

28Pins
Variant: 5V/3V3

4/28/2015
V1I1

RELEASED 07-APR-2015

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DESIGN CONSIDERATIONS

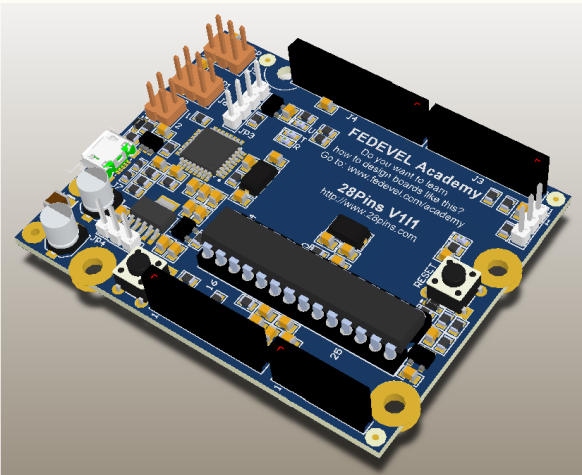
DESIGN NOTE:
Example text for informational
design notes.

DESIGN NOTE:
Example text for cautionary
design notes.

DESIGN NOTE:
Example text for debug notes.

DESIGN NOTE:
Example text for critical
design notes.

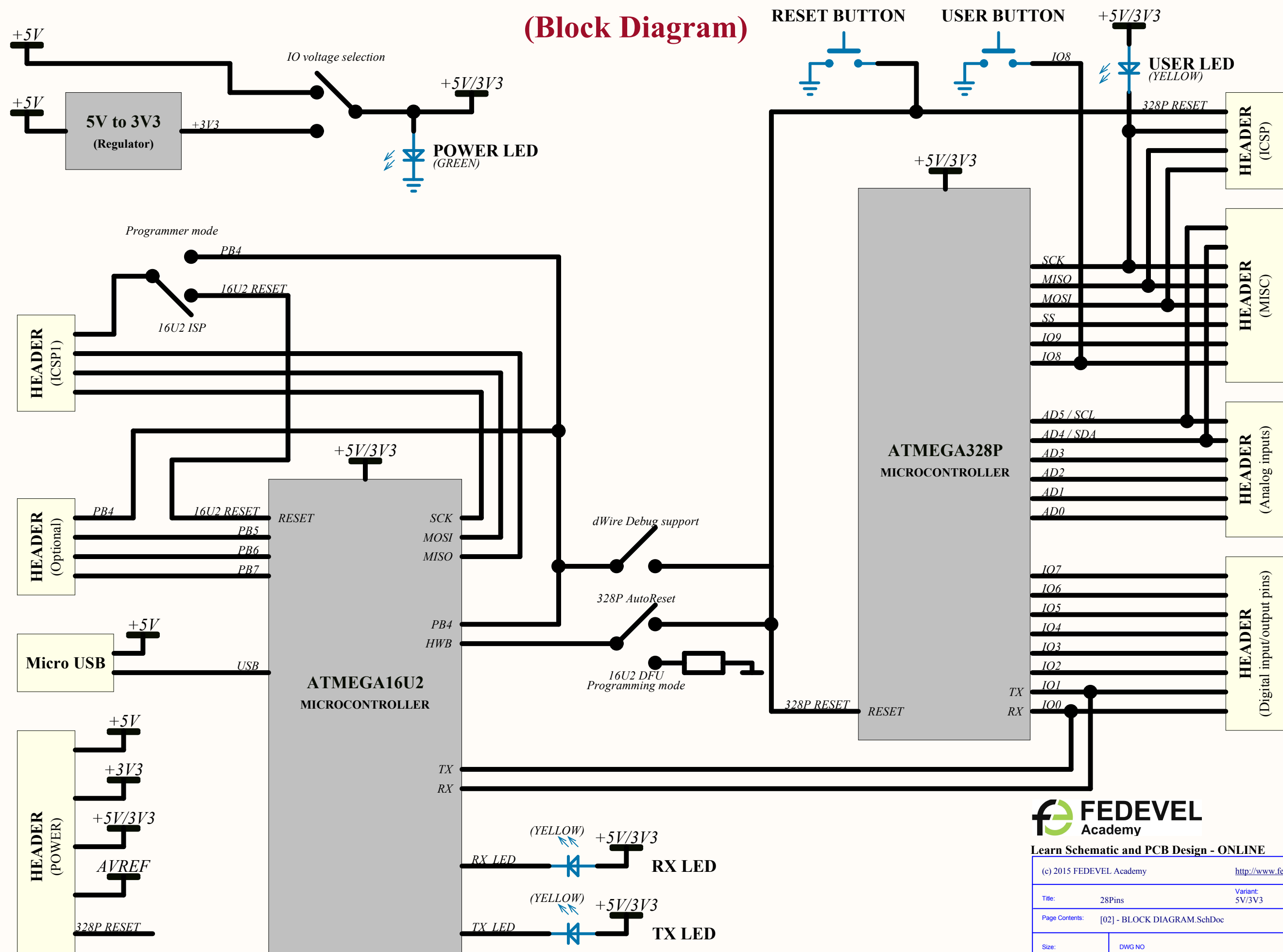
LAYOUT NOTE:
Example text for critical
layout guidelines.



