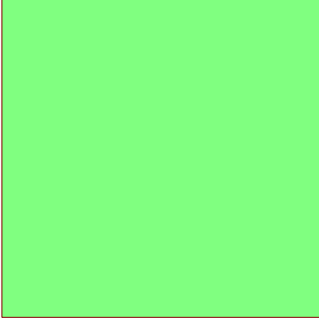
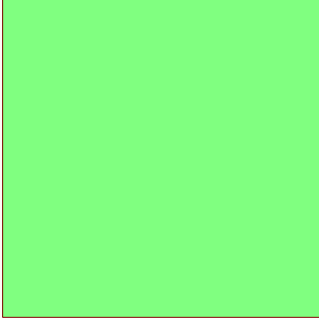


	1	2	3	4	5	6	7	8
A								
B								
C								
D								
	1	2	3	4	5	6	7	8

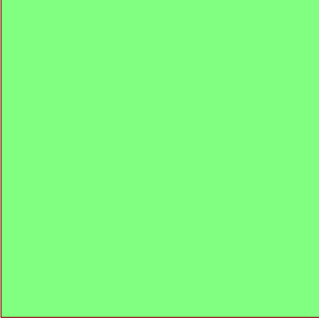
Designator
[01] - COVER PAGE.SchDoc



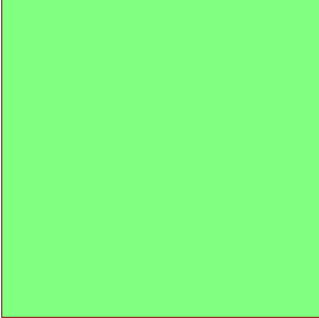
Designator
[02] - BLOCK DIAGRAM.SchDoc



Designator
[03] - 28PINS SCHEMATIC.SchDoc



Designator
[04] - REVISION HISTORY.SchDoc



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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Title:		Variant: [No Variations]
Page Contents: 28Pins_Project_VIII Project.SchDoc		Checked by
Size:	DWG NO	Revision:
Date: 27-12-2024	Designed by www.fedével.com	Sheet 1 of 5

27-12-2024

Variant: [No Variations]

27 DEC 2024

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2	BLOCK DIAGRAM	12		22		32	
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5		15		25		35	
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7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

DESIGN CONSIDERATIONS

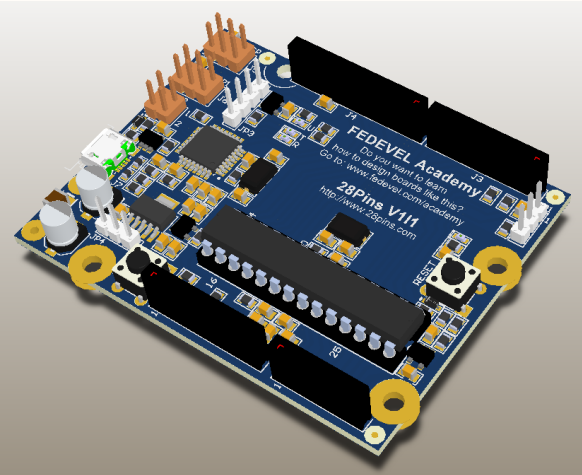
DESIGN NOTE:
Example text for informational
design notes.

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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Page Contents: [01] - COVER PAGE.SchDoc		Checked by
Size:	DWG NO	Revision:
Date: 27-12-2024	Designed by www.fedevel.com	Sheet 2 of 5

DESIGN NOTE:
This board supports 5V or 3V3 voltage level on the IO pins:

- 1) 5V IO - Fit everything as defined in this schematic. NF means, do not fit this component.
- 2) 3.3V IO - Remove R27, Fit R28, *Replace Y1 (change from 16MHz to 10MHz), *Replace Y2 (change from 16MHz to 8MHz).
- 3) Both 5V and 3V3, selected through JP4 - Remove R27, Remove R28, Fit IP4, *Replace Y1 (change from 16MHz to 10MHz), *Replace Y2 (change from 16MHz to 8MHz).

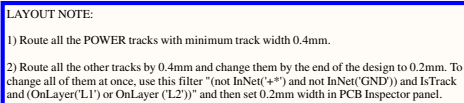
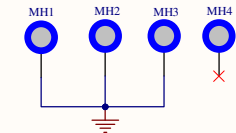
*Note: The 16MHz crystals are not recommended for 3.3V operation. We need to adjust their values, that's why the change.


IMPORTANT: Once you change the crystal value, you may need to re-compile your source code.

DESIGN NOTE:

About JP1:

- 1) Autoreset Enabled - Short 1&2. In this case, 16U2 is used to reset 328P when firmware inside 328P is updated from Arduino IDE.
- 2) 16U2 DFU mode Enabled - Short 2&3. 16U2 HWB pin is sampled by 16U2 during RESET. If pulled low, then after Reset the 16U2 will go into DFU mode.



APPROVALS	DATE	PROJECT		
ENG:	+			
DSN:	+			
CHK:	+	PROJECT REVISION	DOCUMENT REVISION	DESIGN ITEM
		<div> <div>Not in version control</div> <div>Not in version control</div> <div>Not in version control</div> </div>		
REFERENCE DOCUMENTS		TITLE		
BOM:		28Pins		
ASSY DWG:		SIZE	CAGE CODE	DWG NO.
FAB DWG:		A2		
PCB DWG:		SCALE:	FILE NAME	031 - 28PINS SCHEMATIC.SchDoc
				3 OF

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D	<div><div><div>Would you like to learn how to design boards like this?</div><div><div>FEDEVEL</div><div><div>We designed this board, so you can learn.</div><div>Google for FEDEVEL Academy</div></div><div>Academy - Learn Schematic & PCB Design ONLINE</div></div></div><table><tr><td colspan="7">http://www.fedevel.com/academy</td></tr><tr><td colspan="7">Title: Variant: [No Variations]</td></tr><tr><td colspan="4">Page Contents: [04] - REVISION HISTORY.SchDoc</td><td colspan="3">Checked by</td></tr><tr><td>Size:</td><td colspan="5">DWG NO</td><td>Revision:</td></tr><tr><td>Date:</td><td colspan="3">27-12-2024</td><td>Sheet</td><td>5</td><td>of 5</td></tr></table></div>							http://www.fedevel.com/academy							Title: Variant: [No Variations]							Page Contents: [04] - REVISION HISTORY.SchDoc				Checked by			Size:	DWG NO					Revision:	Date:	27-12-2024			Sheet	5	of 5	D
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