

DATA

IC1: TCAN3414DR

5V, 3.3V, VUSB, VBAT

IN and PWR

J1: XT30U-M, BM02B-SR55-TB

J2: CANP, CANN

U2: LD1117S50TR_SOT223

MOTOR DRIVERS

U3: Pololu Motor Driver 18v17

U4: Pololu Motor Driver 18v17

MOTORS MOUNTS TP

J3: Motor 1

J4: Motor 2

H1, H3, H4, H2

TP1, TP2, TP3, TP4

U1: Teensy 4.1

5V, 3.3V, VUSB, VBAT

VIN, IN2, PROGRAM ON/OFF, RX1, TX1, RX2, TX2, RX7, TX7, RX8, TX8, CRX3, CTX3, LRCLK2, BCLK2, MCLK2, SCK, A0, A1, A2, A3, A4, A5, A6, A7, A8, A17, A16, A15, A14, A13, A12, A11, A10, A9

5V, 3.3V, VUSB, VBAT

LED, T-, T+, R-, R+, D+, D-, OUT2, OUT1D, OUT1C, OUT1B, CS3, CS2, CS1, MISO, MOSI, GND, USB_GND

WIP

Gold Rush Robotics

Sheet: /

File: mechanumDriveTrain.kicad_sch

Title: Mechanum Drive Train

Size: A4 Date: 2025-01-14 Rev: 0.1

KiCad E.D.A. 8.0.6 Id: 1/1

DATA

IN and PWR

MOTOR DRIVERS

MOTORS MOUNTS TP

Teensy 4.1

U1

U2

U3

U4

J1

J2

J3

J4

H1

H2

H3

H4

M4

TP1

TP2

TP3

TP4

TP5

TP6

TP7

TP8

TP9

TP10

TP11

TP12

TP13

TP14

TP15

TP16

TP17

TP18

TP19

TP20

TP21

TP22

TP23

TP24

TP25

TP26

TP27

TP28

TP29

TP30

TP31

TP32

TP33

TP34

TP35

TP36

TP37

TP38

TP39

TP40

TP41

TP42

TP43

TP44

TP45

TP46

TP47

TP48

TP49

TP50

TP51

TP52

TP53

TP54

TP55

TP56

TP57

TP58

TP59

TP60

TP61

TP62

TP63

TP64

TP65

TP66

TP67

TP68

TP69

TP70

TP71

TP72

TP73

TP74

TP75

TP76

TP77

TP78

TP79

TP80

TP81

TP82

TP83

TP84

TP85

TP86

TP87

TP88

TP89

TP90

TP91

TP92

TP93

TP94

TP95

TP96

TP97

TP98

TP99

TP100

TP101

TP102

TP103

TP104

TP105

TP106

TP107

TP108

TP109

TP110

TP111

TP112

TP113

TP114

