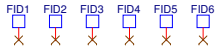
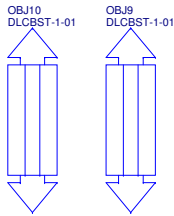
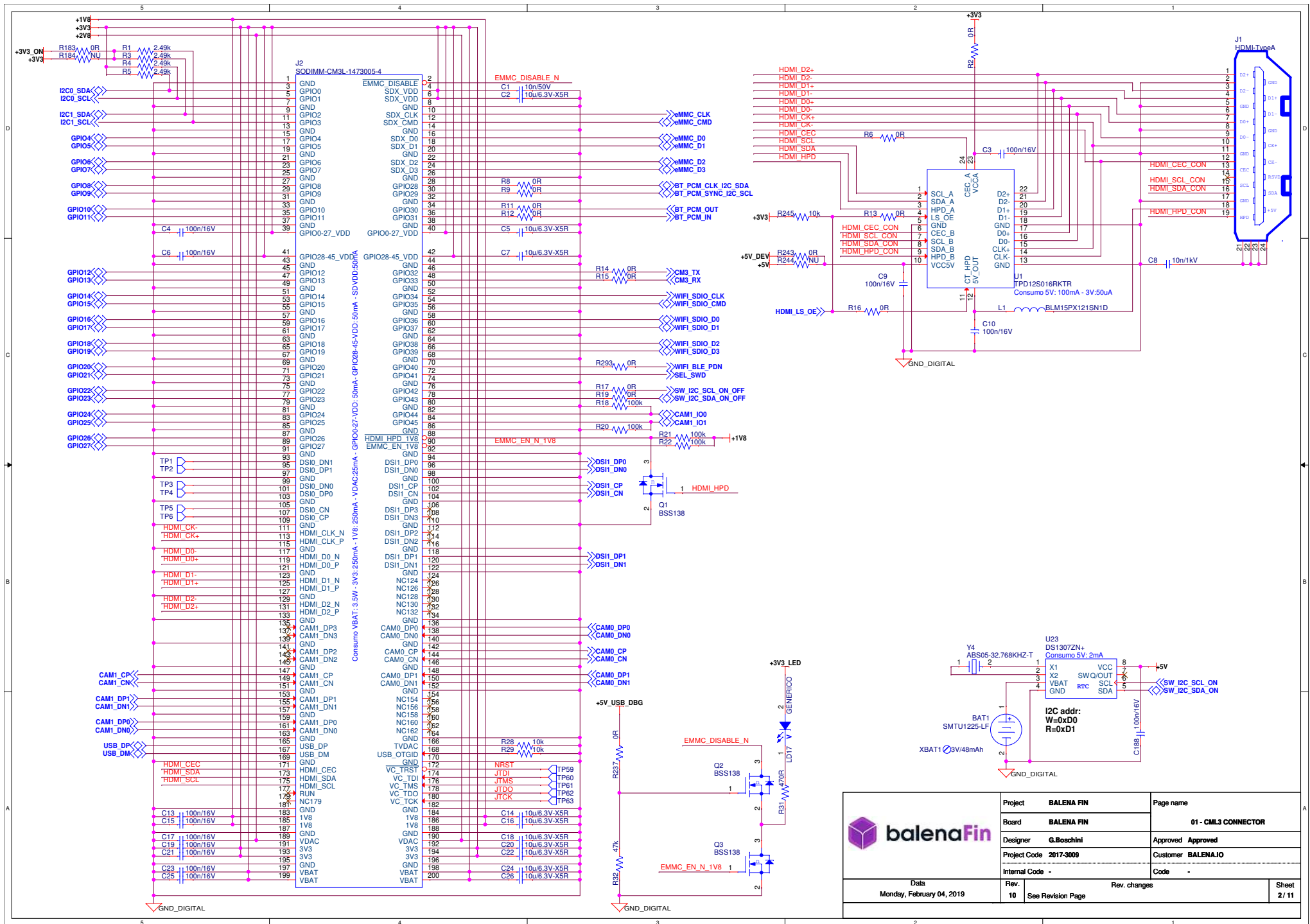


Revision	Date	Author	Description
1	13/05/2017	G.Boschini	First Draft
2	26/08/2017	G.Boschini	<ul style="list-style-type: none"> - Updated symbol from library - Removed micro SD card interface - Removed Artik 020 USB Debug - Removed Temperature and Humidity sensor - Removed CM31 Plug connector - Removed Accelerometer and Gyroscope sensor - Removed Battery Backup from Artik - Changed color led +5V and +3V3 - Changed Display and Camera connector - Changed WiFi+BL Module - Changed LED driver functionality (from CM3 or Artik) - Moved on I2C Camera, Display and EEPROM HAT - Moved on I2C1 Artik and HAT - Added NanoSIM support - Added extended IO Artik connector - Added Power Disconnection functionality managed by Artik - Corrected SWD Artik pinout - Replaced USB HUB and Ethernet controller with LAN9514
