LINBUS INTERFACE

J1 — VBAT (1), GND (2), LIN (3) — LIN1
F1 250ma slow
MBR0540 D1
+12V
C5 22uF 40V
C7 0.1uF 50V
R1 10K
D7 MBR0540
LIN MASTER
JP1
J2 — VBAT (1), GND (2), LIN (3) — LIN2
C2 220pF

U1 ATA6631
- VS
- +5V (8)
- ENI (2)
- LIN (4)
- NRES (7)
- RXO (5) → LIN_RX
- TXI (6) → LIN_TX
- GND (3)

C9 10uF
C8 0.1uF
+5V

MCU

U3 ATMEGA328
- +5V
- 0.1uF C12
- AVCC (18)
- VCC (4)
- VCC (6)
- AREF (20)
- 16MHz X1
- PB6(XTAL1/TOSC1) (7)
- PB7(XTAL2/TOSC2) (8)
- R9 10k
- RESET
- PC6(/RESET) (29)
- AGND (5)
- GND (3)
- GND (21)

- PC0(ADC0) (23) → LIN_BREAK
- PC1(ADC1) (24)
- PC2(ADC2) (25) → LIN_TX
- PC3(ADC3) (26) → LIN_ISR
- PC4(ADC4/SDA) (27)
- PC5(ADC5/SCL) (28)
- ADC6 (19)
- ADC7 (22)
- PD0(RXD) (30) → SER_RX
- PD1(TXD) (31) → SER_TX
- PD2(INT0) (32) → LIN_RX
- PD3(INT1) (1) → LIN_TICK
- PD4(XCK/T0) (2)
- PD5(T1) (9)
- PD6(AIN0) (10) → GP_DEBUG
- PD7(AIN1) (11)
- PB0(ICP) (12) → FRAME_LED
- PB1(OC1A) (13) → ERROR_LED
- PB2(SS/OC1B) (14)
- PB3(MOSI/OC2) (15) → MOSI/LIN_ERR
- PB4(MISO) (16) → MISO/LIN_DATA
- PB5(SCK) (17) → SCK

USB/SERIAL

MBR0540 D5 → +12V
MBR0540 D6 → +5V
0.1uF C6
U2 FT232RL
- VCC (20)
- VCCIO (4)
- TXO (1) → R4 10K → SER_RX
- RXI (5) → R2 10K → SER_TX
- DTRO (2) → 0.1uF C11 → RESET
- TX_LED (23)
- RX_LED (22)
- D- (16)
- D+ (15)
- TEST (26)
- 3V3OUT (17) → C10 0.1uF
- GND (7)
- GND (18)
- GND (21)
- GND (25)

J4 — VBUS (1), D- (2), D+ (3), ID (4), GND (5)
C1 10uF

ICSP

J3
- MISO/LIN_DATA (1)
- (2)
- SCK (3)
- (4) → MOSI/LIN_ERR
- RESET (5)
- (6)
- +5V

DIAGNOSTIC LEDS

FRAME_LED
ERROR_LED
R11 3.3k — D3 RED
R12 3.3k — D4 GREEN
R5 10K — D2 RED
+12V
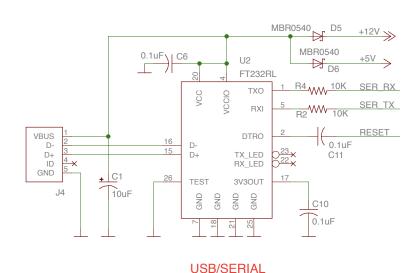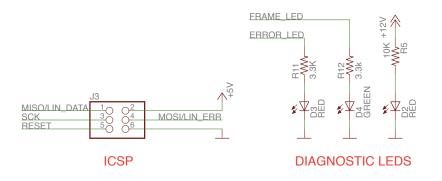
DESIGN NOT VERIFIED YET

TITLE: analyzer

Document Number:

REV:

Date: 2/18/14 10:14 PM

Sheet: 1/1