

Module name

Notecarrier-XS

Index	Description
.....	.....
01	Cover
02	Block Diagram
03	IO Connectors
04	Notecard Connector
05	Power
05	Starnote Connector

Design considerations

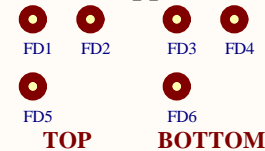
SOFTWARE CONFIG NOTE:

- Contains important notes for software development.  
- Things like: pin configuration, timing requirements,  
IC configuration etc.

DESIGN NOTE:

- Hardware notes

Board support



PCB1

PCB

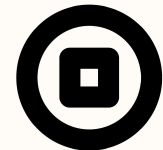
2200-914

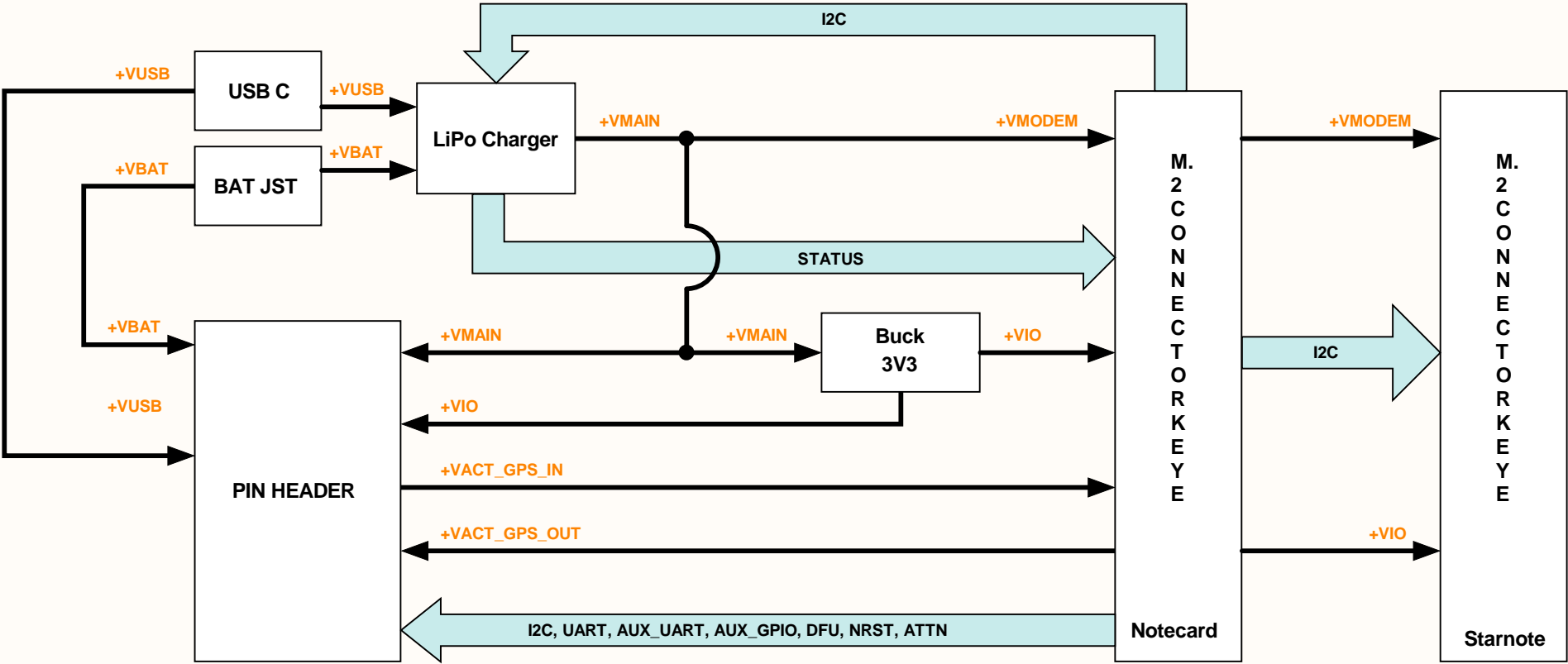
DOC1

HW-E

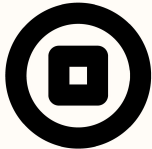
100426

Title: 01_COVER.SchDoc			
Project: 100426_notecarrier-xs.PrjPCB			
Company: Byte Lab Grupa d.o.o.		Medarska 69/1, 10000 Zagreb, Croatia www.byte-lab.com	
Author: M. Marsic		Acceptor: J. Wiedey	
Sheet 1 of 5		Rev: 11	Format: A4