3	20/11/2017	G.Boschini	<ul style="list-style-type: none"> - Updated symbol from library - Removed DSW1 - Removed FTDI Programm connector (J23) - Replaced HDMI-D connector with HDMI-A connector - Replaced eMMC with Sandisk - Added Power On/Off LED - Added UART connection between Artik and CML via FTDI chip - Added RF-Switch for select antenna - Added 5V protection for power-up from HAT - Added Power switch for powerdown 5V device (USB HOST, HDMI) - Added Pullup on HDMI_LS_OE signal - Added mPCIe Reset functionality - Improved capacitor at DC input of mPCIe - Changed project name from Amber to Rubus - Changed HAT fuse to 3A - Changed PullDown LED RGB Resistor - Changed Voltage Input Rail up to 30V
4	02/01/2018	G.Boschini	- Correct PCB Led SilkScreen
5	17/01/2018	G.Boschini	<ul style="list-style-type: none"> - Removed UART Bluetooth connection - Changed I2C bus for RTC, Artik 020, CM3, IO Expander and isolated RTC and Artik bus from IO Expander and CM3 when CM3 is not powered - Modified 5V HAT Power Supply - Enable W_Disable_mPCIe - Removed WiFi clock enable - Added switch for selection of WiFi antennas and removed signal from CM3 - Added capacitors on 5V of USB Host output - Removed RGB Led - Added serial connection from CM3 to Artik - Added SWO connection from CM3 to Artik - Moved HDMI Enable and PDN WiFi to IO Expander - Replaced power input connector with black version
6	06/02/2018	G.Boschini	<ul style="list-style-type: none"> - Updated symbol from library - Corrected SW-I2C net name - Added RGB led - Removed SWO connection from CM3 to Artik - Moved PDN WiFi to CM3 - Moved HDMI_LS_OE to IO3 of IO Expander
7	22/02/2018	G.Boschini	- Removed logo from silkscreen
