Kennlinienschreiber Übersicht

Arduino Nano or Adafruit Metro Mini 328

USB for diosplay curves with Processing

USB for programming NANO

USB for loading Lion battery

TX RX pin_ENC2_A pin_ENC1_A pin_ENC1_B pin_ENC2_B pin_ADC_CS pinDAC_CS TFT_CS TFT_DC MOSI MISO SCK pin_E_NEG pin_E_POS pin_CV_SW pin_EB I2C_SDA I2C_SCL

TX RX D A0 A1 A2 A3 A4 A5 A6 A7

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

5 V

2 3 4 4

TFT_DC

Encoders no Push-Button

7V

Power Supply Battery Loader Voltage Source 7 V for NANO and 15V for TCA0372

pin_BE

pin_CV_SW

SCL

SDA

5V

15V

3.2-4.2V

Lion-Battery 18650

TX

RX

pin_E_POS

pin_E_NEG

SCK

TFT_CS

MISO

MOSI

TFT_CS

MOSI SCK

pin_DAC_CS

5V

pin_ADC_CS

BlueTooth Sender HM-10

5 V

to PC / Smartphone

Divider 5V to 3.3V only for NANO, not for Adafruit Metro Mini

SPI - TFT

Precision Voltage Source 0...12V SPI 2 x DAC and 4 x ADC

Isolated Precision Current-Source I2C 1 µA to 4000 µA

5V

TFT DISPLAY ILI9341

(320x240) Touch not used

C B E

TEXTOOL

pin_EB == 0:: Emitter to Gnd (Rsense) ,Base to Iconst

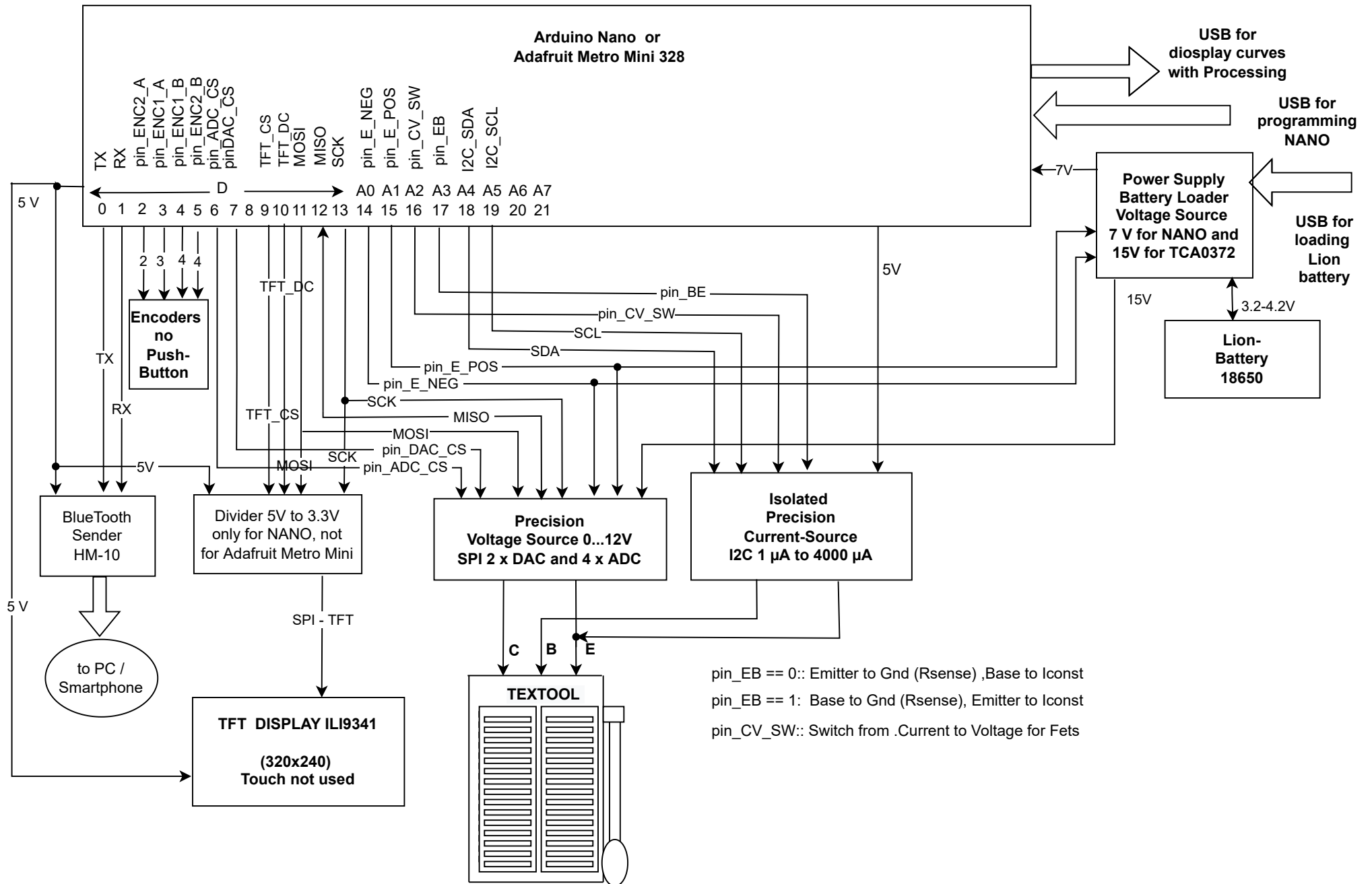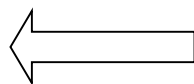pin_EB == 1: Base to Gnd (Rsense), Emitter to Iconst

pin_CV_SW:: Switch from .Current to Voltage for Fets

USB for loading 18650

P_BE: Emitter to Gnds, Base to Iconst

P_EB: Base to Gnds, Emitter to Iconst

Switch from const.Current(I) to const.Voltage(U) for Fets