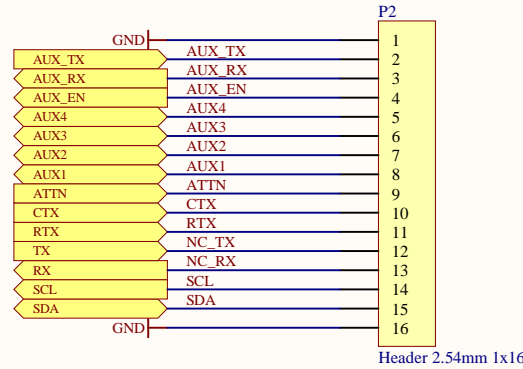
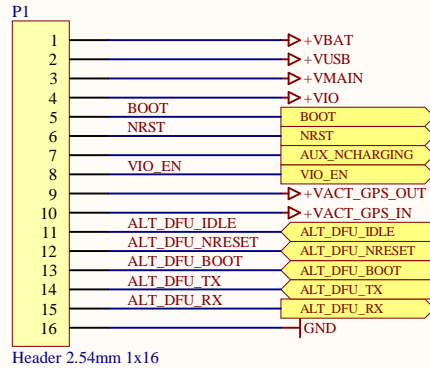




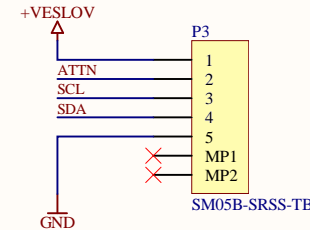
Title: 02_BLOCK-DIAGRAM.SchDoc			
Project: 100426_notecarrier-xs.PrjPCB			
Company: Byte Lab Grupa d.o.o.		Medarska 69/1, 10000 Zagreb, Croatia www.byte-lab.com	
Author:	M. Marsic	Acceptor:	J. Wiedey
Sheet 2 of 5		Rev: 11	Format: A4