TP115

TP116

TP117

TP118

TP119

TP120

TP121

TP122

TP123

TP124

TP125

TP126

TP127

TP128

TP129

TP130

TP131

TP132

TP133

TP134

TP135

TP136

TP137

TP138

TP139

TP140

TP141

TP142

TP143

TP144

TP145

TP146

TP147

TP148

TP149

TP150

TP151

TP152

TP153

TP154

TP155

TP156

TP157

TP158

TP159

TP160

TP161

TP162

TP163

TP164

TP165

TP166

TP167

TP168

TP169

TP170

TP171

TP172

TP173

TP174

TP175

TP176

TP177

TP178

TP179

TP180

TP181

TP182

TP183

TP184

TP185

TP186

TP187

TP188

TP189

TP190

TP191

TP192

TP193

TP194

TP195

TP196

TP197

TP198

TP199

TP200

TP201

TP202

TP203

TP204

TP205

TP206

TP207

TP208

TP209

TP210

TP211

TP212

TP213

TP214

TP215

TP216

TP217

TP218

TP219

TP220

TP221

TP222

TP223

TP224

TP225

TP226

TP227

TP228

TP229

TP230

TP231

TP232

TP233

TP234

TP235

TP236

TP237

TP238

TP239

TP240

TP241

TP242

TP243

TP244

TP245

TP246

TP247

TP248

TP249

TP250

TP251

TP252

TP253

TP254

TP255

TP256

TP257

TP258

TP259

TP260

TP261

TP262

TP263

TP264

TP265

TP266

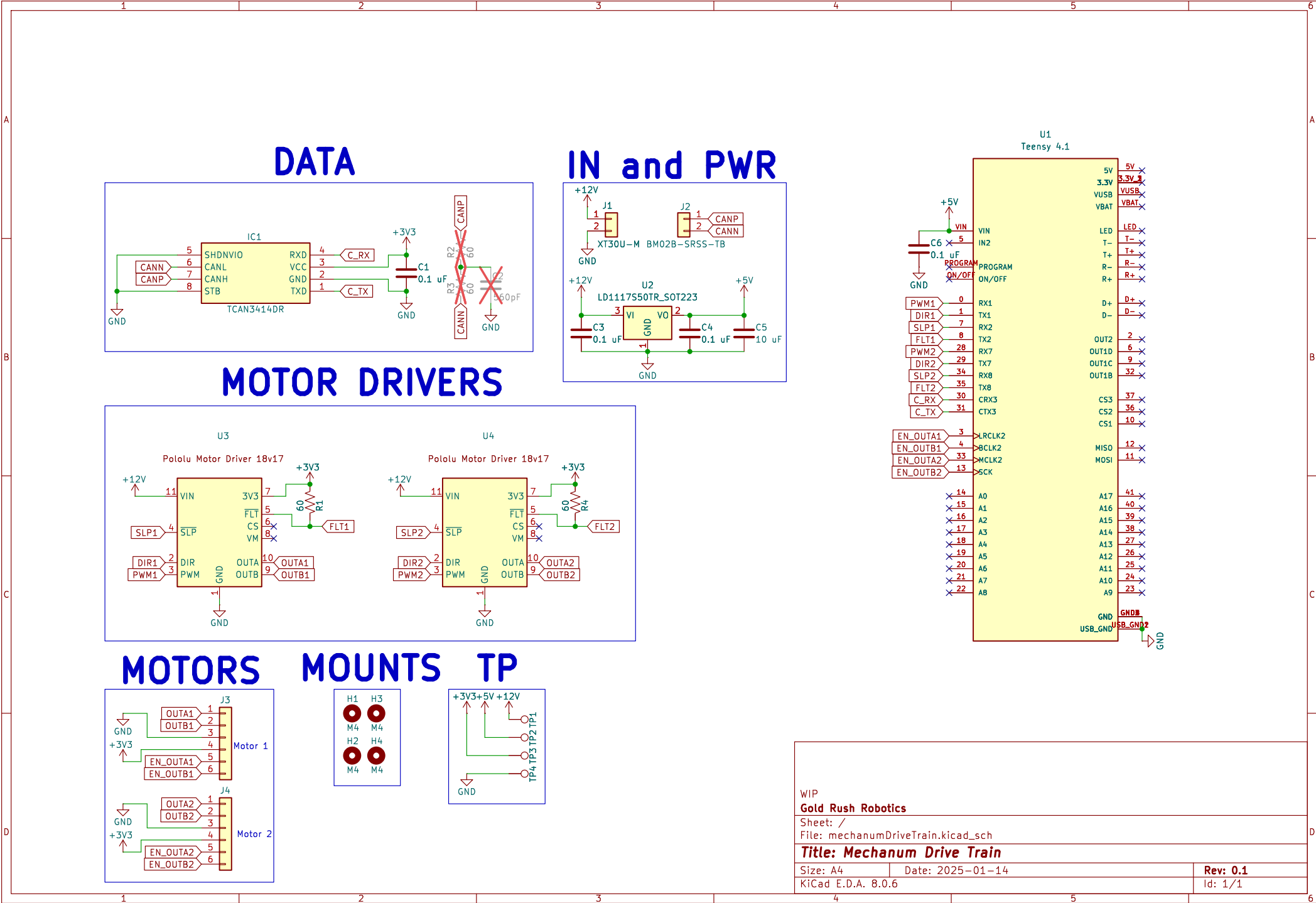
TP267

TP268

TP269

TP270

TP271



DATA

IC1: TCAN3414DR

5V, 3.3V, VUSB, VBAT

IN and PWR

J1: XT30U-M, BM02B-SR55-TB

J2: CANP, CANN

U2: LD1117S50TR_SOT223

MOTOR DRIVERS

U3: Pololu Motor Driver 18v17

U4: Pololu Motor Driver 18v17

MOTORS MOUNTS TP

J3: Motor 1

J4: Motor 2

U1: Teensy 4.1

5V, 3.3V, VUSB, VBAT

LED, T-, T+, R-, R+, D+, D-, OUT2, OUT1D, OUT1C, OUT1B, CS3, CS2, CS1, MISO, MOSI, A0, A1, A2, A3, A4, A5, A6, A7, A8, A17, A16, A15, A14, A13, A12, A11, A10, A9