8	17/05/2018	G.Boschini	<ul style="list-style-type: none"> - Added FIN logo on silkscreen - Changed value of R259,R264,C218,C219,C222,C224,C227,C228,C229,C230
9	10/12/2018	G.Boschini	<ul style="list-style-type: none"> - Removed Reset Button (PB1) - Removed protection networks of HAT connector (DS11,DS12,DS13,DS14,DS15,DS16,DS17,DS18,DS19,DS20,DS21,DS22,DS23,DS24,RS5,RS6,RS7,RS8,RS9,RS10,RS11,RS12) - Changed value of F3, J18 - Removed FTDI and relative components - Added digital switch for USART to SWD communication from CM3 to Artik - Removed I2C connections to mPCIe - Added led RGB PWM control - Added POR feature - Added switch for DSI e CSI interface - Added switch for I2C (PCM) for DSI/CSI connector - Removed I2C from Artik IO Connector Expander
10	31/01/2019	G.Boschini	<ul style="list-style-type: none"> - Updated symbol from library - Replace LAN9514 with industrial version - Replace R145 connector with temperature extended version - Added power supply from debug USB - Added R311 for reset MCU - Change to mount USB strip connector

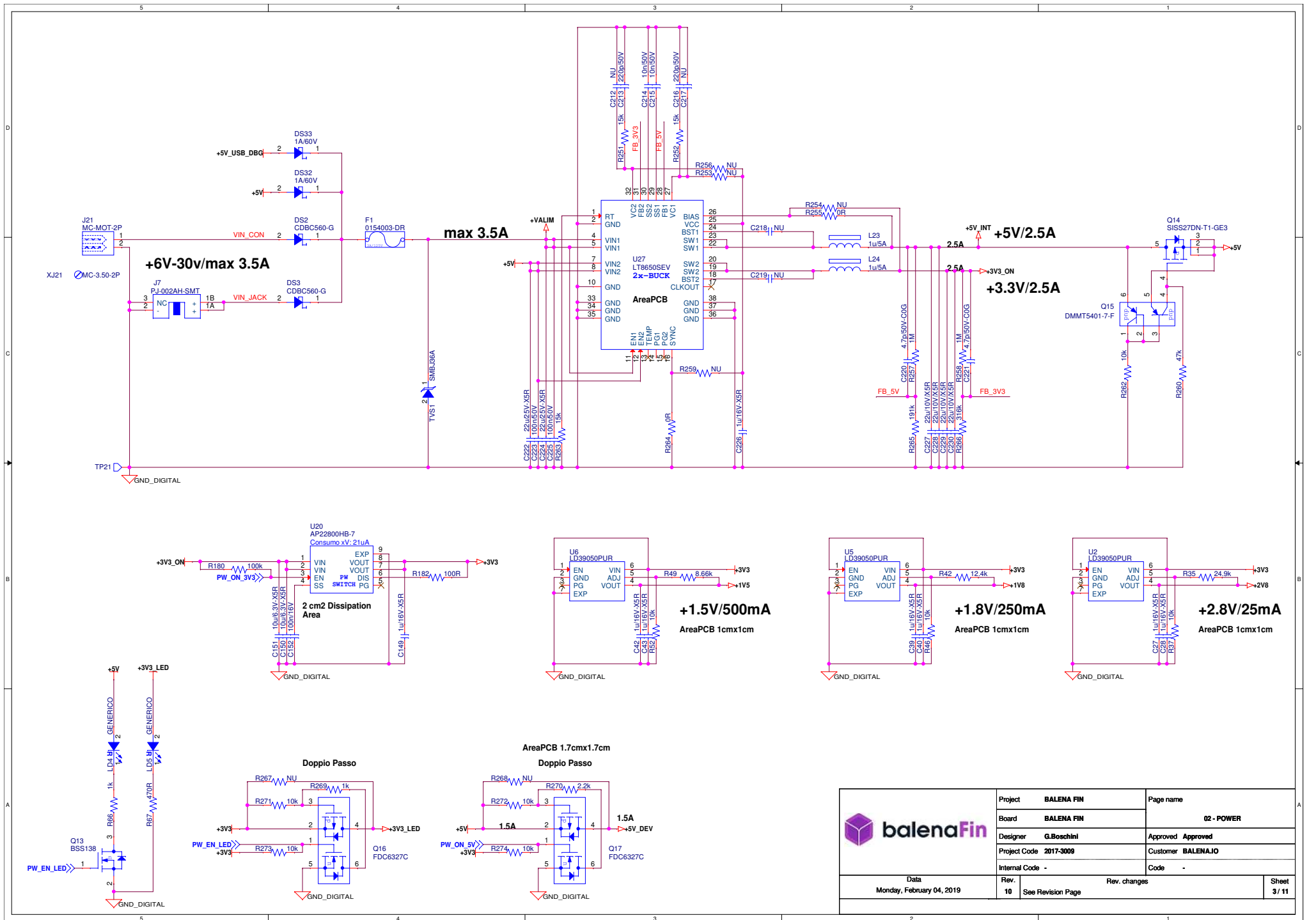


Test Point SPEA

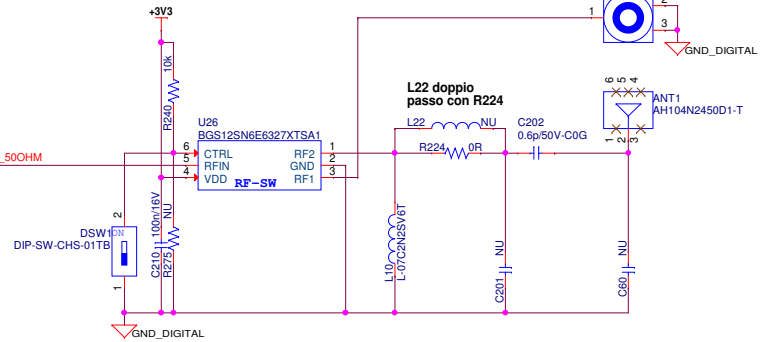
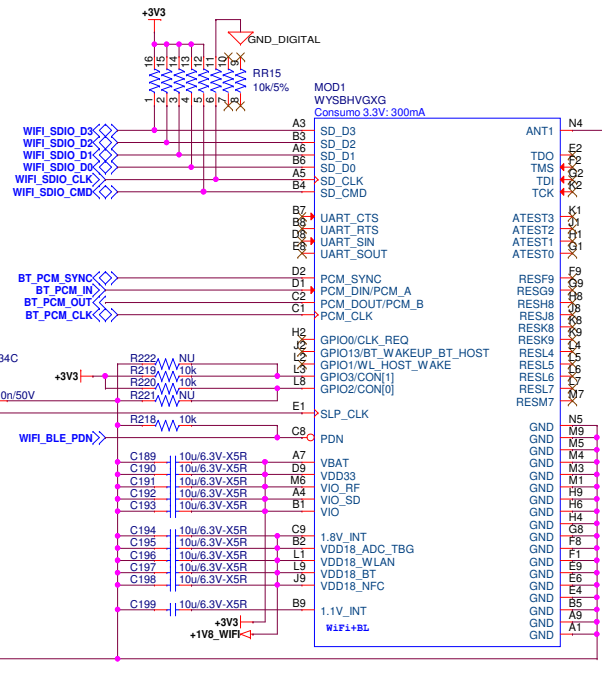
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	Designer	G.Boschini	Approved Approved	
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Data	Rev.	Rev. changes	Sheet	
Thursday, January 31, 2019	10	See Revision Page	1 / 11	



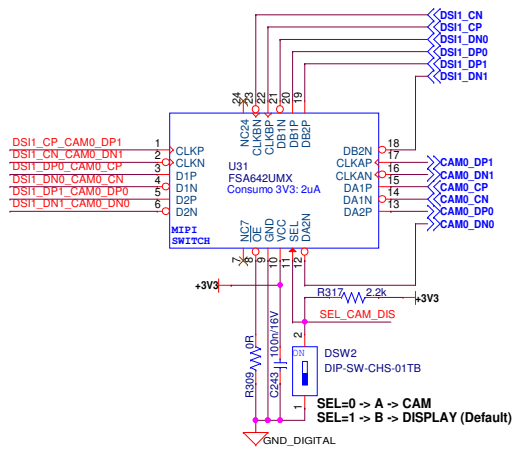
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	Designer	G.Boschini	Approved	Approved
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Data	Monday, February 04, 2019	Rev. 10	See Revision Page	Rev. changes
