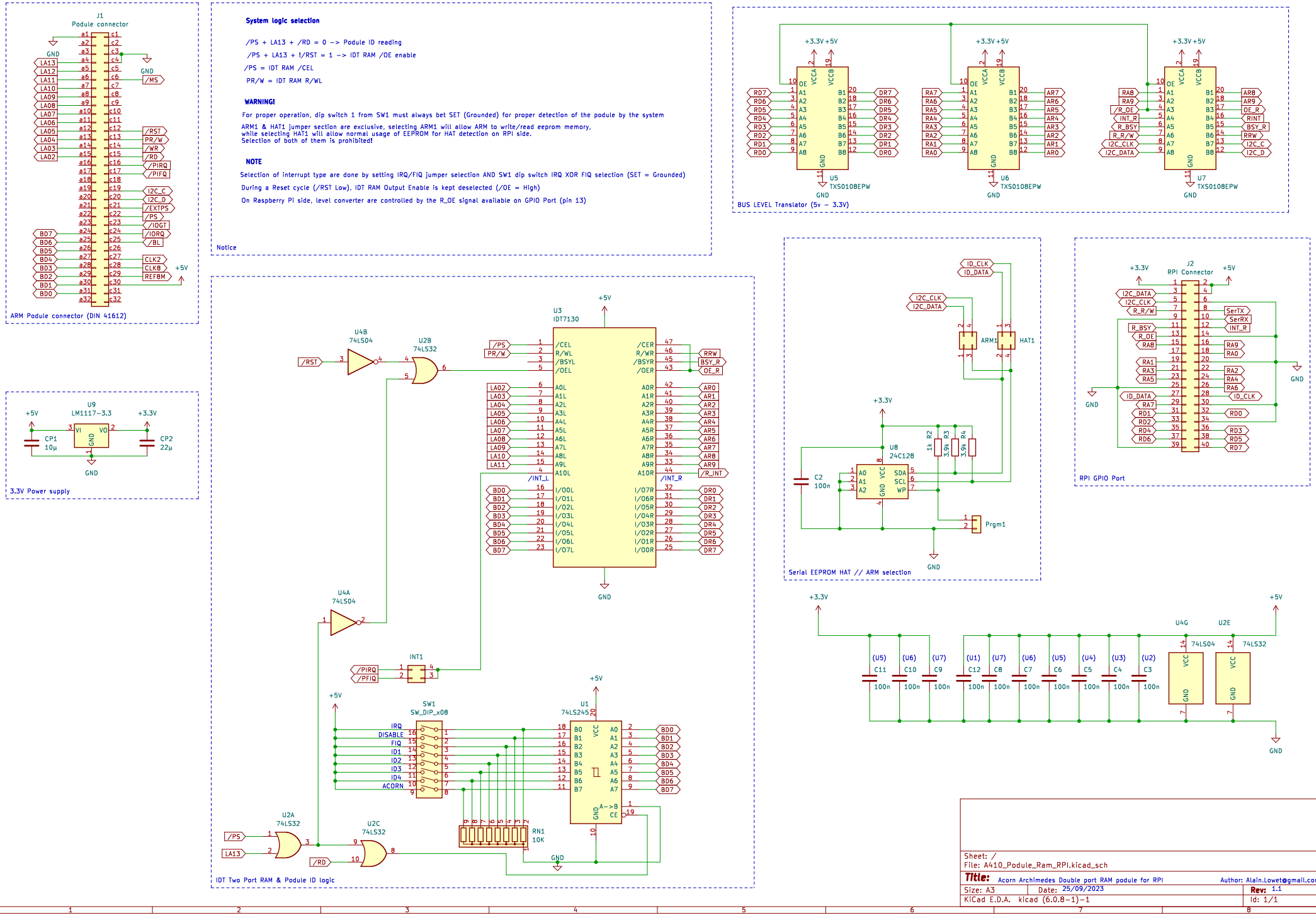
J1
Podule connector
ARM Podule connector (DIN 41612)
System logic selection
/PS + LA13 + /RD = 0 -> Podule ID reading
/PS + LA13 + !/RST = 1 -> IDT RAM /OE enable
/PS = IDT RAM /CEL
PR/W = IDT RAM R/WL
WARNING!
For proper operation, dip switch 1 from SW1 must always bet SET (Grounded) for proper detection of the podule by the system
ARM1 & HAT1 jumper section are exclusive, selecting ARM1 will allow ARM to write/read eeprom memory,
while selecting HAT1 will allow normal usage of EEPROM for HAT detection on RPI side.
Selection of both of them is prohibited!
NOTE
Selection of interrupt type are done by setting IRQ/FIQ jumper selection AND SW1 dip switch IRQ XOR FIQ selection (SET = Grounded)
During a Reset cycle (/RST Low), IDT RAM Output Enable is kept deselected (/OE = High)
On Raspberry Pi side, level converter are controlled by the R_OE signal available on GPIO Port (pin 13)
Notice
BUS LEVEL Translator (5v - 3.3V)
U5
TXS0108EPW
U6
TXS0108EPW
U7
TXS0108EPW
U9
LM1117-3.3
3.3V Power supply
U3
IDT7130
U1
74LS245
SW1
SW_DIP_x08
RN1
10K
INT1
U2A
74LS32
U2B
74LS32
U2C
74LS32
U4A
74LS04
U4B
74LS04
IDT Two Port RAM & Podule ID logic
U8
24C128
ARM1
HAT1
Prgm1
Serial EEPROM HAT // ARM selection
J2
RPI Connector
RPI GPIO Port
U4G
74LS04
U2E
74LS32
Sheet: /
File: A410_Podule_Ram_RPI.kicad_sch
Title: Acorn Archimedes Double port RAM podule for RPI
Author: Alain.Lowet@gmail.com
Size: A3
Date: 25/09/2023
Rev: 1.1
KiCad E.D.A. kicad (6.0.8-1)-1
Id: 1/1