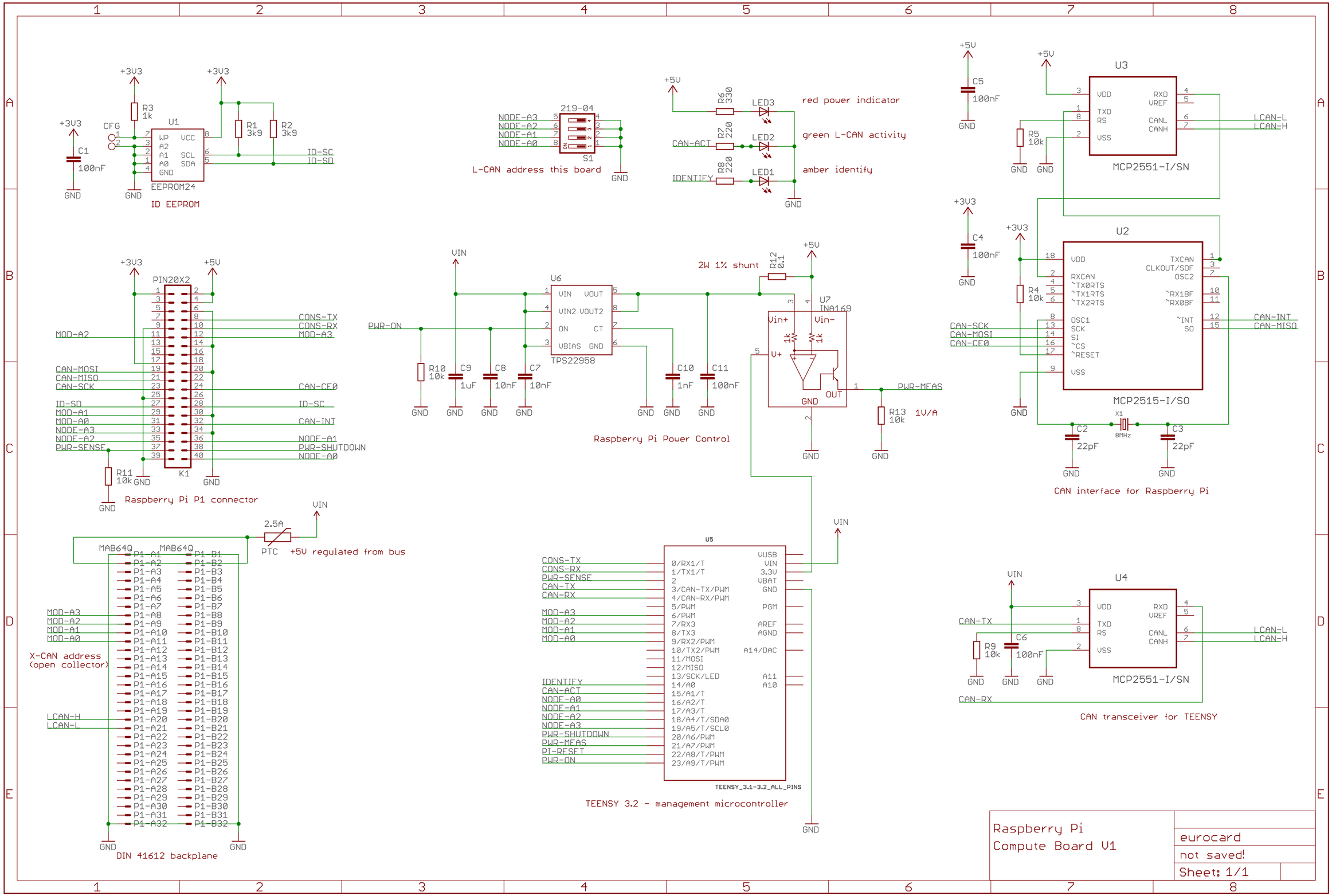
ID EEPROM
EEPROM24
U1
R3 1k
R1 3k9
R2 3k9
C1 100nF
+3V3
GND
CFG
WP VCC A2 A1 SCL A0 SDA GND
ID-SC
ID-SD
L-CAN address this board
219-04
S1
NODE-A3
NODE-A2
NODE-A1
NODE-A0
red power indicator
green L-CAN activity
amber identify
LED3
LED2
LED1
R6 330
R7 220
R8 220
CAN-ACT
IDENTIFY
+5V
C5 100nF
U3
MCP2551-I/SN
VDD TXD RS VSS RXD VREF CANL CANH
R5 10k
LCAN-L
LCAN-H
C4 100nF
U2
MCP2515-I/SO
VDD RXCAN ~TX0RTS ~TX1RTS ~TX2RTS OSC1 SCK SI ~CS ~RESET VSS TXCAN CLKOUT/SOF OSC2 ~RX1BF ~RX0BF ~INT SO
R4 10k
CAN-SCK
CAN-MOSI
CAN-CE0
CAN-INT
CAN-MISO
X1 8MHz
C2 22pF
C3 22pF
CAN interface for Raspberry Pi
PIN20X2
K1
CONS-TX
CONS-RX
MOD-A2
MOD-A3
CAN-MOSI
CAN-MISO
CAN-SCK
CAN-CE0
ID-SD
ID-SC
MOD-A1
MOD-A0
CAN-INT
NODE-A3
NODE-A2
NODE-A1
PWR-SENSE
PWR-SHUTDOWN
R11 10k
Raspberry Pi P1 connector
VIN
U6
TPS22958
VIN VIN2 ON VBIAS VOUT VOUT2 CT GND
PWR-ON
R10 10k
C9 1uF
C8 10nF
C7 10nF
C10 1nF
C11 100nF
2W 1% shunt
R12 0.1
U7
INA169
Vin+ Vin- V+ OUT
1k
PWR-MEAS
R13 10k
1V/A
