

# Computadora Industrial Abierta Argentina

## Versión NXP

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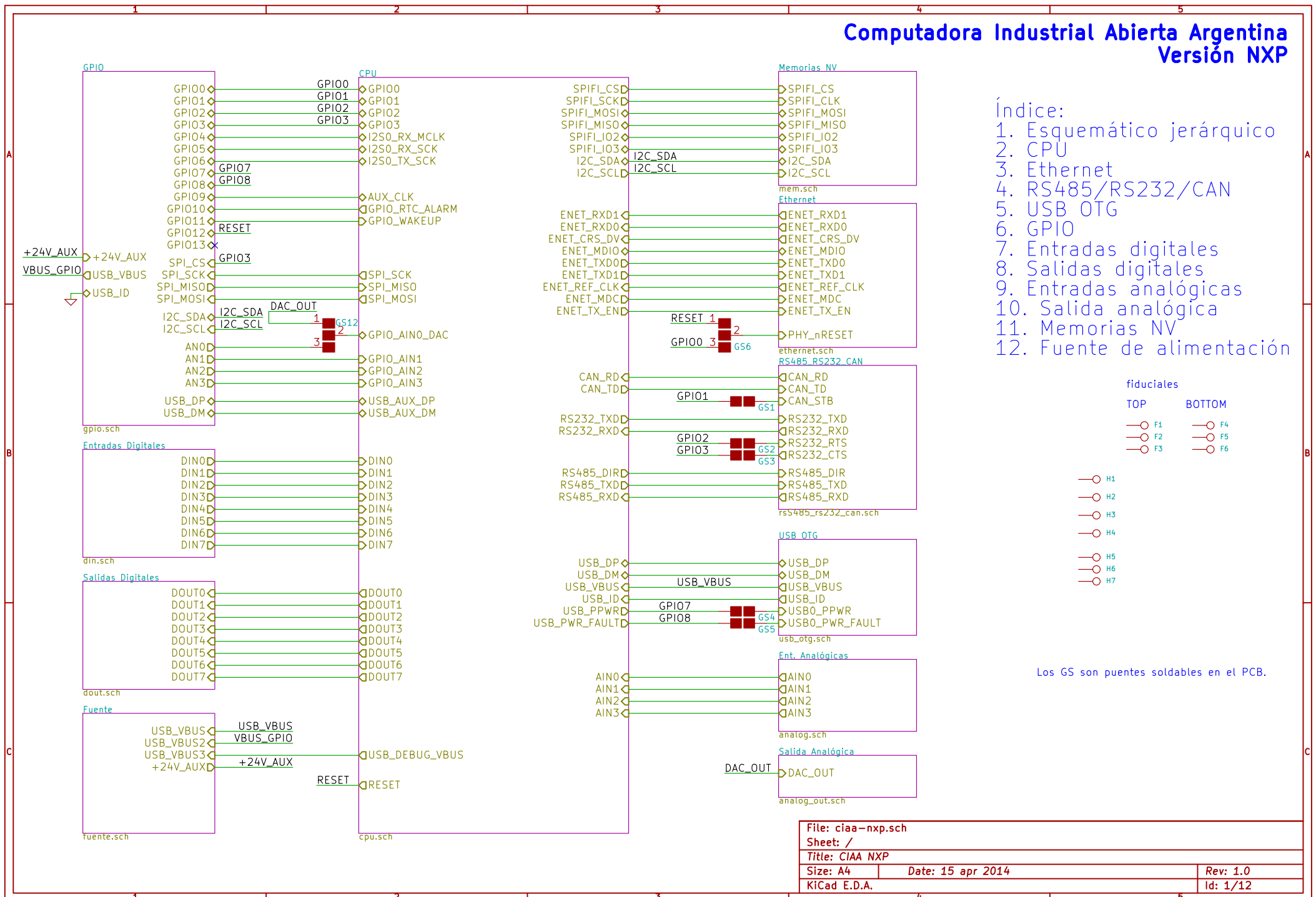
fiduciales