EN_OUTA1, EN_OUTB1, EN_OUTA2, EN_OUTB2

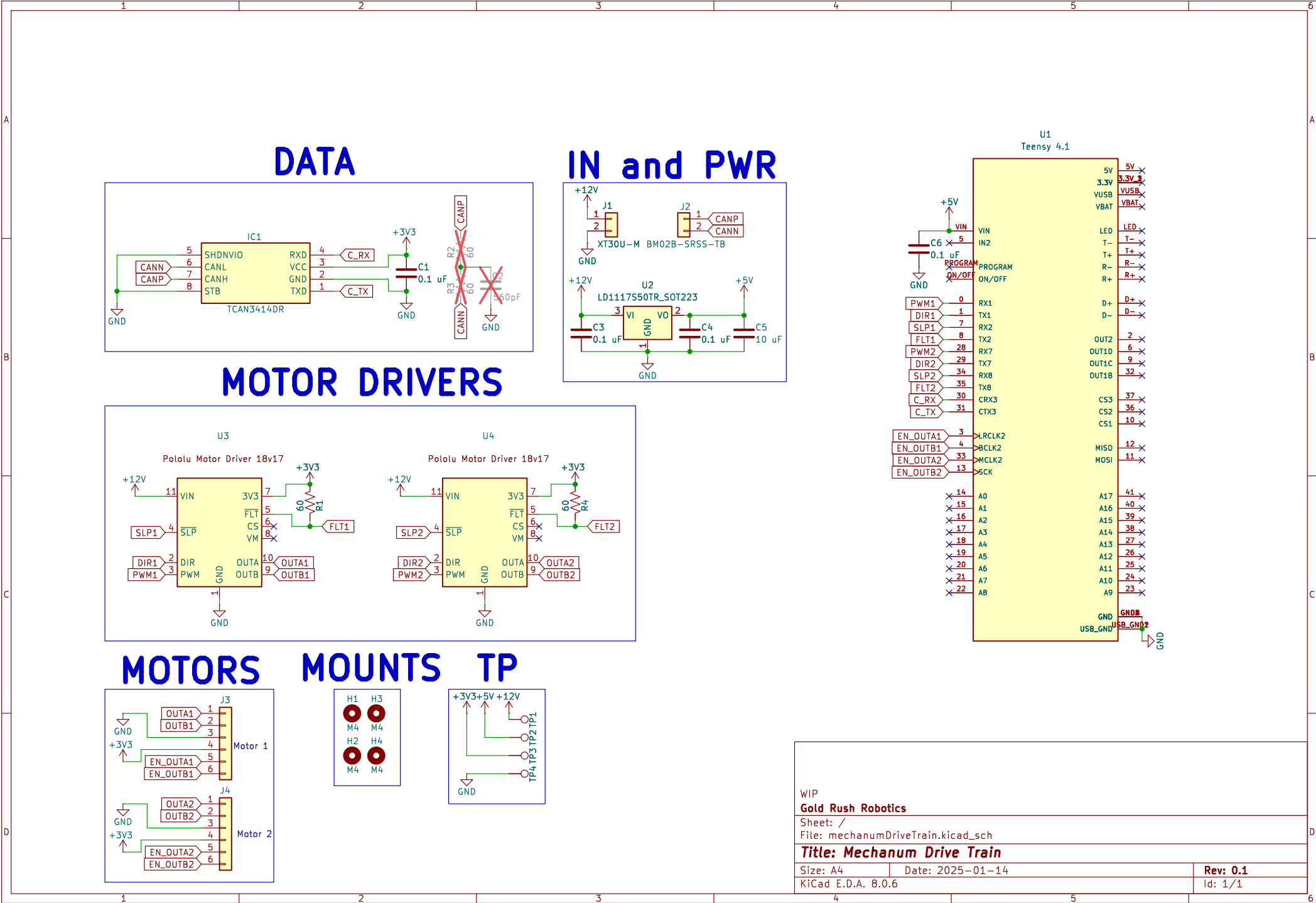
DIR1, SLP1, PWM1, DIR2, SLP2, PWM2

CANN, CANP, C_TX, C_RX

TP3, TP2, TP1, TP4

Rev: 0.1

Id: 1/1



DATA

IC1: TCAN3414DR

5V, 3.3V, VUSB, VBAT, LED, T-, T+, R-, R+, D+, D-, OUT2, OUT1D, OUT1C, OUT1B, CS3, CS2, CS1, MISO, MOSI, A0, A1, A2, A3, A4, A5, A6, A7, A8, A17, A16, A15, A14, A13, A12, A11, A10, A9, GND, USB_GND, USB_GND2

IN and PWR

J1: XT30U-M, BM02B-SR55-TB

J2: CANP, CANN

U2: LD1117S50TR_SOT223

5V, 3.3V, VUSB, VBAT, LED, T-, T+, R-, R+, D+, D-, OUT2, OUT1D, OUT1C, OUT1B, CS3, CS2, CS1, MISO, MOSI, A0, A1, A2, A3, A4, A5, A6, A7, A8, A17, A16, A15, A14, A13, A12, A11, A10, A9, GND, USB_GND, USB_GND2

MOTOR DRIVERS

U3: Pololu Motor Driver 18v17

U4: Pololu Motor Driver 18v17

5V, 3.3V, VUSB, VBAT, LED, T-, T+, R-, R+, D+, D-, OUT2, OUT1D, OUT1C, OUT1B, CS3, CS2, CS1, MISO, MOSI, A0, A1, A2, A3, A4, A5, A6, A7, A8, A17, A16, A15, A14, A13, A12, A11, A10, A9, GND, USB_GND, USB_GND2

MOTORS

J3: Motor 1

J4: Motor 2

MOUNTS

H1, H3, M4, M4, H2, H4, M4, M4

TP

TP1, TP2, TP3, TP4

Teensy 4.1

5V, 3.3V, VUSB, VBAT, LED, T-, T+, R-, R+, D+, D-, OUT2, OUT1D, OUT1C, OUT1B, CS3, CS2, CS1, MISO, MOSI, A0, A1, A2, A3, A4, A5, A6, A7, A8, A17, A16, A15, A14, A13, A12, A11, A10, A9, GND, USB_GND, USB_GND2

