

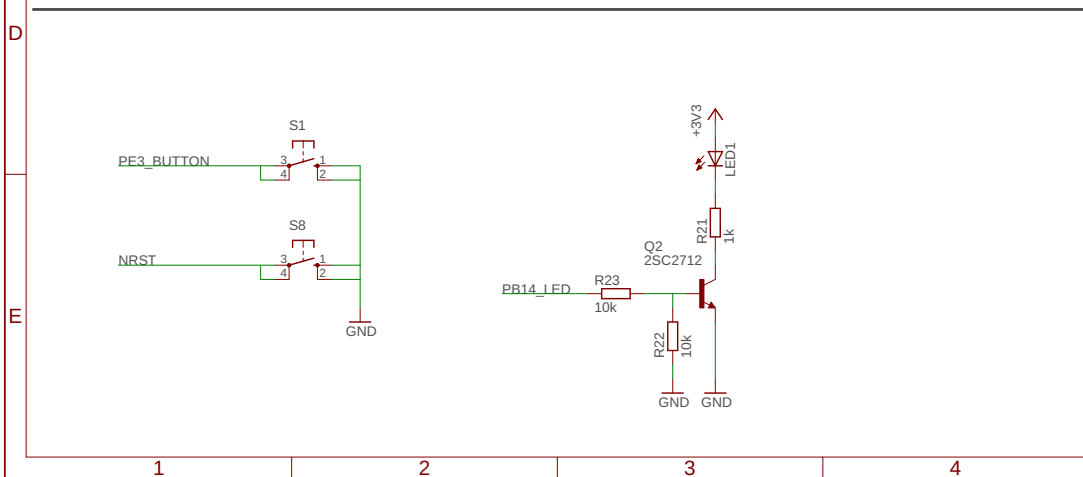
Battery

The diagram shows a power supply section for a microcontroller. A +15V supply is connected to the VCC pin of a microcontroller (U\$5, FUC-03A) through a fuse (H5, MOUNT-PAD-ROUND3.2). The GND pin of the microcontroller is connected to ground through a fuse (H6, MOUNT-PAD-ROUND3.2). Three capacitors (C19, C21, C22) are connected in parallel between the VCC and GND lines to provide decoupling.

Connectors for power supply

The diagram illustrates the power supply connectors for a system. On the left, a +15V supply line is connected to a series of six connectors labeled CN1 through CN6. Each connector has two pins, with the first pin connected to +15V and the second pin connected to GND. On the right, a +5V supply line is connected to a USB connector labeled X1. The USB connector has four pins, with the first pin connected to +5V and the second pin connected to GND. The USB connector is labeled KUSBVX-AS1N-W.

Regulators



Microcontroller

Microcontroller

main_control_board

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Ball sensor



XBee (for debugging)



Kicker



RS485

The diagram illustrates the RS485 interface circuit. It features a 5V supply connected to a 0.01uF capacitor (C29) to ground. The circuit includes an LTC485S IC (IC2) with pins for USART2_RX, USART2_TX, RS485_DE, and RS485_A/B. A 100 ohm resistor (JP1) is connected between the RS485_A and RS485_B pins. The RS485_A and RS485_B lines are connected to four connectors: CN8, CN9, CN10, and CN11. Each connector is labeled with pin numbers 1 through 4. The connectors are also labeled with the component name BM04B-SRSS-TB.



Ethernet

The schematic diagram illustrates the Ethernet interface circuit for the DP83848 IC (IC3). The IC is connected to the main control board via a connector. The circuit includes the following components and connections:

- DP83848 IC (IC3):**
 - Pins 1-12:** TX_CLK, TX_EN, TXD_0, TXD_1, TXD_2, TXD_3, PWRDN_INTN, TCK, TDO, TMS, TRST_N, TDI.
 - Pins 13-24:** TPRDM, TRPRP, CPDSS, TP7DPM, TP7DPM, ANA18VDD, ANA18VSS, IP-PH_P, IP-PH_M, ANA33VDD, ANA33VSS, VREF.
 - Pins 25-37:** CORE_VSS, IO_VSS2, X1, X2, IO_VDD2, MDC, MDIO, RESET_N, LED_LNK, LED_SPD, LED_ACTCOL, CLK2MAC.
- Power Supply:**
 - +3V3:** Connected to various pins (e.g., TXD_0, TXD_1, TXD_2, TXD_3, TXD_4, TXD_5, TXD_6, TXD_7, TXD_8, TXD_9, TXD_10, TXD_11, TXD_12, TXD_13, TXD_14, TXD_15, TXD_16, TXD_17, TXD_18, TXD_19, TXD_20, TXD_21, TXD_22, TXD_23, TXD_24, TXD_25, TXD_26, TXD_27, TXD_28, TXD_29, TXD_30, TXD_31, TXD_32, TXD_33, TXD_34, TXD_35, TXD_36, TXD_37, TXD_38, TXD_39, TXD_40, TXD_41, TXD_42, TXD_43, TXD_44, TXD_45, TXD_46, TXD_47, TXD_48, TXD_49, TXD_50, TXD_51, TXD_52, TXD_53, TXD_54, TXD_55, TXD_56, TXD_57, TXD_58, TXD_59, TXD_60, TXD_61, TXD_62, TXD_63, TXD_64, TXD_65, TXD_66, TXD_67, TXD_68, TXD_69, TXD_70, TXD_71, TXD_72, TXD_73, TXD_74, TXD_75, TXD_76, TXD_77, TXD_78, TXD_79, TXD_80, TXD_81, TXD_82, TXD_83, TXD_84, TXD_85, TXD_86, TXD_87, TXD_88, TXD_89, TXD_90, TXD_91, TXD_92, TXD_93, TXD_94, TXD_95, TXD_96, TXD_97, TXD_98, TXD_99, TXD_100).
 - GND:** Connected to various pins (e.g., TXD_0, TXD_1, TXD_2, TXD_3, TXD_4, TXD_5, TXD_6, TXD_7, TXD_8, TXD_9, TXD_10, TXD_11, TXD_12, TXD_13, TXD_14, TXD_15, TXD_16, TXD_17, TXD_18, TXD_19, TXD_20, TXD_21, TXD_22, TXD_23, TXD_24, TXD_25, TXD_26, TXD_27, TXD_28, TXD_29, TXD_30, TXD_31, TXD_32, TXD_33, TXD_34, TXD_35, TXD_36, TXD_37, TXD_38, TXD_39, TXD_40, TXD_41, TXD_42, TXD_43, TXD_44, TXD_45, TXD_46, TXD_47, TXD_48, TXD_49, TXD_50, TXD_51, TXD_52, TXD_53, TXD_54, TXD_55, TXD_56, TXD_57, TXD_58, TXD_59, TXD_60, TXD_61, TXD_62, TXD_63, TXD_64, TXD_65, TXD_66, TXD_67, TXD_68, TXD_69, TXD_70, TXD_71, TXD_72, TXD_73, TXD_74, TXD_75, TXD_76, TXD_77, TXD_78, TXD_79, TXD_80, TXD_81, TXD_82, TXD_83, TXD_84, TXD_85, TXD_86, TXD_87, TXD_88, TXD_89, TXD_90, TXD_91, TXD_92, TXD_93, TXD_94, TXD_95, TXD_96, TXD_97, TXD_98, TXD_99, TXD_100).
- Signal Traces:**
 - ETH_RMII_TX0, ETH_RMII_TX1:** Connected to TXD_0 and TXD_1.
 - ETH_RMII_RXD0, ETH_RMII_RXD1:** Connected to RXD_0 and RXD_1.
 - ETH_RMII_CRS_DV:** Connected to CRS.
 - ETH_RMII_MDC:** Connected to MDC.
 - ETH_RMII_MDIO:** Connected to MDIO.
 - LED_LINK:** Connected to LED_LNK.
 - LEDACT_LINK:** Connected to LED_ACTCOL.
- Other Components:**
 - SG-210STF 50MHz:** A transformer used for signal conditioning.
 - Resistors:** R10 (4.7k), R11 (150), R12 (18), R13 (2k), R14 (2k), R4 (51), R5 (51), R6 (51), R7 (51), R8 (330), R24 (2k), R25 (2k).
 - Capacitors:** C1 (100n), C2 (100n), C3 (100n), C4 (100n), C5 (0.01u), C30 (0.01u), C31 (0.01u), C36 (1u), C37 (0.01u).

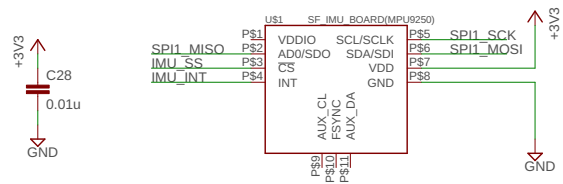
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MPU9250



Dribble_MD

