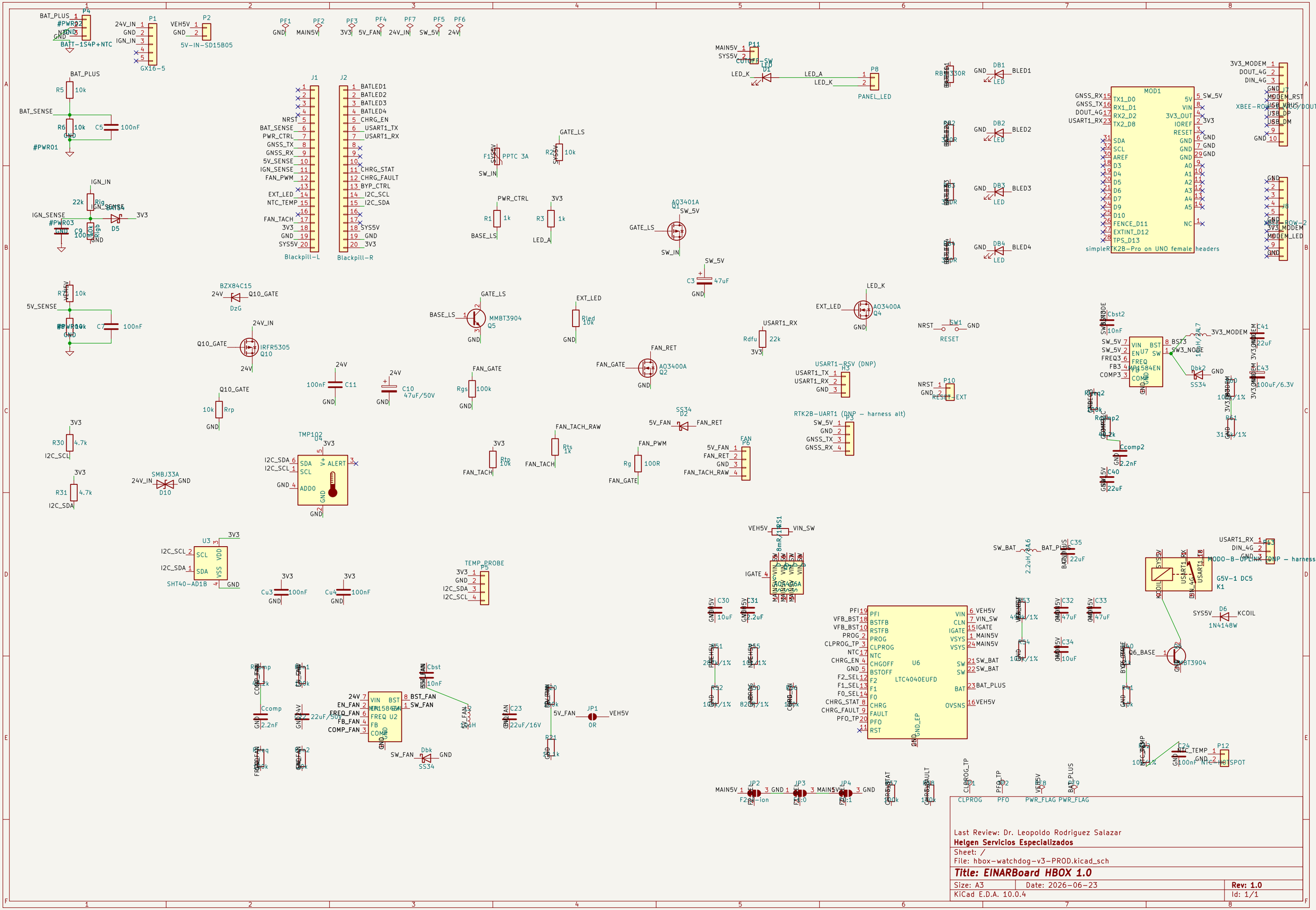
BAT_PLUS
P4
BATT-1S4P+NTC
P1
GX16-5
P2
5V-IN-SD15B05
PF1 PF2 PF3 PF4 PF5 PF6
GND MAIN5V 3V3 5V_FAN 24V_IN SW_5V 24V
P11
CUTOFF_SW
LED
D1
LED_K
LED_A
P8
PANEL_LED
R8 330R
DB1 LED
BLED1
DB2 LED
BLED2
DB3 LED
BLED3
DB4 LED
BLED4
J1
Blackpill-L
J2
Blackpill-R
BATLED1
BATLED2
BATLED3
BATLED4
CHRG_EN
USART1_TX
USART1_RX
CHRG_STAT
CHRG_FAULT
BYP_CTRL
I2C_SCL
I2C_SDA
SYS5V
MOD1
simpleRTK2B-Pro on UNO female headers
3V3_MODEM
DOUT_4G
DIN_4G
MODEM_RST
USB_VBUS
USB_DP
USB_DM
XBEE-ROW-1 (VBUS/DOUT/DIN)
XBEE-ROW-2
MODEM_LED
R5 10k
BAT_SENSE
R6 10k
C5 100nF
#PWR01
IGN_IN
IGN_SENSE
D5 BAT54
3V3
R7 10k
5V_SENSE
C7 100nF
BZX84C15
DzG
Q10_GATE
IRFR5305
Q10
24V
Rrp
R30 4.7k
I2C_SCL
R31 4.7k
I2C_SDA
SMBJ33A
D10
TMP102
U4
ADD0
ALERT
C11 100nF
C10 47uF/50V
U3
SHT40-AD1B
Cu3 100nF
Cu4 100nF
TEMP_PROBE
P5
GATE_LS
F1 PPTC 3A
R2 10k
SW_IN
PWR_CTRL
R1 1k
BASE_LS
R3 1k
LED_A
AO3401A
Q1
SW_5V
C3 47uF
MMBT3904
Q5
EXT_LED
Rled 10k
AO3400A
Q4
FAN_RET
FAN_GATE
Q2
Rgs 100k
SS34
D2
5V_FAN
FAN_TACH_RAW
Rts 1k
FAN_TACH
Rtp 10k
FAN_PWM
Rg 100R
P6
FAN
USART1_RX
Rdfu 22k
USART1-RSV (DNP)
H3