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Title:	28Pins	Variant:	5V/3V3
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28Pins (Block Diagram)



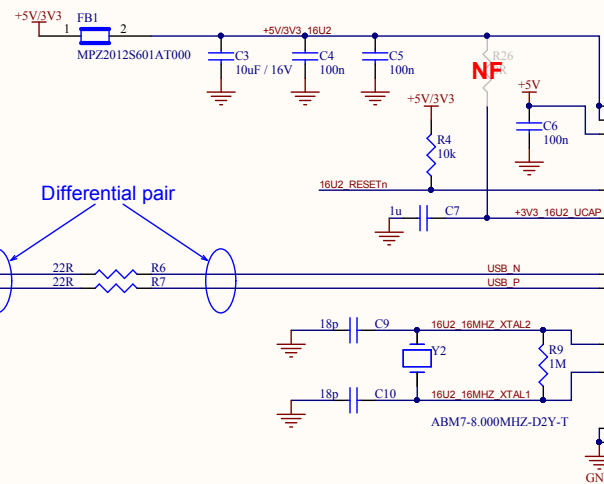
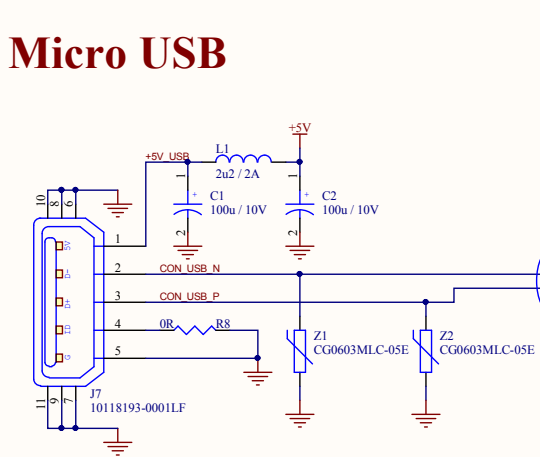
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Page Contents:	[02] - BLOCK DIAGRAM.SchDoc		
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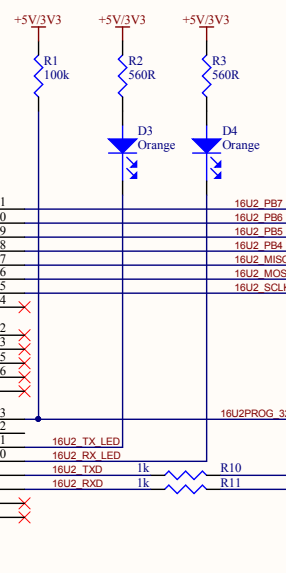
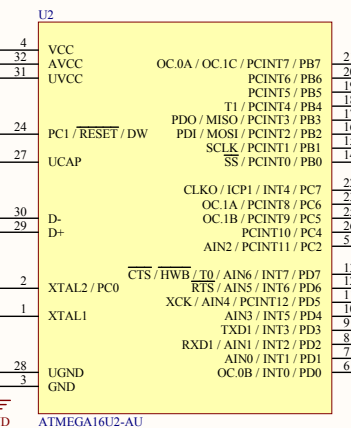
28PINS - SCHEMATIC