WIP

Gold Rush Robotics

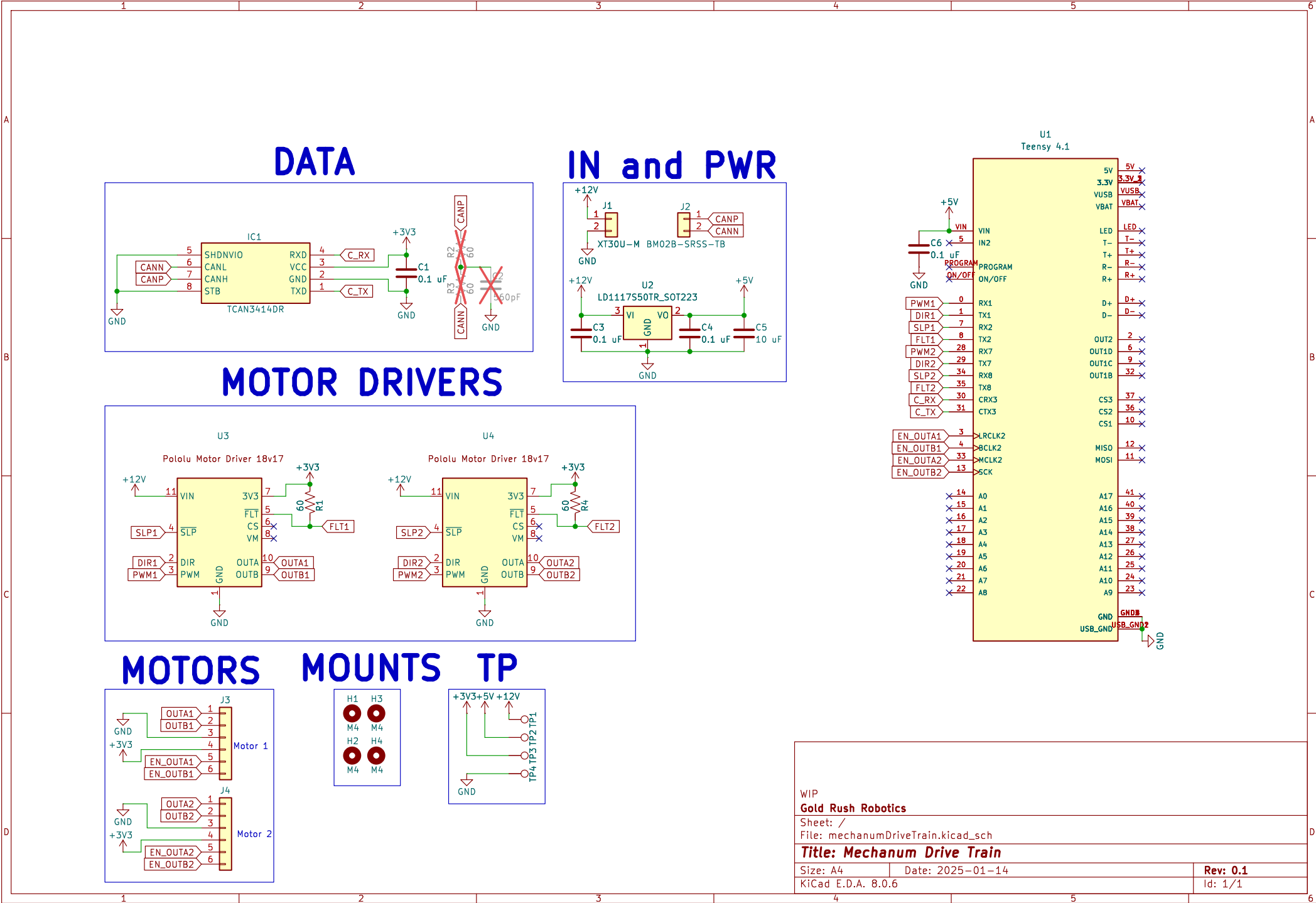
Sheet: /

File: mechanumDriveTrain.kicad_sch

Title: Mechanum Drive Train

Size: A4 Date: 2025-01-14 Rev: 0.1

KiCad E.D.A. 8.0.6 Id: 1/1



15. 2/ 2