TOP BOTTOM

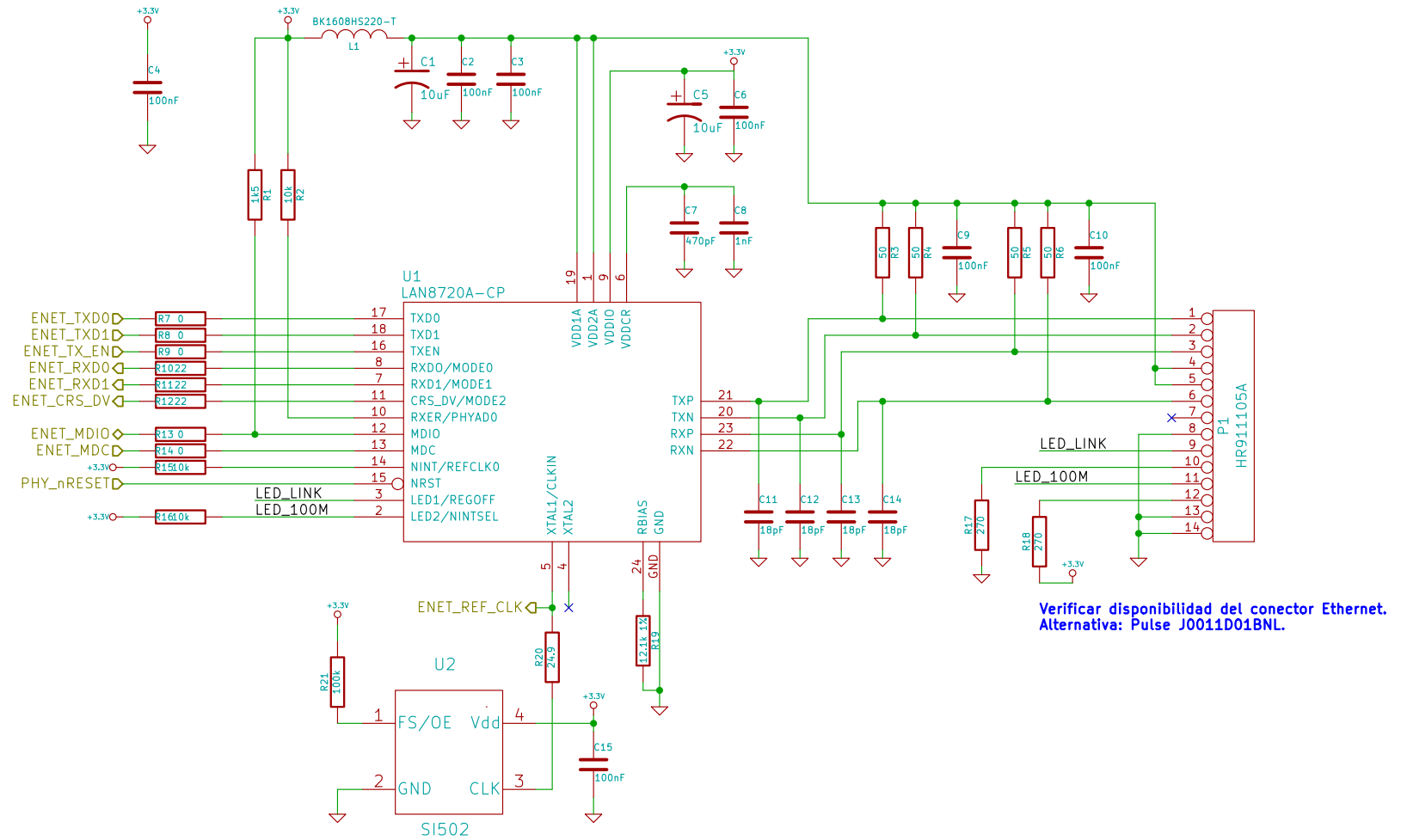
F1 F2 F3 F4 F5 F6

H1 H2 H3 H4 H5 H6 H7

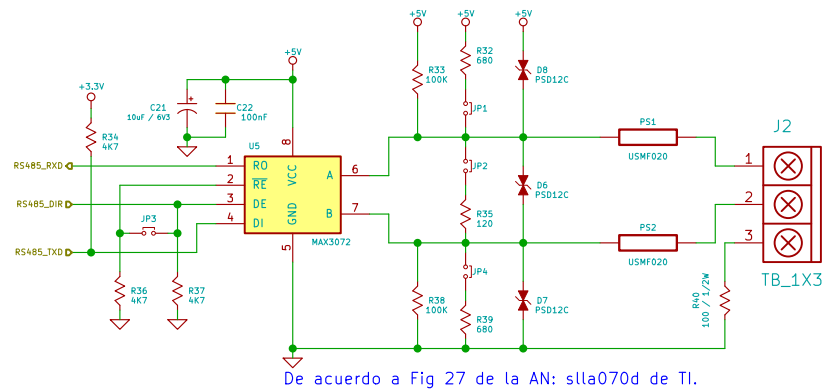
Los GS son puentes soldables en el PCB.