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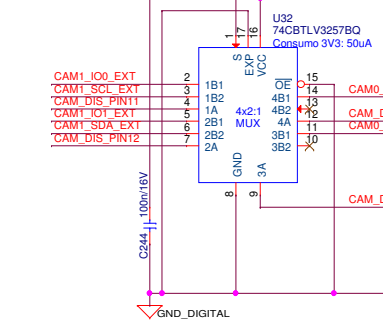
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	Designer	G.Boschini	Approved	Approved	
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Data	Rev.		Rev. changes		Sheet
Monday, February 04, 2019	10	See Revision Page			3 / 11



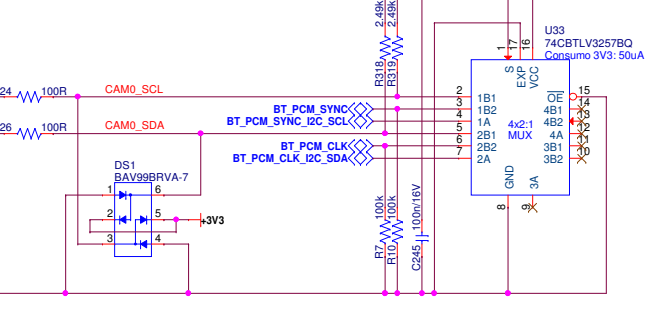
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Data	Monday, February 04, 2019	Rev. 10	Rev. changes	See Revision Page	
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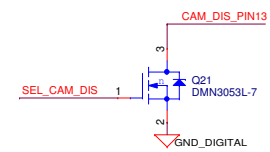
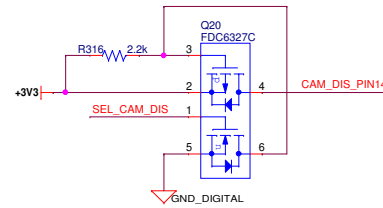
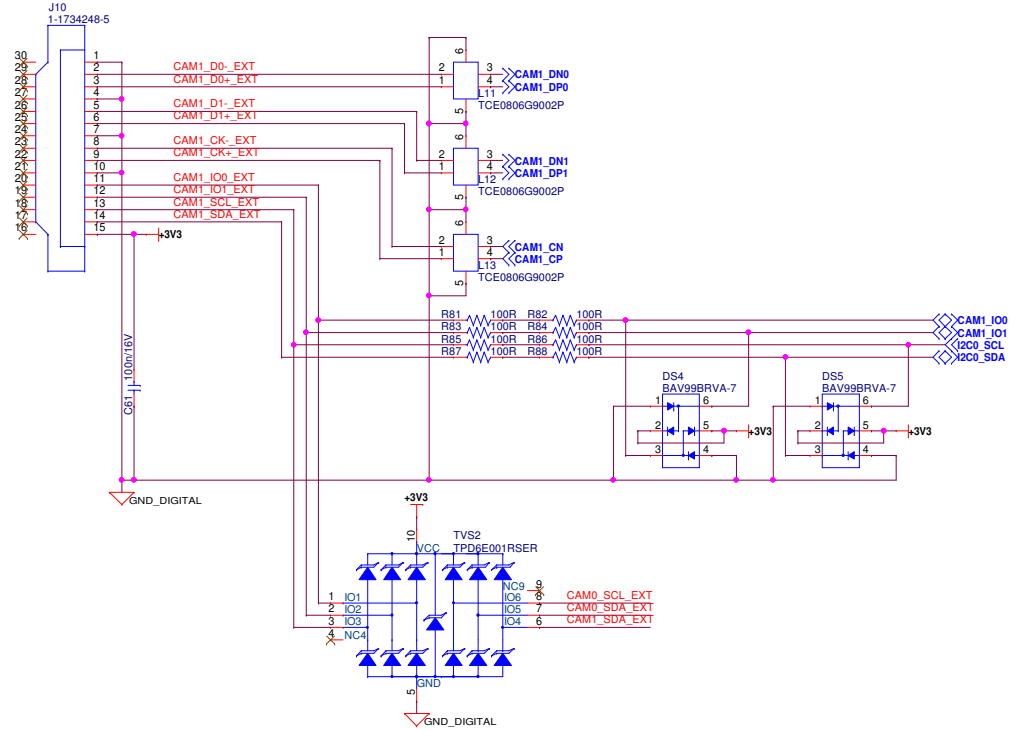
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 S=1 -> B2 -> DISPLAY (Default)



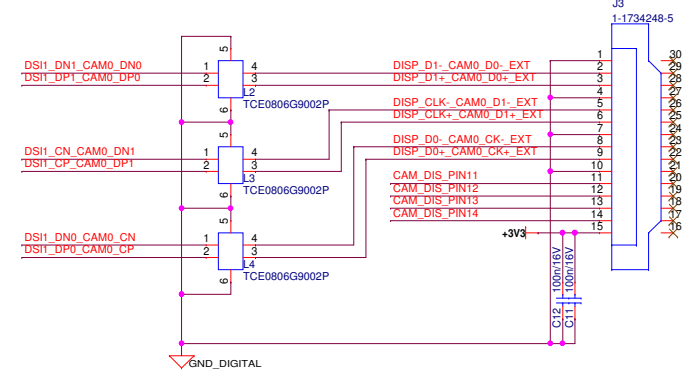
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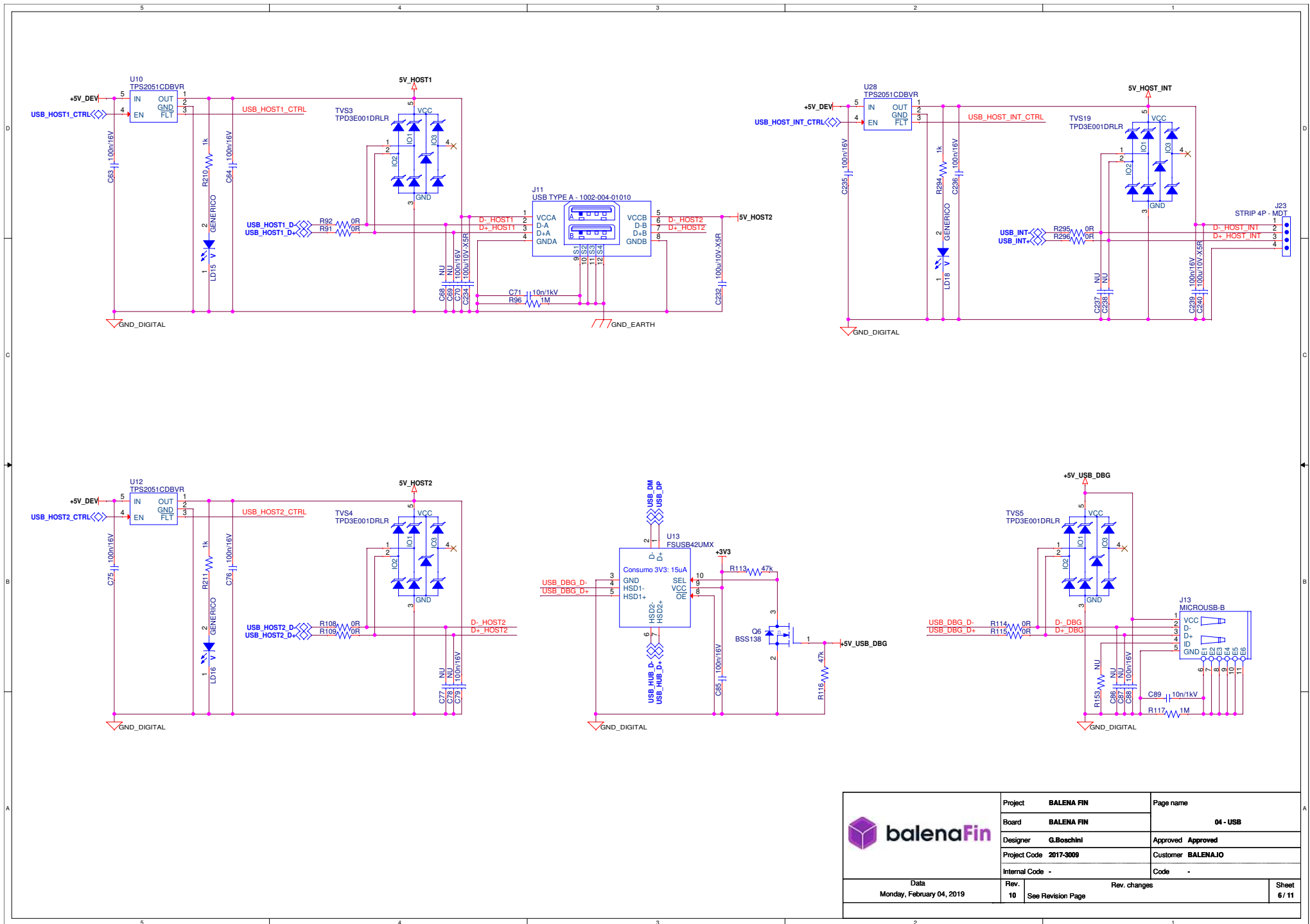
