A22	1 1			1	41 PB4B 42 PB7A 61 PB24A
		PE 2 PD 7	PD 7	FMC_NE1/NCE2 Chi FMC_NE2/NCE3 Chi				MEM ADDR23 MEM CHIP SELECT 1 MEM CHIP SELECT 2	MEM_A23 MEM_CS1 MEM_CS2	1 1			1	62 PB24B 50 PB13B
			PG10	FMC_NE3/NCE4 Chi	•	LCD_B2)		MEM CHIP SELECT 3 MEM CHIP SELECT 4	MEM_CS3 MEM_CS4	1			1	63 PB24D
		PC 0 PC 2 PC 3	PC 0 PC 2 PC 3		RAM (opt)		_	MEM CTRL SDRAM MEM CTRL SDRAM MEM CTRL SDRAM	MEM_SDWNE MEM_SDNE0 MEM_SDCKE0	1 1				
		100	PF11 PG 8	FMC_SDNRAS SDI FMC_SDCLK SDI	RAM <del>DCMI_D12)</del> RAM			MEM CTRL SDRAM MEM CTRL SDRAM	MEM_SDNRAS MEM_SDCLK	1 1				
_	_	<u>–</u> РD 3	PB 7	FMC_SDNCAS SDI FMC_NL/NADV NO FMC_CLK NO				MEM CTRL SDRAM MEM CTRL SRAM MEM CTRL SRAM	MEM_SDNCAS MEM_NADV MEM_CLK	1 1			1	43 PB7B 49 PB13A <b>PCLKT2_0</b>
		PD 4 PD 5	PD 4 PD 5	FMC_NOE NO NO	R/PSRAM/SDRAM R/PSRAM/SDRAM			MEM CTRL SRAM/SDRAM MEM CTRL SRAM/SDRAM	MEM_NOE MEM_NWE	1 1			1	47 PB10A 48 PB10B
		PD 6 PE 0 PE 1	PE 0	FMC_NBL0 SR/	R/P\$ <b>DCMI_D10)++</b> AM/I <b>DCMI_D 2)</b> AM/I <b>DCMI_D 3)</b>	LCD_B2)++		MEM CTRL SRAM/SDRAM MEM CTRL SRAM/SDRAM MEM CTRL SRAM/SDRAM	MEM_NWAIT MEM_NBL0 MEM_NBL1	1 1			1 1	132 PT14B 38 PB3A 39 PB3B
			XX					MEM DDR2 ADDR MEM DDR2 ADDR	DDR_A0 DDR_A1	1			1	73 PR19B 74 PR19A
			XX XX XX					MEM DDR2 ADDR MEM DDR2 ADDR MEM DDR2 ADDR	DDR_A2 DDR_A3 DDR_A4	1			1 1	75 PR18B 76 PR18A 77 PR16B
			XX XX XX					MEM DDR2 ADDR MEM DDR2 ADDR MEM DDR2 ADDR	DDR_A5 DDR_A6 DDR_A7	1			1 1	78 PR16A 81 PR15B 82 PR15A
			XX XX					MEM DDR2 ADDR MEM DDR2 ADDR	DDR_A8 DDR_A9	1 1			1 1	83 PR14B 84 PR14A
			XX XX XX					MEM DDR2 ADDR MEM DDR2 ADDR MEM DDR2 ADDR	DDR_A10 DDR_A11 DDR_A12	1			1 1	85 PR13B 86 PR13A 87 PR10D
			XX XX					MEM DDR2 ADDR MEM DDR2 ADDR	DDR_A13 DDR_A14	1 1			1 1	89 PR10C 95 PR8B DQ0
			XX XX XX					MEM DDR2 ADDR MEM DDR2 CTRL MEM DDR2 CTRL	DDR_A15	1			1 1	96 PR8A DQ0 25 PL16A 26 PL16B
			XX XX					MEM DDR2 CTRL MEM DDR2 CTRL		1 1			1 1	27 PL17A PCLKT3_0 28 PL17B PCLKTC_0
			XX XX XX					MEM DDR2 CTRL MEM DDR2 CTRL MEM DDR2 CTRL		1			1 1	31 PL18D 32 PL19A 33 PL19B
			XX					MEM DDR2 CTRL MEM DDR2 CTRL		1 1				34 PL20A 35 PL20B
			XX XX XX					MEM DDR2 CTRL MEM DDR2 CTRL CLK MEM DDR2 CTRL <b>CLK</b>	DDR_CLKN DDR_CLK	1			1 1	103 PR4C 91 PR10B PCLKC1_0 92 PR10A <b>PCLKT1_0</b>
			XX XX					MEM DDR2 DATA MEM DDR2 DATA	DDR_DQS0 DDR_DQS0N	1 1			1 1	93 PR9B DQS0 94 PR9A DQS0N
			XX XX XX					MEM DDR2 DATA MEM DDR2 DATA MEM DDR2 DATA	DDR_DQ1 DDR_DQ0 DDR_DQ3	1			1 1	97 PR6B DQ0 98 PR6A DQ0 99 PR5B DQ0
			XX XX					MEM DDR2 DATA MEM DDR2 DATA	DDR_DQ2 DDR_DQ5	1 1			1	100 PR5A DQ0 104 PR3B DQ0
			XX XX					MEM DDR2 DATA MEM DDR2 DATA	DDR_DQ4 DDR_DQ7	1				105 PR3A DQ0 106 PR2B DQ0