

Radio Telescope Control System

Aaron Olsen, Zach Martin, Loc Pham

Revision & Notes:

* 11/9/2022: Initial Schematic, Zach Martin

Title		
Title Page		
Size A	Document Number radiotelescope-PCB	Rev 0
Date: Saturday, November 26, 2022		
Sheet 1 of 3		

Program/Debug Port

J1
1 VDD/MCLR
2 VDD
3 GND
4 PGD/U2TX
5 PGC/U2RX
6 Diags

R1 10K
+5V
GND
C7 100nF

Processor

U1 PIC24FV32KA304
RA0 RA1 RA2 RA3 RA4 RA5 RA6 RA7 RA8 RA9 RA10 RA11
MCLR/RAS
RB0 RB1 RB2 RB3 RB4 RB5 RB6 RB7 RB8 RB9 RB10 RB11 RB12 RB13 RB14 RB15
RC0 RC1 RC2 RC3 RC4 RC5 RC6 RC7 RC8 RC9
RD0 RD1 RD2 RD3 RD4 RD5 RD6 RD7 RD8 RD9 RD10 RD11 RD12 RD13 RD14 RD15
RE0 RE1 RE2 RE3 RE4 RE5 RE6 RE7 RE8 RE9 RE10 RE11 RE12 RE13 RE14 RE15
RF0 RF1 RF2 RF3 RF4 RF5 RF6 RF7 RF8 RF9 RF10 RF11 RF12 RF13 RF14 RF15
RG0 RG1 RG2 RG3 RG4 RG5 RG6 RG7 RG8 RG9 RG10 RG11 RG12 RG13 RG14 RG15
RH0 RH1 RH2 RH3 RH4 RH5 RH6 RH7 RH8 RH9 RH10 RH11 RH12 RH13 RH14 RH15
RJ0 RJ1 RJ2 RJ3 RJ4 RJ5 RJ6 RJ7 RJ8 RJ9 RJ10 RJ11 RJ12 RJ13 RJ14 RJ15
RK0 RK1 RK2 RK3 RK4 RK5 RK6 RK7 RK8 RK9 RK10 RK11 RK12 RK13 RK14 RK15
RL0 RL1 RL2 RL3 RL4 RL5 RL6 RL7 RL8 RL9 RL10 RL11 RL12 RL13 RL14 RL15
RM0 RM1 RM2 RM3 RM4 RM5 RM6 RM7 RM8 RM9 RM10 RM11 RM12 RM13 RM14 RM15
RN0 RN1 RN2 RN3 RN4 RN5 RN6 RN7 RN8 RN9 RN10 RN11 RN12 RN13 RN14 RN15
RO0 RO1 RO2 RO3 RO4 RO5 RO6 RO7 RO8 RO9 RO10 RO11 RO12 RO13 RO14 RO15
RP0 RP1 RP2 RP3 RP4 RP5 RP6 RP7 RP8 RP9 RP10 RP11 RP12 RP13 RP14 RP15
RS0 RS1 RS2 RS3 RS4 RS5 RS6 RS7 RS8 RS9 RS10 RS11 RS12 RS13 RS14 RS15
RT0 RT1 RT2 RT3 RT4 RT5 RT6 RT7 RT8 RT9 RT10 RT11 RT12 RT13 RT14 RT15
RU0 RU1 RU2 RU3 RU4 RU5 RU6 RU7 RU8 RU9 RU10 RU11 RU12 RU13 RU14 RU15
RV0 RV1 RV2 RV3 RV4 RV5 RV6 RV7 RV8 RV9 RV10 RV11 RV12 RV13 RV14 RV15
RW0 RW1 RW2 RW3 RW4 RW5 RW6 RW7 RW8 RW9 RW10 RW11 RW12 RW13 RW14 RW15
RX0 RX1 RX2 RX3 RX4 RX5 RX6 RX7 RX8 RX9 RX10 RX11 RX12 RX13 RX14 RX15
RY0 RY1 RY2 RY3 RY4 RY5 RY6 RY7 RY8 RY9 RY10 RY11 RY12 RY13 RY14 RY15
RZ0 RZ1 RZ2 RZ3 RZ4 RZ5 RZ6 RZ7 RZ8 RZ9 RZ10 RZ11 RZ12 RZ13 RZ14 RZ15

PIN CONFIGURATIONS:

- * ANX: Analog Input/Channel X
- * GND: Digital Output
- * GP: Digital Input
- * GP/OB: Digital Output, Open Drain
- * UART: UART Peripheral I/O
- * I2C: I2C peripheral I/O
- * SPI: SPI peripheral I/O

Rotary Encoders

AZ_ENCODER2
AZ_ENCODER1
EL_ENCODER2
EL_ENCODER1

Local Control Interface

BUTTON1
BUTTON2
BUTTON3

USB-UART Interface

FT232RL
FT232RL

Title Block

Main Electronics		
Size B	Document Number radiotelescope-PCB	Rev 0
Date:	Wednesday, November 30, 2022	Sheet 2 of 3

[illegible][illegible][illegible][illegible][illegible]