USART1_TX
RTK2B-UART1 (DNP – harness alt)
P3
GNSS_TX
GNSS_RX
NRST
Sw1
RESET
P10
RESET_EXT
Cbst2 10nF
U7 LM1584EN
VIN
EN
FREQ
FB
COMP
BST
SW
L1 4.7uH
3V3_MODEM
Dbk2 SS34
C41 22uF
C43 100uF/6.3V
R61 31.6k/1%
R60 100k/1%
Rcomp2 10k
Ccomp2 2.2nF
C40 22uF
VIN_SW
IGATE
Q7 AO3406A
Q8 AO3406A
C30 10uF
C31 2.2uF
U6 LTC4040EUFD
PFI
VFB_BST
PROG
CLPROG_TP
NTC
CHGOFF
BSTOFF
F2
F1
F0
CHRG
FAULT
PFO
RST
GND_EP
VIN
CLN
IGATE
VSYS
SW
BAT
OVSNS
MAIN5V
VEH5V
SW_BAT
BAT_PLUS
SW_BAT
2.2uH/3A6
C35 22uF
C32 47uF
C33 47uF
C34 10uF
R53 402k/1%
R54 100k/1%
R52 100k/1%
R51 200k/1%
R55 100k/1%
R50 820k/1%
Rcomp 100k
Q9 MMBT3904
Q6_BASE
R40 100k
R41 100k
G5V-1 DC5
K1
USART1_RX
DIN_4G
MODO-B-OPLINK (DNP – harness alt)
SYS5V
D6 1N4148W
KCOIL
R43 100k/1%
C24 100nF
NTC_TEMP
P12
NTC-HOTSPOT
Rcomp 40.2k
Ccomp 2.2nF
C22 22uF/50V
R21 1k
C23 22uF/16V
JP1 0R
JP2 Jumper
JP3 Jumper
JP4 Jumper
CLPROG
PFO
PWR_FLAG
BAT_PLUS
Last Review: Dr. Leopoldo Rodriguez Salazar
Heigen Servicios Especializados
Sheet: /
File: hbox-watchdog-v3-PROD.kicad_sch
Title: EINARBoard HBOX 1.0
Size: A3
Date: 2026-06-23
KiCad E.D.A. 10.0.4
Rev: 1.0
Id: 1/1