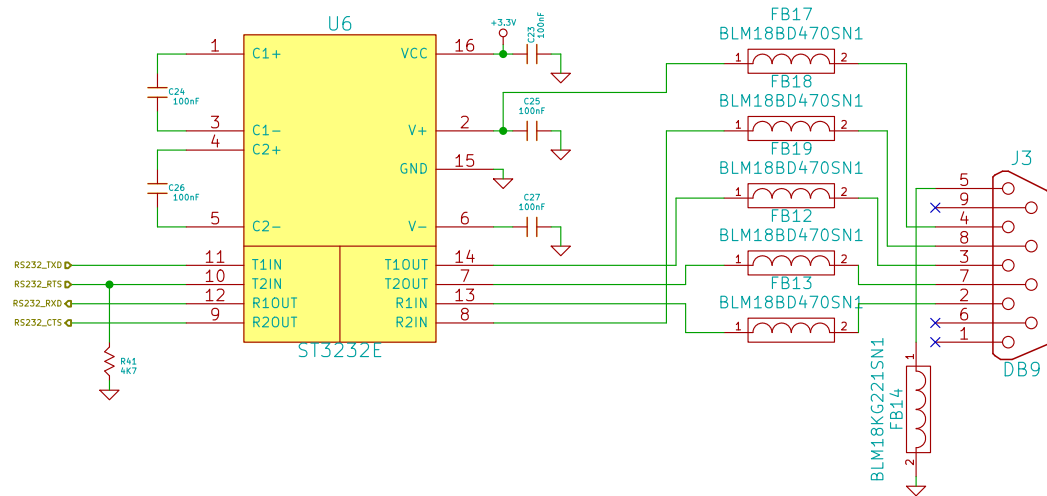
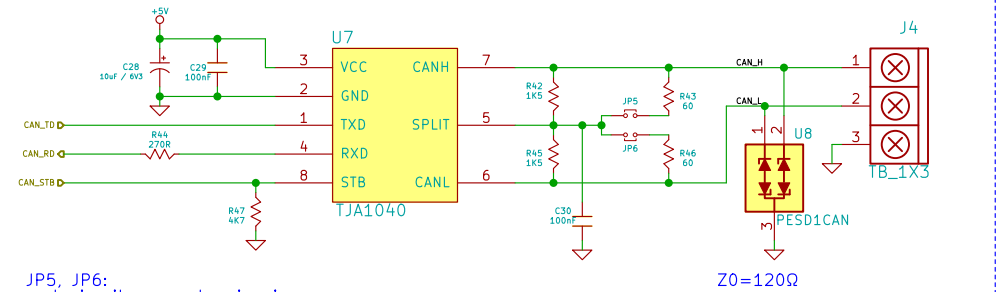


File: ethernet.sch		
Sheet: /Ethernet/		
Title: CIAA Ethernet		
Size: A4	Date: 15 apr 2014	Rev: 1.0
KiCad E.D.A.		Id: 3/12



JP1, JP2, JP4: cortocircuitar en caso que sea el último nodo de la red.