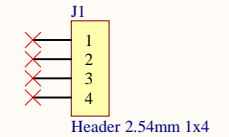
## I/O Pin Headers & Castellations



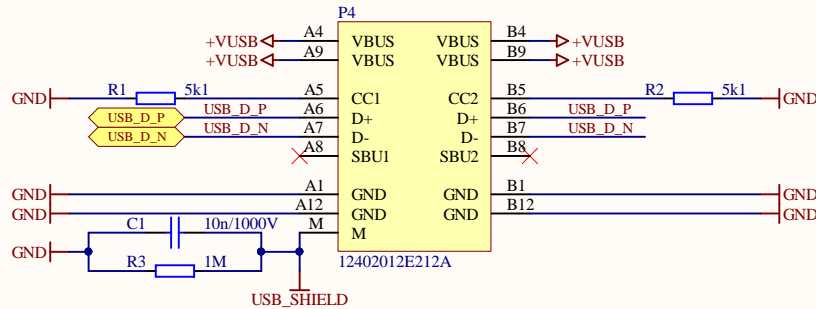
## ESLOV Connector



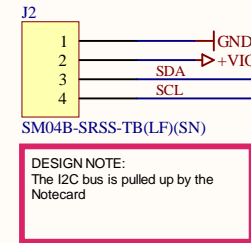
## Mech Support Connector



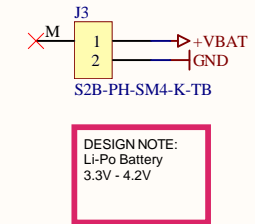
## USB C Connector



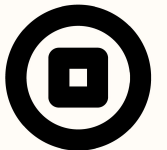
## QWIIC Connector



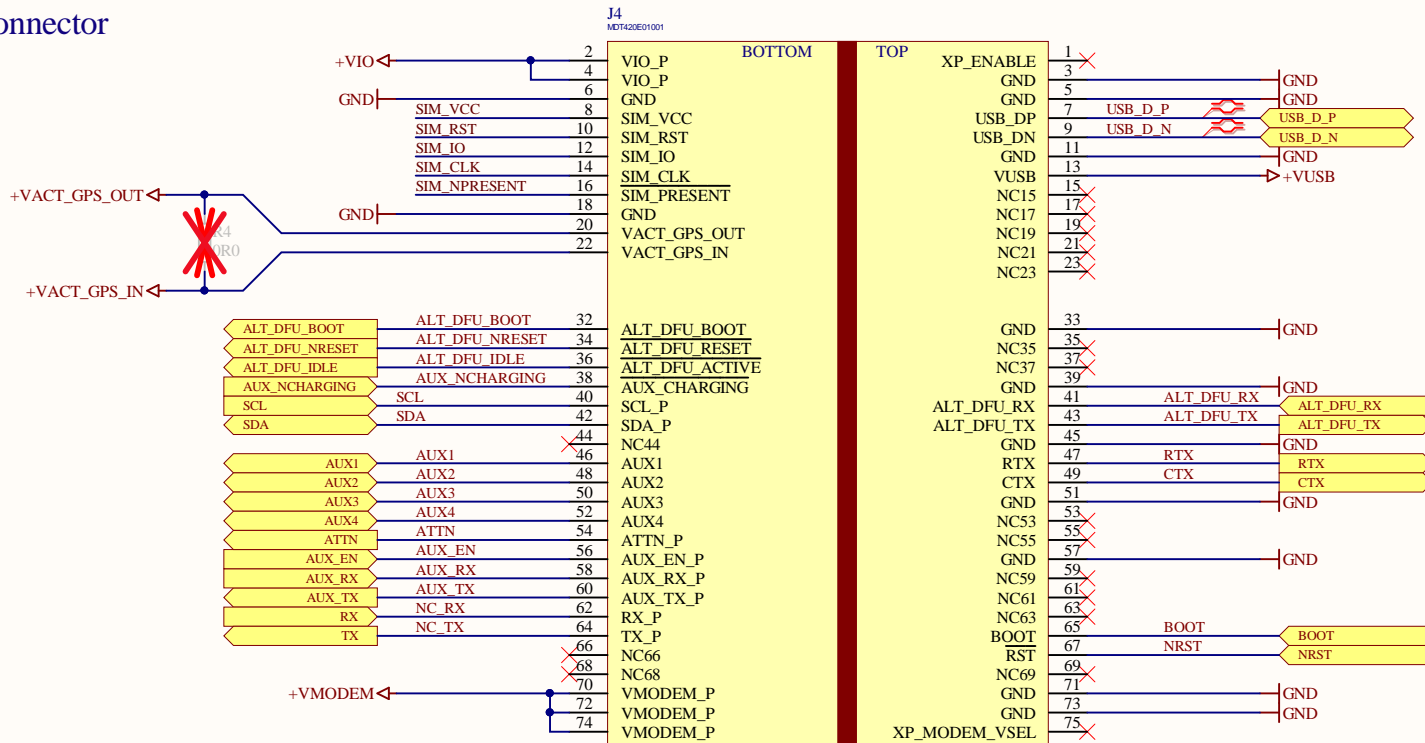
## Battery Connector



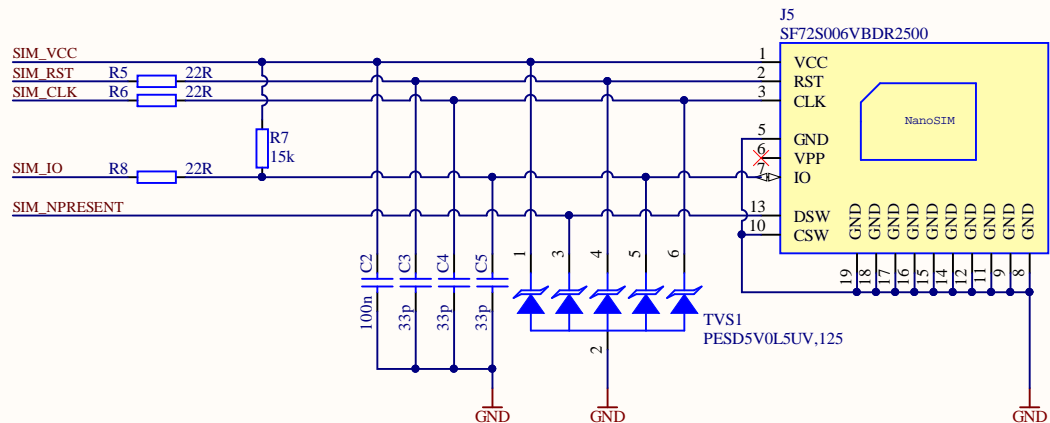
Title: 03_IO-CONNECTION.SchDoc		
Project: 100426_notecarrier-xs.PrjPCB		
Company: Byte Lab Grupa d.o.o.		Medarska 69/1, 10000 Zagreb, Croatia www.byte-lab.com
Author: M. Marsic	Acceptor: J. Wiedey	
Sheet 3 of 5	Rev: 11	Format: A4