<http://www.28pins.com>

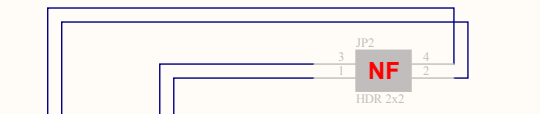
Micro USB



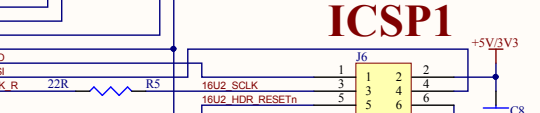
16U2



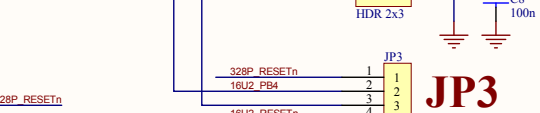
JP2



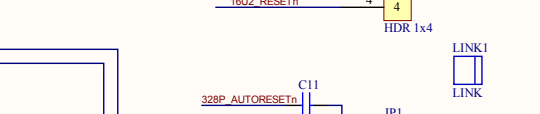
ICSP1



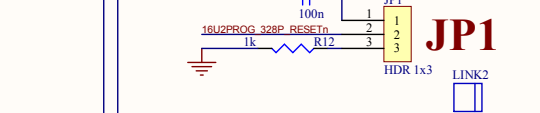
JP3



JP1



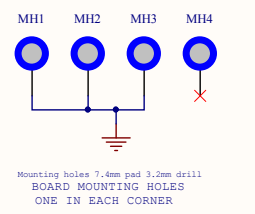
ICSP



DIP SOCKET



MOUNTING HOLES



FIDUCIALS



POWER

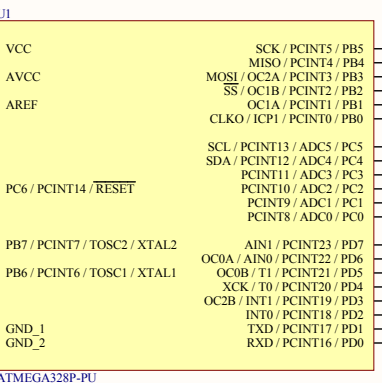
POWER PADS

3V3 LDO

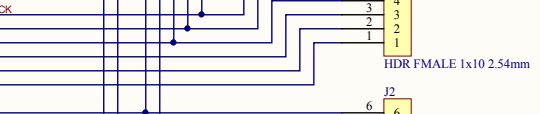
Power Selection

DESIGN NOTE:
This board can be powered from micro USB connector (J7) or a single +3.3V power rail (through J1 pin 4). If +3.3V is used, fit R26 and R28. In this case, JP4 & R27 must NOT be fitted, otherwise the board may be damaged.