RS485



RS232

File: rsS485\_rs232\_can.sch

Sheet: /RS485\_RS232\_CAN/

Title: CIAA RS485 - RS232 - CAN

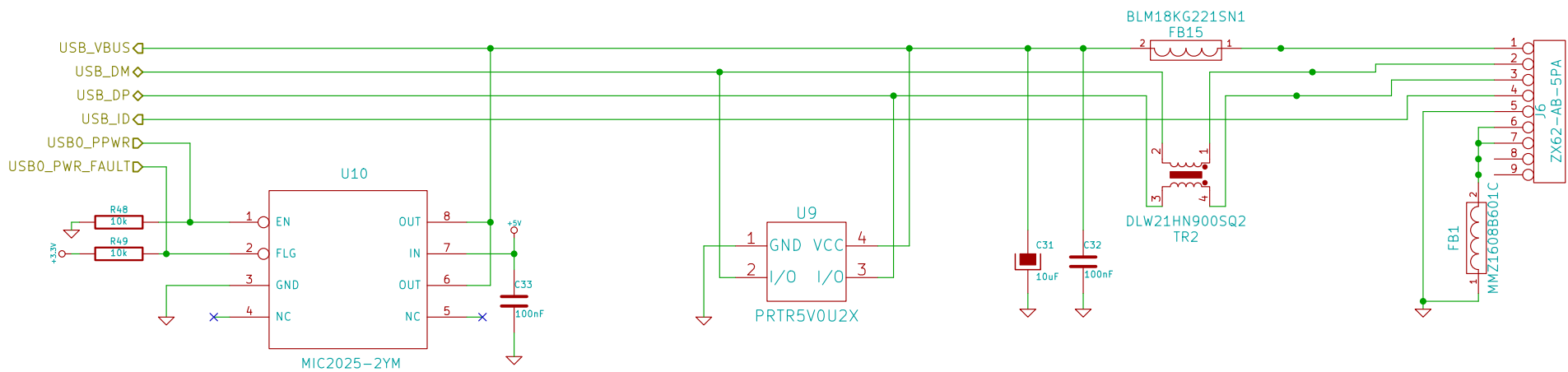
Size: A4

Date: 15 apr 2014

Rev: 1.0

KiCad E.D.A.

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File: usb_otg.sch		
Sheet: /USB OTG/		
Title: USB OTG CIAA		
Size: A4	Date: 15 apr 2014	Rev: 1.0
KiCad E.D.A.		Id: 5/12

Conectores de expansión LVTTL.  
En formato de pines, 2.54mm de pitch.

USR\_5V

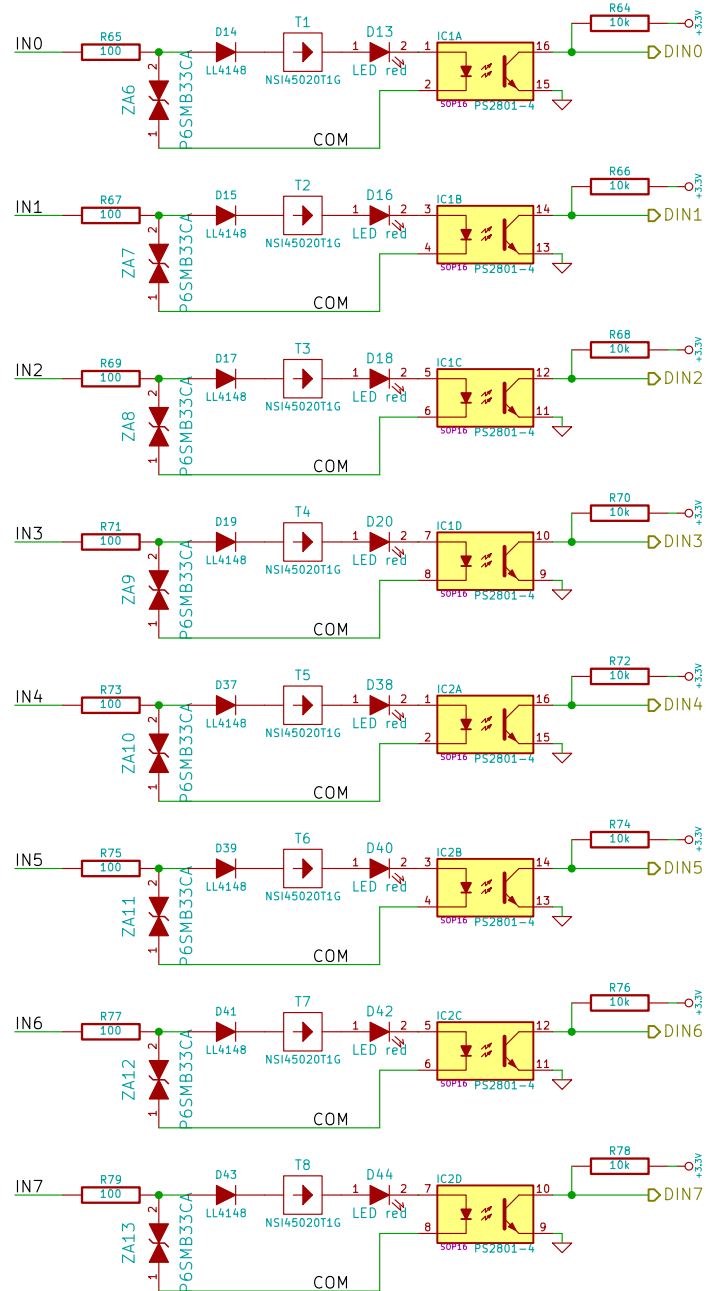
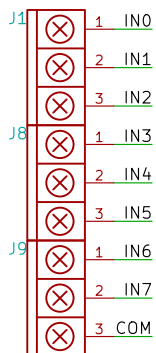
The schematic illustrates the electrical connections for various expansion headers:

- Power Regulation:** A +24V input is regulated down to +3.3V by TH8 (MF-MSMF030-2) and to +5V by TH9 (MF-MSMF110-2).
- Digital I/O:** Header P12 (CONN\_10X2) provides 20 pins for GPIOs (GPIO0-GPIO12 on one side, GPIO1-GPIO13 on the other).
- I2C Interface:** Header P13 (I2C) connects I2C\_SDA and I2C\_SCL signals.
- SPI Interface:** Header P14 (SPI) connects SPI\_MISO, SPI\_CS#, SPI\_MOSI, and SPI\_SCK signals.
- Analog Inputs:** Header P15 (Analog) includes pull-up resistors R117, R119, R118, and R120 for AN0 through AN3.
- USB Connection:** The BLM18KG221SN1 FB16 ferrite bead filters the USB\_VBUS signal before it reaches the ZX62-B-5PA USB-to-UART bridge chip via header P16. Other USB signals (DM, DP, ID) are connected directly. An auxiliary USB port is also shown with its own ferrite bead (FB10) and connector (MWZ1608B601C).

File: gpio.sch		
Sheet: /GPIO/		
Title: CIAA GPIO/SPI/I2C/USB/ANALOG		
Size: A4	Date: 15 apr 2014	Rev: 1.0
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Id: 6/12

Diodo:  
Vf = 1.4V  
If = 10mA



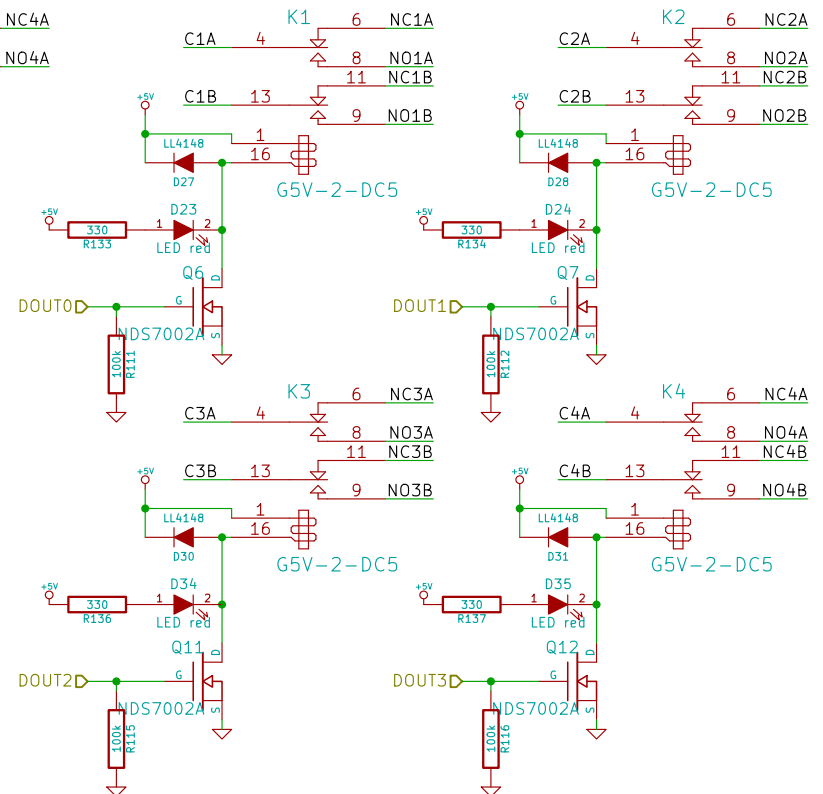
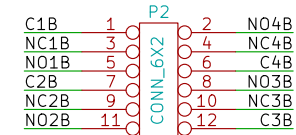
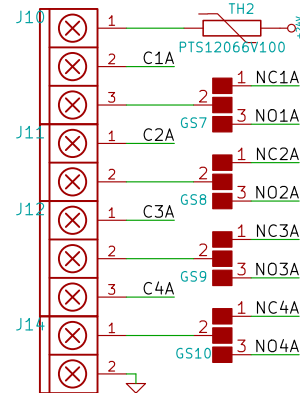
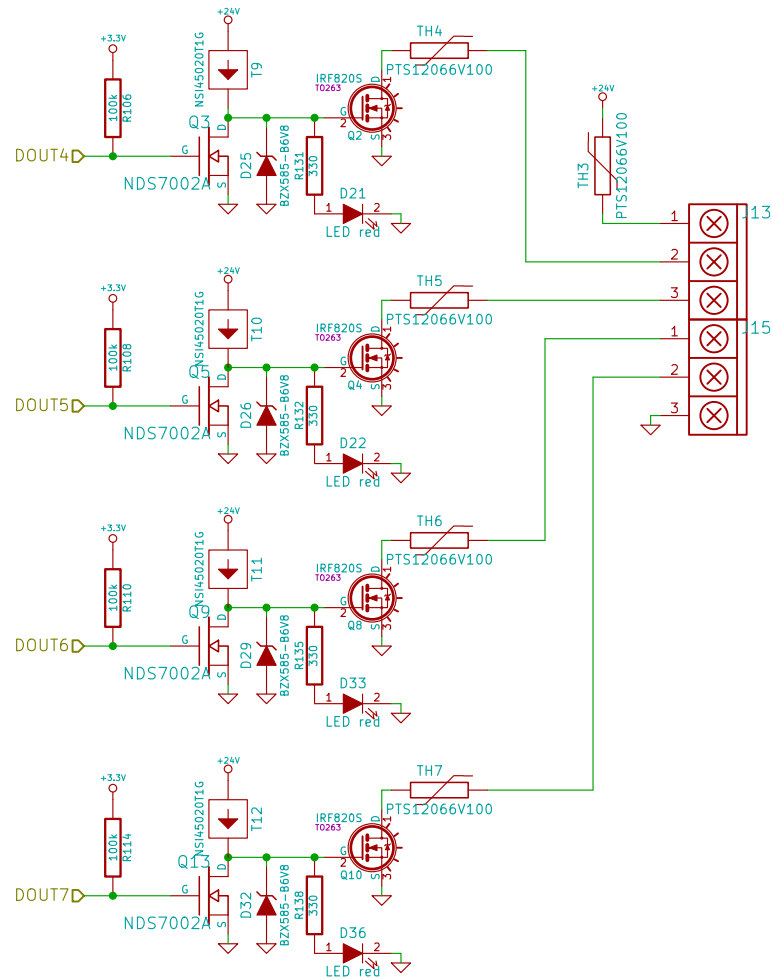
Entradas optoacopladas por bornera.  
Rango de Voltaje de entrada aproximado: 10 a 30V (CC).  
Protección contra sobrevoltaje y polarización inversa,  
limitación de corriente.