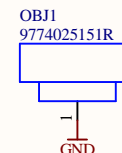
## Notecard Connector



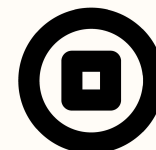
## SIM Card



## Notecard Support



Title: <b>04_NOTECARD-CONNECTION.SchDoc</b>		
Project: 100426_notecarrier-xs.PrjPCB		
Company: Byte Lab Grupa d.o.o.		Medarska 69/1, 10000 Zagreb, Croatia www.byte-lab.com
Author: M. Marsic	Acceptor: J. Wiedey	
Sheet 4 of 5	Rev: 11	Format: A4



## Battery Charger w/ Power Path

### DESIGN NOTE:

#### Charger:

- Default charging voltage: 4.2V
- Default charging current: 320mA
- Default termination current: 20mA
- Default pre-charge current: 20mA
- No battery thermal protection

### DESIGN NOTE:

#### Power Path:

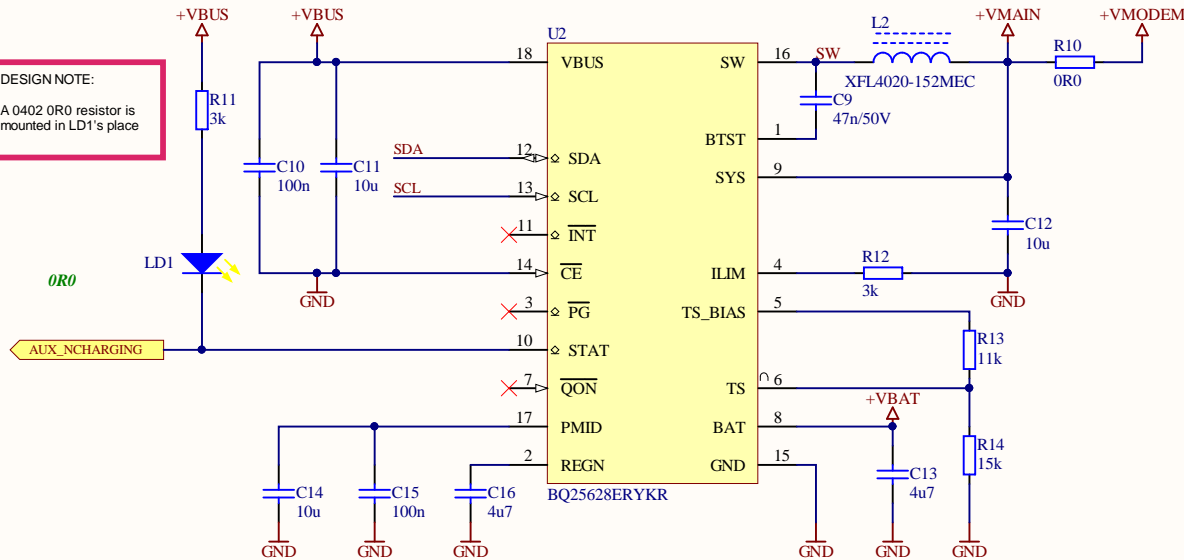
- Input current limit: 3.5A
- 26mOhm reverse blocking transistor
- 15mOhm battery transistor

#### Buck Regulator:

- 1.5MHz frequency
- Input Voltage: 5V
- Output Voltage: 3.3-4.2V
- Peak current: 2.5A

### DESIGN NOTE:

A 0402 0R0 resistor is mounted in LD1's place

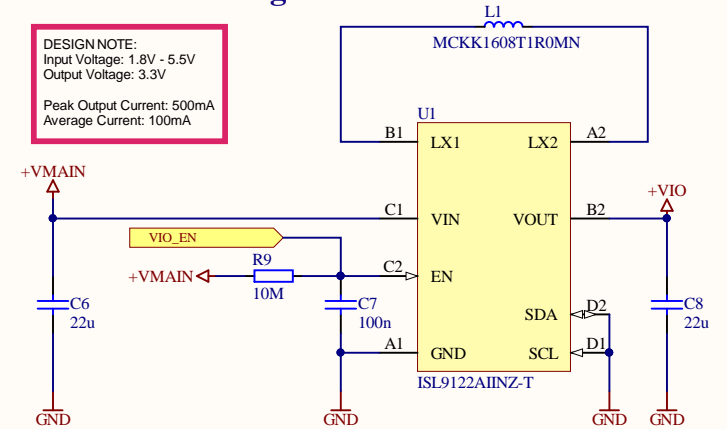


## 3V3 Buck/Boost Regulator

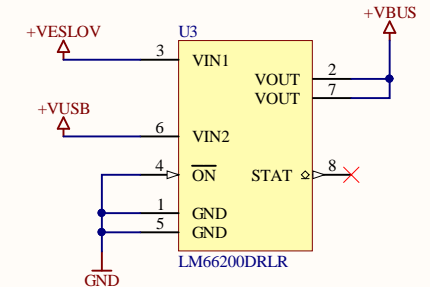
### DESIGN NOTE:

Input Voltage: 1.8V - 5.5V  
Output Voltage: 3.3V

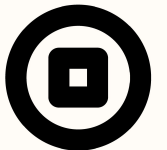
Peak Output Current: 500mA  
Average Current: 100mA



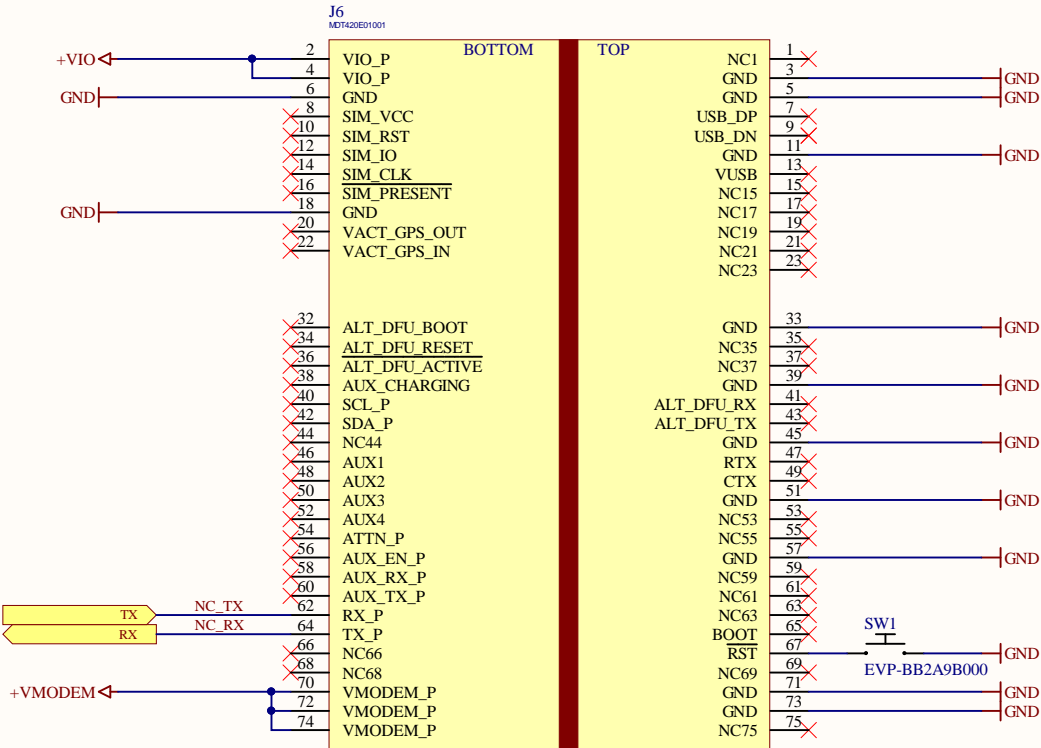
## VBUS ORing



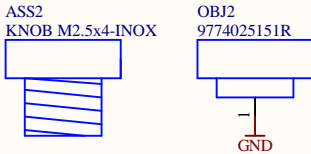
Title: <b>05_POWER.SchDoc</b>			
Project: 100426_notecarrier-xs.PrjPCB			
Company: Byte Lab Grupa d.o.o.		Medarska 69/1, 10000 Zagreb, Croatia www.byte-lab.com	
Author:	M. Marsic	Acceptor:	J. Wiedey
Sheet 5 of 5		Rev: 11	Format: A4