328P



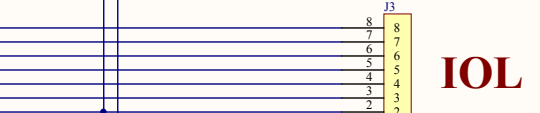
IOH



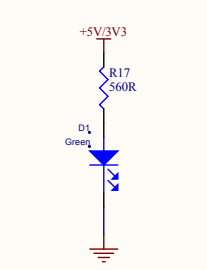
AD



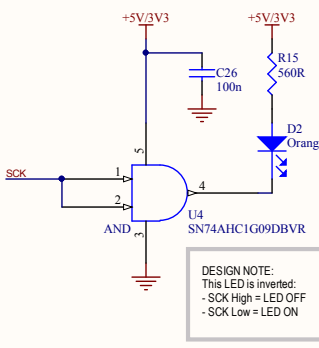
IOL



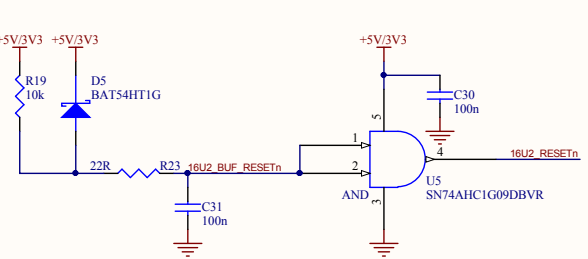
POWER LED



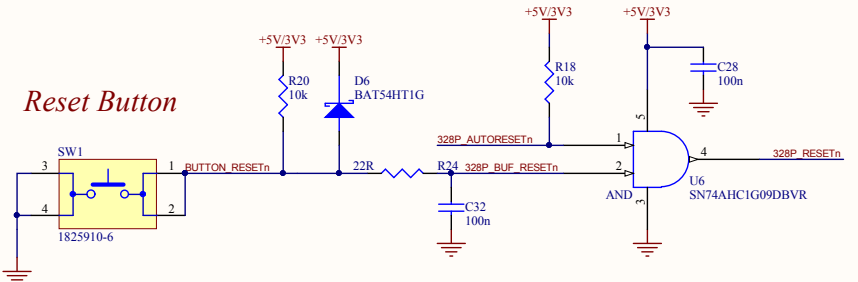
USER LED



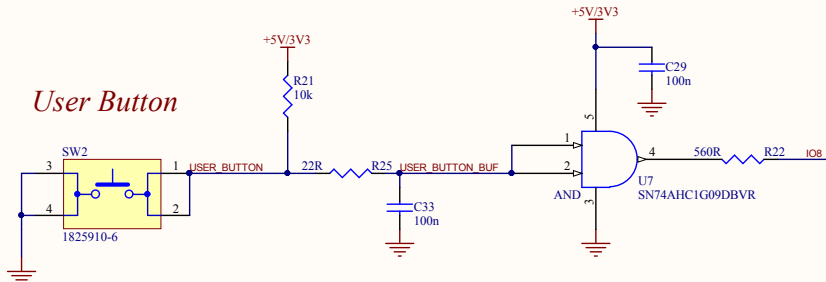
RESET (16U2)



RESET (328P)



USER BUTTON



LAYOUT NOTE:
1) Route all the POWER tracks with minimum track width 0.4mm.
2) Route all the other tracks by 0.4mm and change them by the end of the design to 0.2mm. To change all of them at once, use this filter "(not InNet(*)" and not InNet("GND") and IsTrack and (OnLayer("L1") or OnLayer("L2"))" and then set 0.2mm width in PCB Inspector panel.

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Size: DWG NO: Revision: VIII

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A	<div>REVISION HISTORY</div> <div> <div>28-APR-2015: The block diagram has been corrected</div> <div>Change: In the block diagram, user LED has been moved from MOSI to SCK</div> </div>							A																				
B								B																				
C								C																				
D	<div> <div> <div> <div></div> <div>FEDEVEL</div> <div>Academy</div> </div> <div>Learn Schematic and PCB Design - ONLINE</div> </div> <table> <tr> <td colspan="2">(c) 2015 FEDEVEL Academy</td><td colspan="2">http://www.fedevel.com/academy</td></tr> <tr> <td>Title:</td><td>28Pins</td><td>Variant:</td><td>5V/3V3</td></tr> <tr> <td>Page Contents:</td><td colspan="2">[04] - REVISION HISTORY.SchDoc</td><td>Checked by</td></tr> <tr> <td>Size:</td><td colspan="2">DWG NO</td><td>Revision: V111</td></tr> <tr> <td>Date:</td><td colspan="2">4/28/2015</td><td>Sheet 4 of 5</td></tr> </table> </div>							(c) 2015 FEDEVEL Academy		http://www.fedevel.com/academy		Title:	28Pins	Variant:	5V/3V3	Page Contents:	[04] - REVISION HISTORY.SchDoc		Checked by	Size:	DWG NO		Revision: V111	Date:	4/28/2015		Sheet 4 of 5	D
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Title:	28Pins	Variant:	5V/3V3																									
Page Contents:	[04] - REVISION HISTORY.SchDoc		Checked by																									
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A	<div>Designator [01] - COVER PAGE.SchDoc</div> <div></div>	<div>Designator [02] - BLOCK DIAGRAM.SchDoc</div> <div></div>	<div>Designator [03] - 28PINS SCHEMATIC.SchDoc</div> <div></div>	<div>Designator [04] - REVISION HISTORY.SchDoc</div> <div></div>				
B								
C								
D								

NOTES

Mark Not Fitted Components as
NF

- DRAFT** - Very early stage of schematic, ignore details.
- PRELIMINARY** - Close to final schematic.
- CHECKED** - There should not be any mistakes. Tell the engineer if you find one.
- RELEASED** - A board with this schematic has been sent to production.



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