Raspberry Pi Power Control
2.5A
PTC
+5V regulated from bus
MAB64Q
P1-A1 P1-A2 P1-A3 P1-A4 P1-A5 P1-A6 P1-A7 P1-A8 P1-A9 P1-A10 P1-A11 P1-A12 P1-A13 P1-A14 P1-A15 P1-A16 P1-A17 P1-A18 P1-A19 P1-A20 P1-A21 P1-A22 P1-A23 P1-A24 P1-A25 P1-A26 P1-A27 P1-A28 P1-A29 P1-A30 P1-A31 P1-A32
P1-B1 P1-B2 P1-B3 P1-B4 P1-B5 P1-B6 P1-B7 P1-B8 P1-B9 P1-B10 P1-B11 P1-B12 P1-B13 P1-B14 P1-B15 P1-B16 P1-B17 P1-B18 P1-B19 P1-B20 P1-B21 P1-B22 P1-B23 P1-B24 P1-B25 P1-B26 P1-B27 P1-B28 P1-B29 P1-B30 P1-B31 P1-B32
X-CAN address (open collector)
DIN 41612 backplane
U5
TEENSY_3.1-3.2_ALL_PINS
0/RX1/T 1/TX1/T 2 3/CAN-TX/PWM 4/CAN-RX/PWM 5/PWM 6/PWM 7/RX3 8/TX3 9/RX2/PWM 10/TX2/PWM 11/MOSI 12/MISO 13/SCK/LED 14/A0 15/A1/T 16/A2/T 17/A3/T 18/A4/T/SDA0 19/A5/T/SCL0 20/A6/PWM 21/A7/PWM 22/A8/T/PWM 23/A9/T/PWM
VUSB VIN 3.3V VBAT GND PGM AREF AGND A14/DAC A11 A10
IDENTIFY
CAN-ACT
PWR-MEAS
PI-RESET
TEENSY 3.2 - management microcontroller
U4
MCP2551-I/SN
R9 10k
C6 100nF
CAN-TX
CAN-RX
Raspberry Pi
Compute Board V1
eurocard
not saved!
Sheet: 1/1