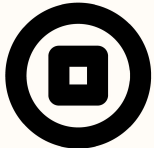
Starnote Connector



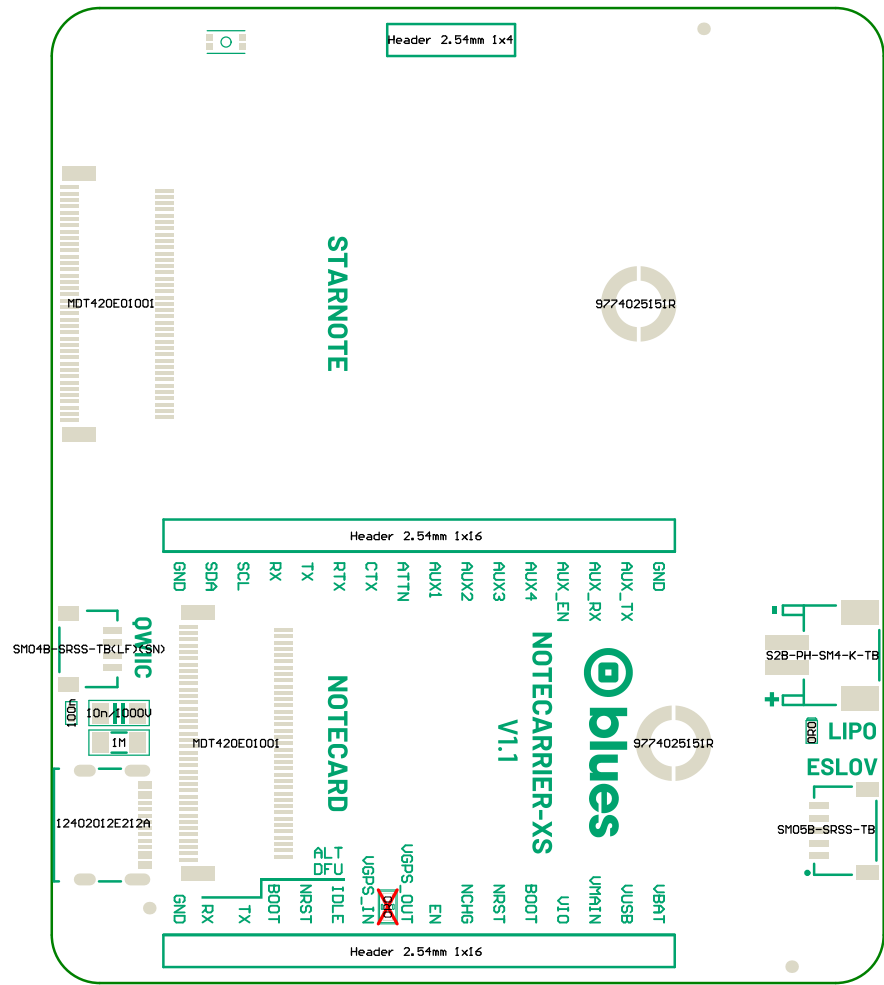
Starnote Support



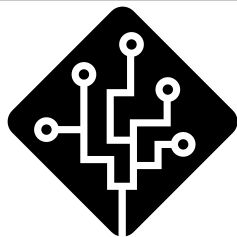
Title: 06_STARNOTE-CONNECTION.SchDoc		
Project: 100426_notecarrier-xs.PrjPCB		
Company: Byte Lab Grupa d.o.o.		Medarska 69/1, 10000 Zagreb, Croatia www.byte-lab.com
Author: M. Marsic	Acceptor: J. Wiedey	
Sheet 6 of 6	Rev: 11	Format: A4



Copyright © 2023 Blues Inc.



Mount pin headers on bottom!



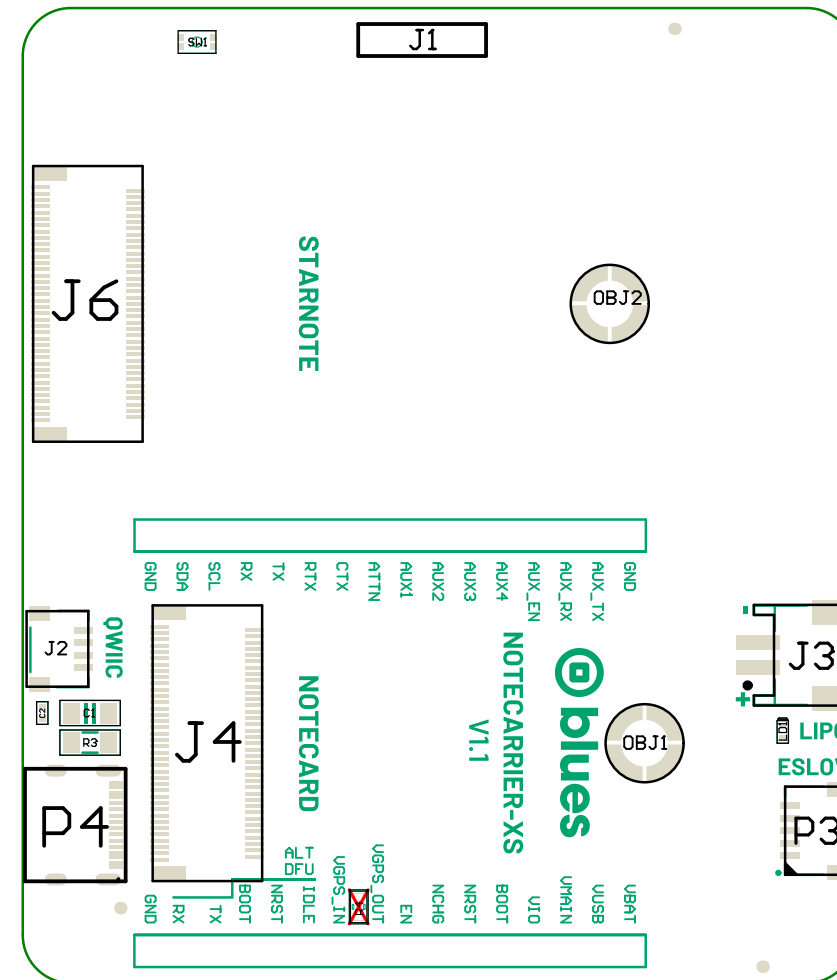
Byte Lab Grupa d.o.o.  
Medarska 69/1  
10000 Zagreb  
Croatia