File: din.sch		
Sheet: /Entradas Digitales/		
Title: CIAA Entradas Digitales		
Size: A4	Date: 15 apr 2014	Rev: 1.0
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Resistores 3.3kohm, 250mW  
ERJ-8GEYJ332V

Salidas digitales Open-Drain por bornes (P10). Corriente de Drain limitada a 1A.  
Salidas digitales a Relé por bornes (P11). Corriente máxima de contactos C, NC y NO: 2A.

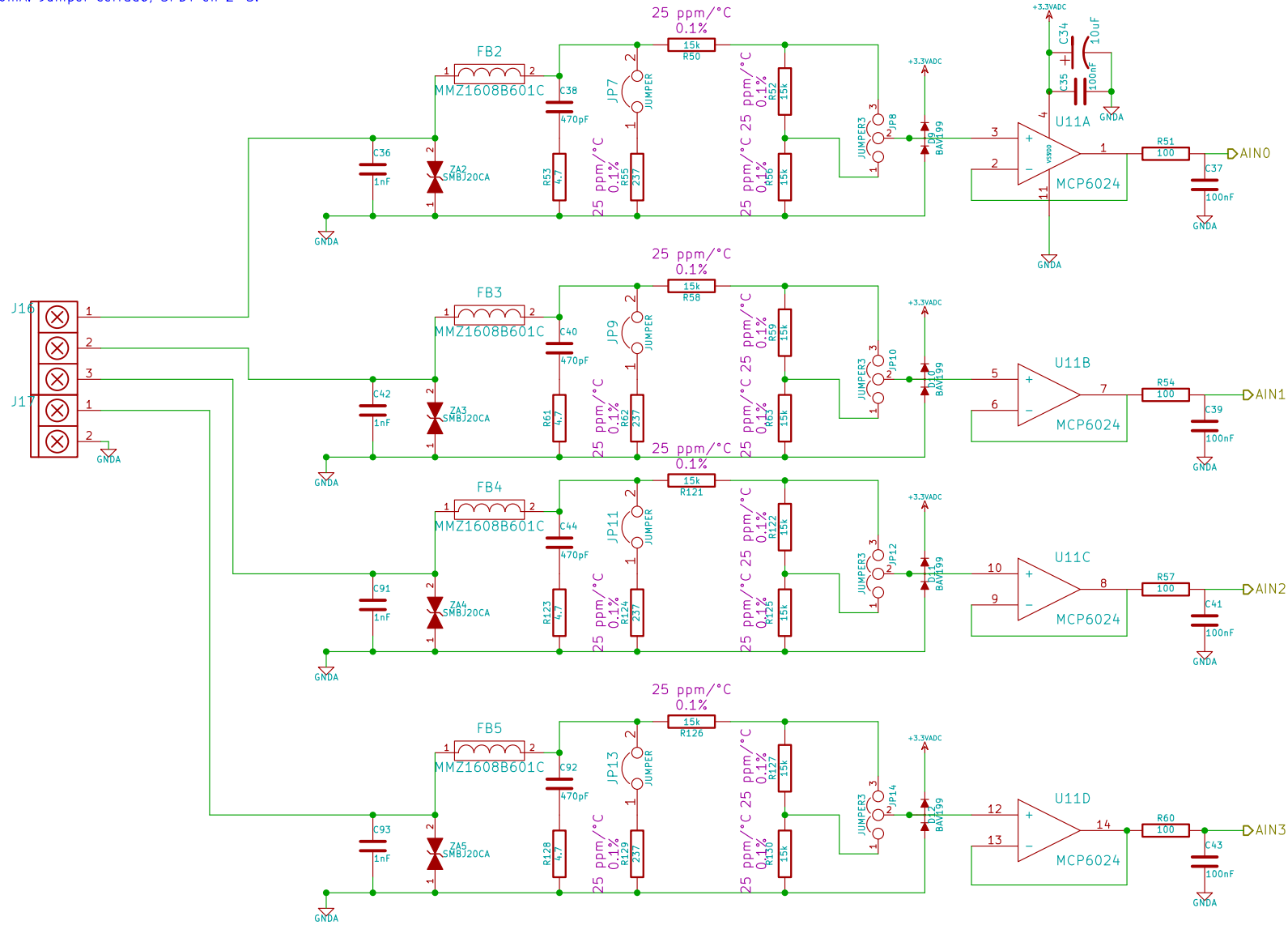
Relé alternativo de menor corriente de bobina:  
C93401



File: dout.sch		
Sheet: /Salidas Digitales/		
Title: CIAA Salidas Digitales		
Size: A4	Date: 15 apr 2014	Rev: 1.0
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0-10V: Jumper abierto, SPDT en 1-2.  
0-20mA: Jumper cerrado, SPDT en 2-3.



Javier Gogolino - SesentaCuarenta

File: analog.sch

Sheet: /Ent. Analógicas/

Title: CIAA - Entradas Analógicas

Size: A4

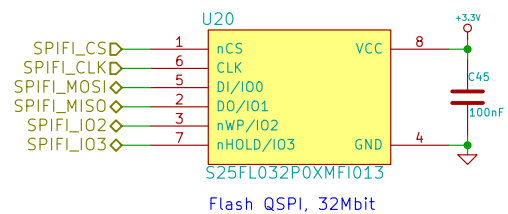
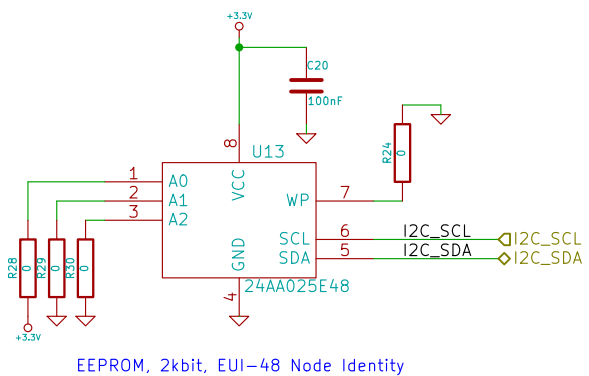
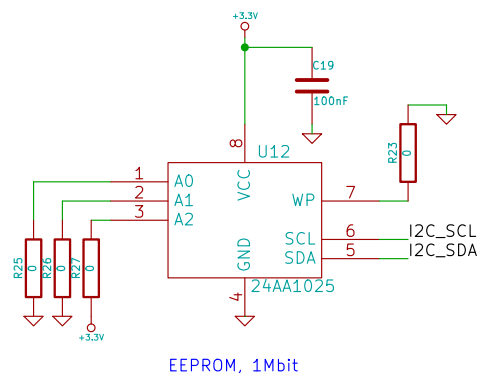
Date: 15 apr 2014