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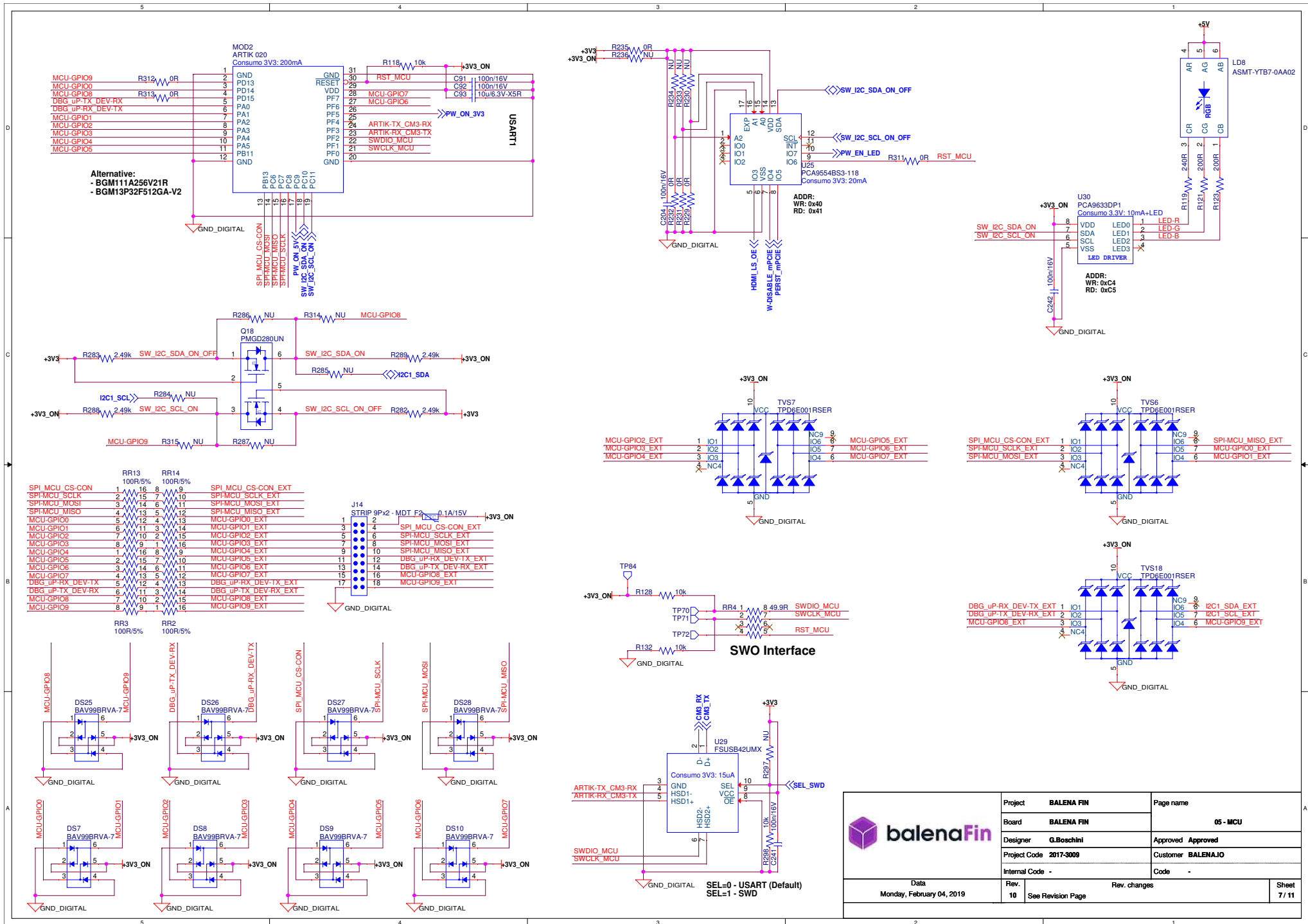
CAM/DISPLAY



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Data	Rev.	Rev. changes		
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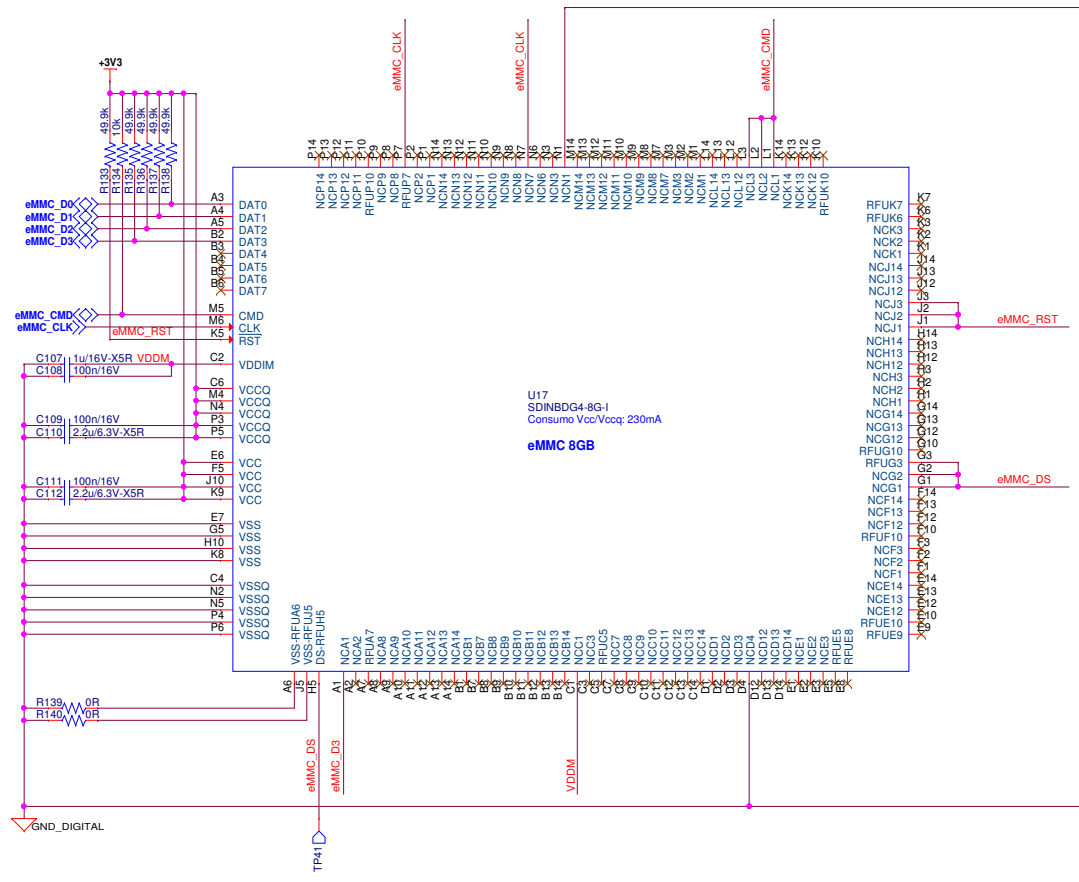
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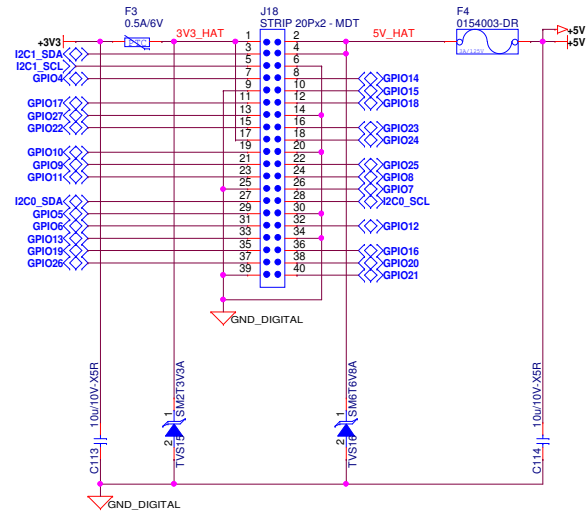
Alternative:
 - BGM111A256V21R
 - BGM13P32F512GA-V2


SWO Interface

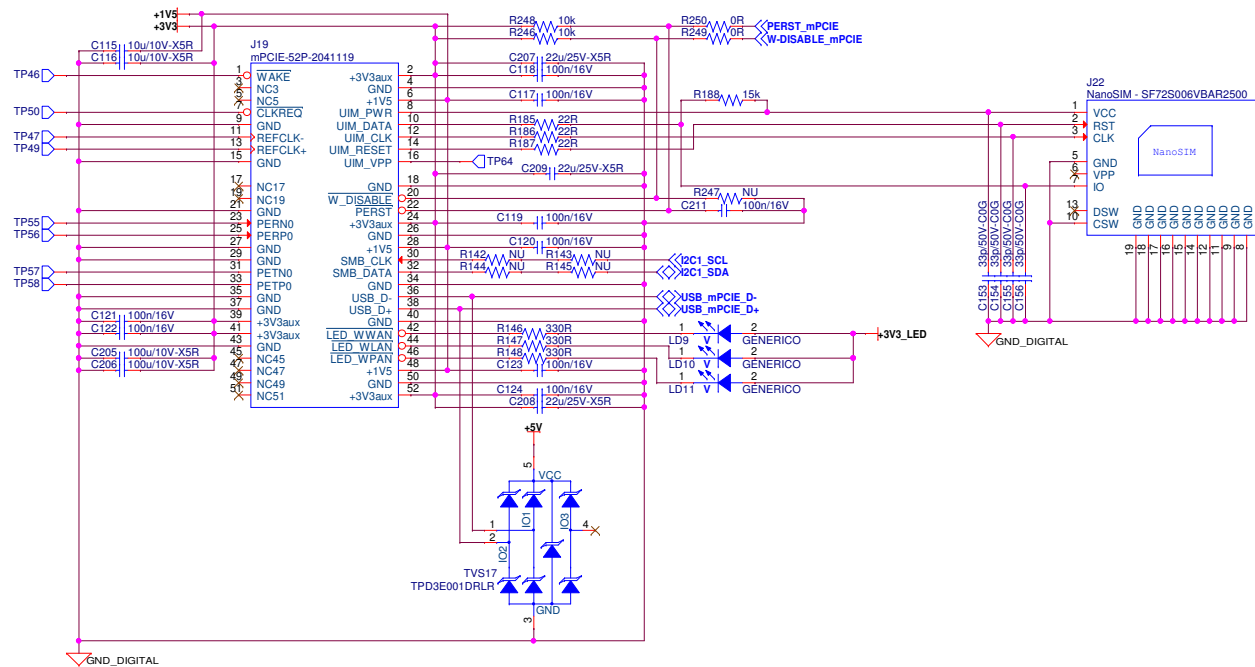
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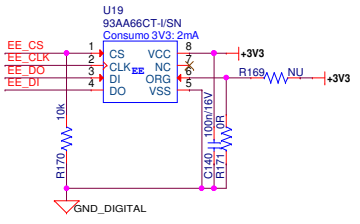
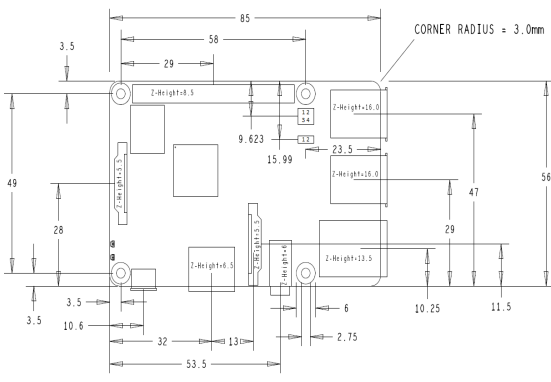
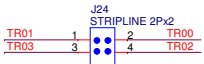
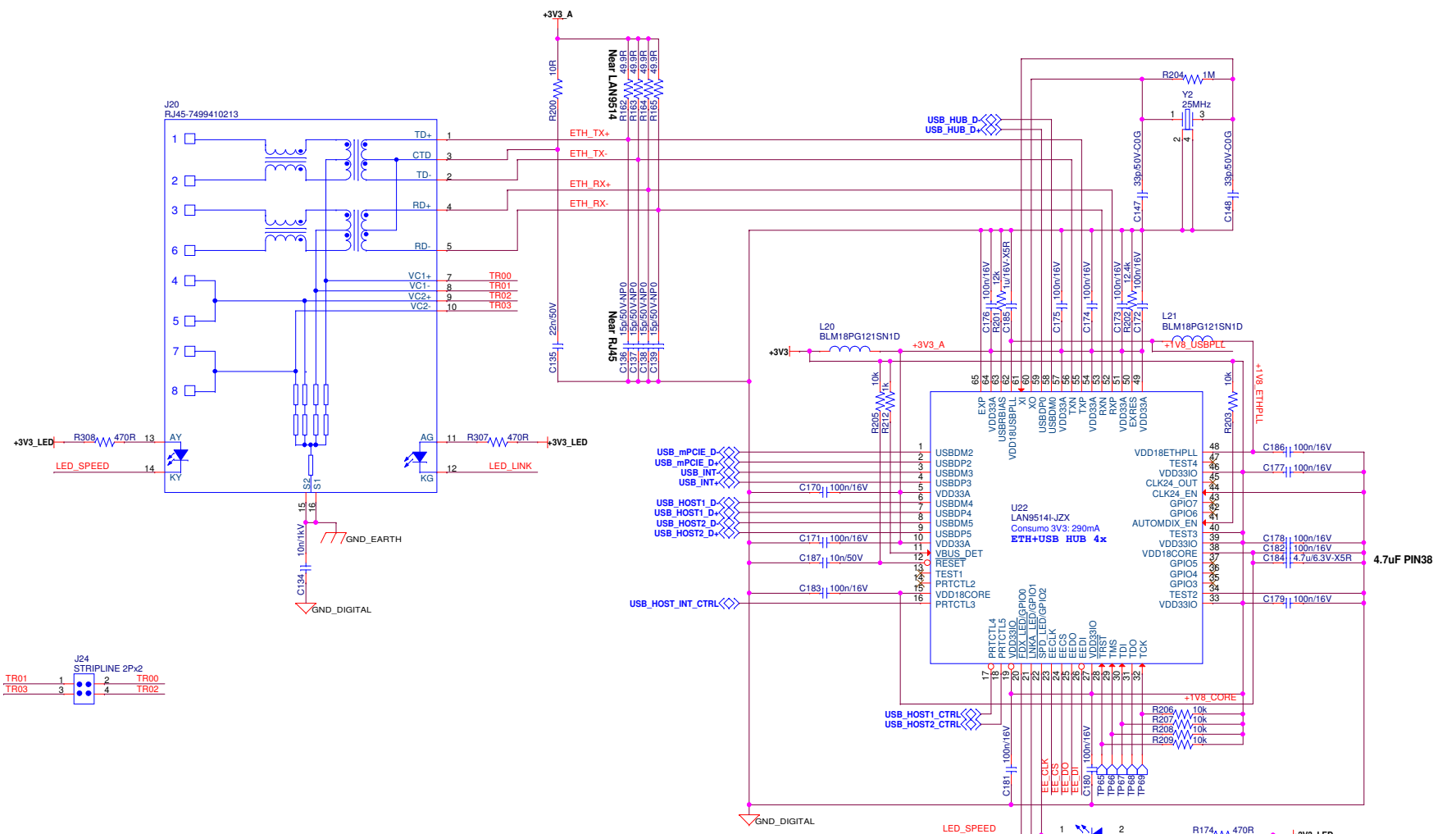
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Data	Monday, February 04, 2019	Rev.	10	See Revision Page
		Rev. changes		Sheet 8 / 11



	Project	BALENA FIN	Page name	
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	Designer	G.Boschini	Approved	Approved
	Project Code	2017-3009	Customer	BALENALIO
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Data	Rev.	Rev. changes		Sheet
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	Project	BALENA FIN	Page name		
	Board	BALENA FIN	Approved	08 - mPCIE	
	Designer	G.Boschini	Approved	Approved	
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	Internal Code	-		Code	-
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	Project	BALENA FIN	Page name	
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	Designer	G.Boschini	Approved	Approved
	Project Code	2017-3009	Customer BALENA I/O	
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Data	Monday, February 04, 2019	Rev. 10	See Revision Page	Rev. changes
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