	SIGNATURE	TITLE:  <b>Assembly drawing comments - TOP</b>
AUTHOR:	<b>M. Marsic</b>	
ACCEPTOR:	<b>J. Wiedey</b>	
		BOM NO.:  <b>3000-789-001</b>
DESIGN DOCUMENT NAME:		<b>100426 Notecarrier-XS Rev. 11</b>
		FORMAT:  <b>A4</b>

Copyright © 2023 Blues Inc.

A

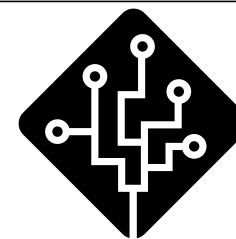
B



Mount pin headers on bottom!

C

D



Byte Lab Grupa d.o.o.  
Medarska 69/1  
10000 Zagreb  
Croatia

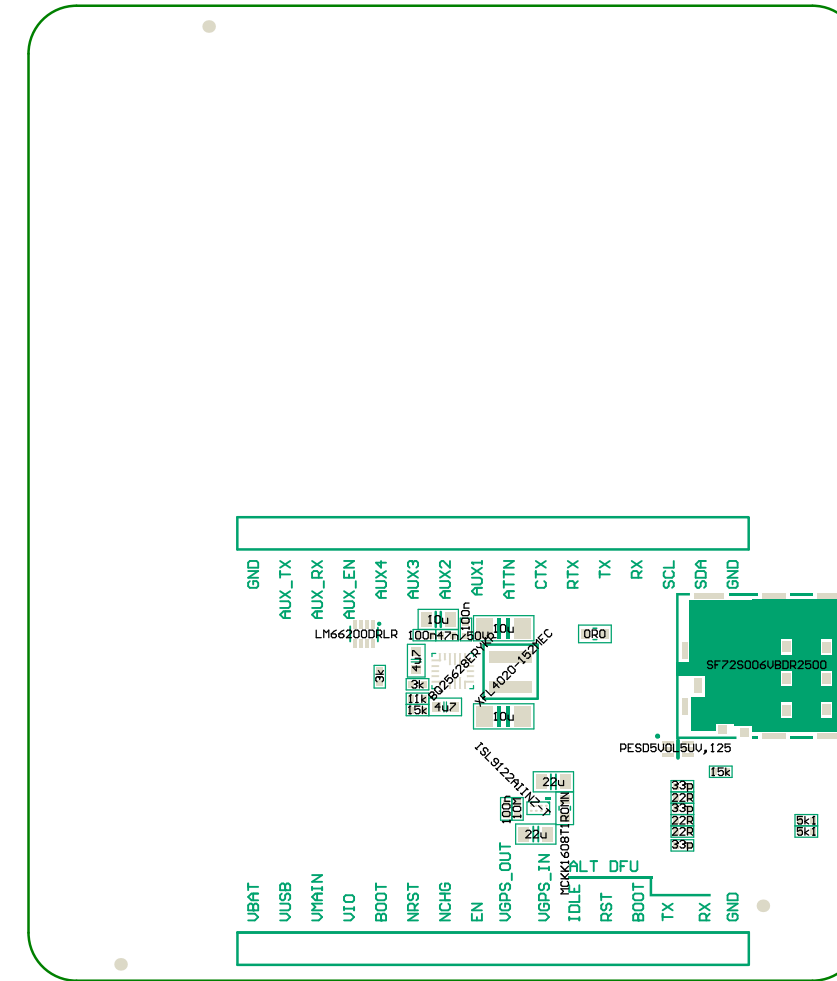
	SIGNATURE	TITLE:  <b>Assembly drawing designators - TOP</b>
AUTHOR:	<b>M. Marsic</b>	
ACCEPTOR:	<b>J. Wiedey</b>	
		BOM NO.:  <b>3000-789-001</b>
DESIGN DOCUMENT NAME:  <b>100426 Notecarrier-XS Rev. 11</b>		FORMAT:  <b>A4</b>



Copyright © 2023 Blues Inc.