Rev: 1.0

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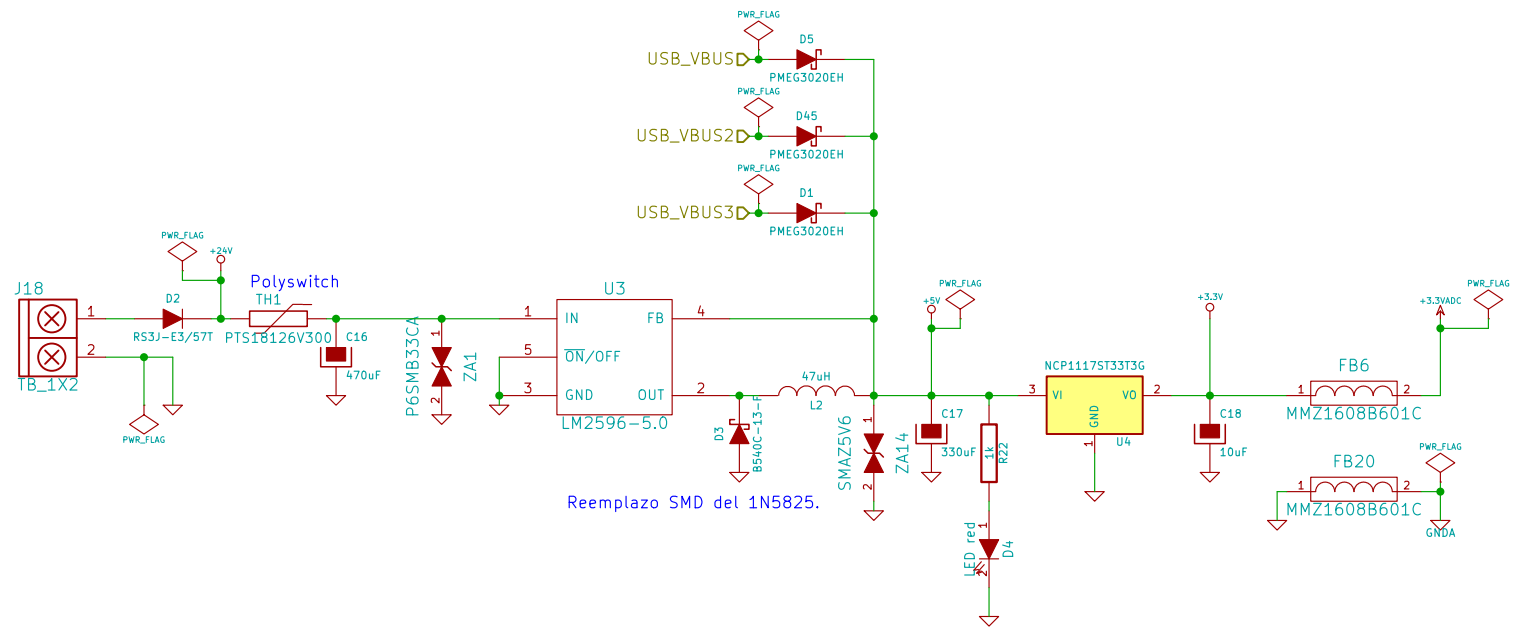
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File: mem.sch		
Sheet: /Memorias NV/		
Title: CIAA micro SD card		
Size: A4	Date: 15 apr 2014	Rev: 1.0
KiCad E.D.A.		Id: 11/12

Fuente de alimentación con rango aproximado de entrada de 12 a 30V (CC).  
Tensiones de salida: 5V, 3A y 3.3V, 1A.  
Posibilidad de alimentar la CIAA a través del puerto USB mediante la conexión con D1.



File: fuente.sch		
Sheet: /Fuente/		
Title: CIAA Fuente de alimentación		
Size: A4	Date: 15 apr 2014	Rev: 1.0
KiCad E.D.A.		Id: 12/12