A

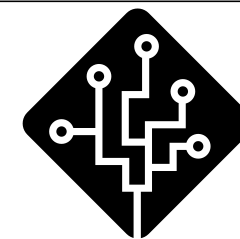
B



Mount pin headers on bottom!

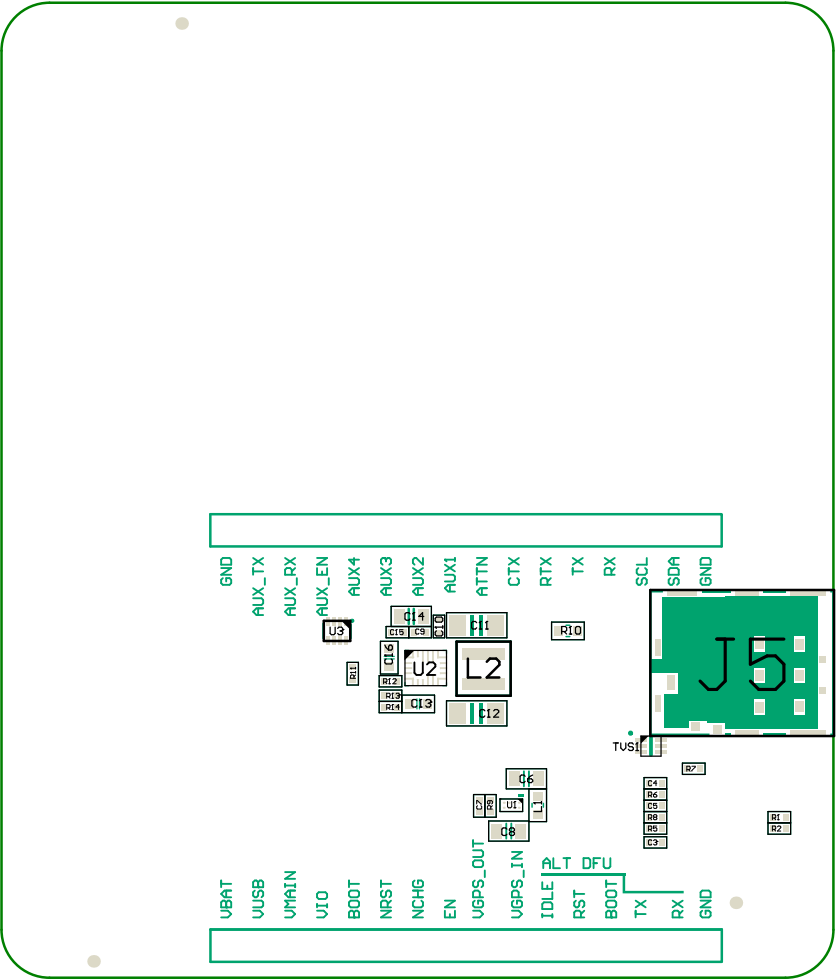
C

D

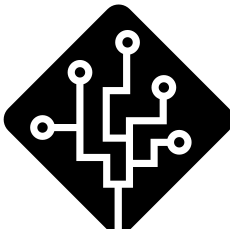


Byte Lab Grupa d.o.o.  
Medarska 69/1  
10000 Zagreb  
Croatia

	SIGNATURE	TITLE:  <b>Assembly drawing comments - BOTTOM</b>
AUTHOR:	<b>M. Marsic</b>	
ACCEPTOR:	<b>J. Wiedey</b>	
		BOM NO.: <b>3000-789-001</b>
DESIGN DOCUMENT NAME: <b>100426 Notecarrier-XS Rev. 11</b>		FORMAT: <b>A4</b>



Mount pin headers on bottoml

 Byte Lab Grupa d.o.o. Medarska 69/1 10000 Zagreb Croatia	SIGNATURE		TITLE:  Assembly drawing designators - BOTTOM
	AUTHOR:	M. Marsic	
	ACCEPTOR:	J. Wiedey	
			BOM NO.: 3000-789-001
	DESIGN DOCUMENT NAME: 100426 Notecarrier-XS Rev. 11		FORMAT: A4