

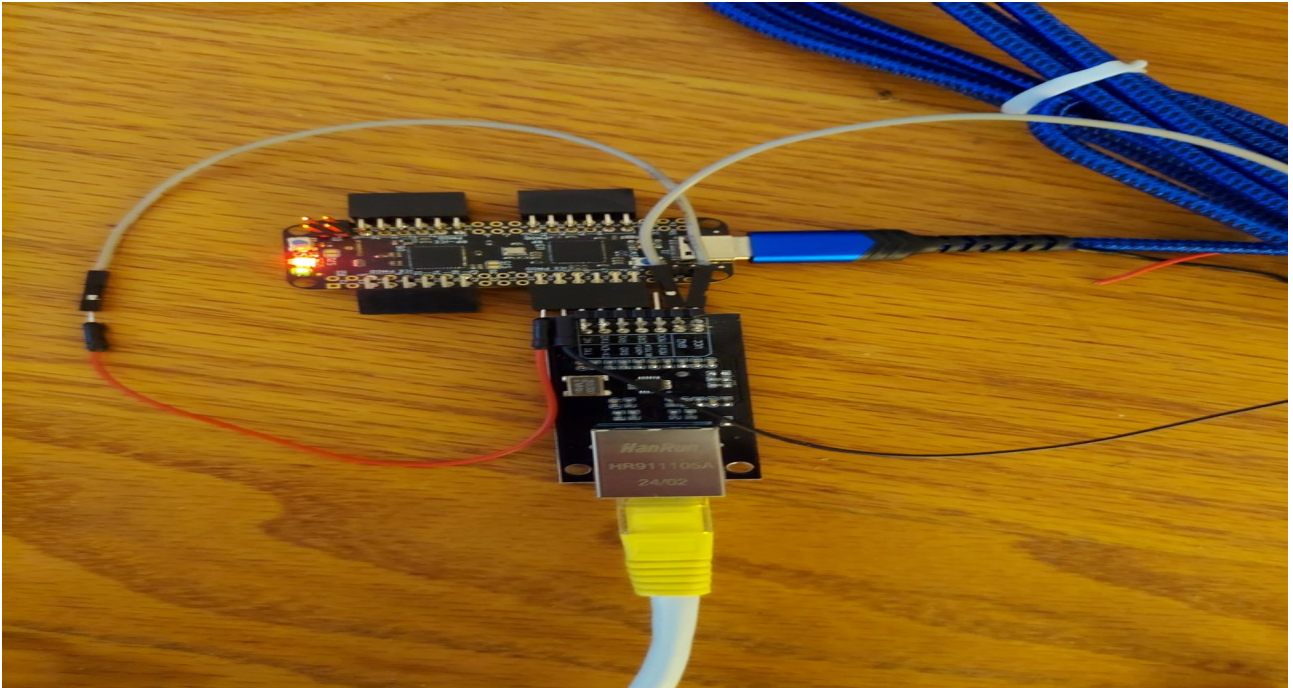
*****Default*****

PipelineC Ethernet PMOD

02/16/25

*****Default*****

pico-ice Running gateway.bin provided by Discord user absurdfatalism. Led blink red.



raspberrypi-5 devel@pi5-90:~/PipelineC/examples/arty/src/eth \$ sudo ./loopback_test

Wireshark network traffic capture showing Ethernet II frames. The capture is on interface eth0. The first frame (No. 72) is a 565-byte Ethernet II frame from 72:13:26:97:88:23 to a0:b1:c2:d3:e4:f5. The frame is marked as 'Frame is ignored: False'.

Frame 72: 565 bytes on wire (4520 bits), 565 bytes captured (4520 bits) on interface eth0, id 0

Section number: 1

Interface id: 0 (eth0)

Encapsulation type: Ethernet (1)

Arrival Time: Feb 16, 2025 17:20:16.785628377 MST

[Time shift for this packet: 0.000000000 seconds]

Epoch Time: 1739751616.785628377 seconds

[Time delta from previous captured frame: 0.054614909 seconds]

[Time delta from previous displayed frame: 0.000000000 seconds]

[Time since reference or first frame: 13.269788237 seconds]

Frame Number: 72

Frame Length: 565 bytes (4520 bits)

Capture Length: 565 bytes (4520 bits)

[Frame is marked: False]

[Frame is ignored: False]

Protocols in frame: eth:ethertype:data

Ethernet II, Src: Raspber... (a0:b1:c2:d3:e4:f5), Dst: a0:b1:c2:d3:e4:f5 (a0:b1:c2:d3:e4:f5)

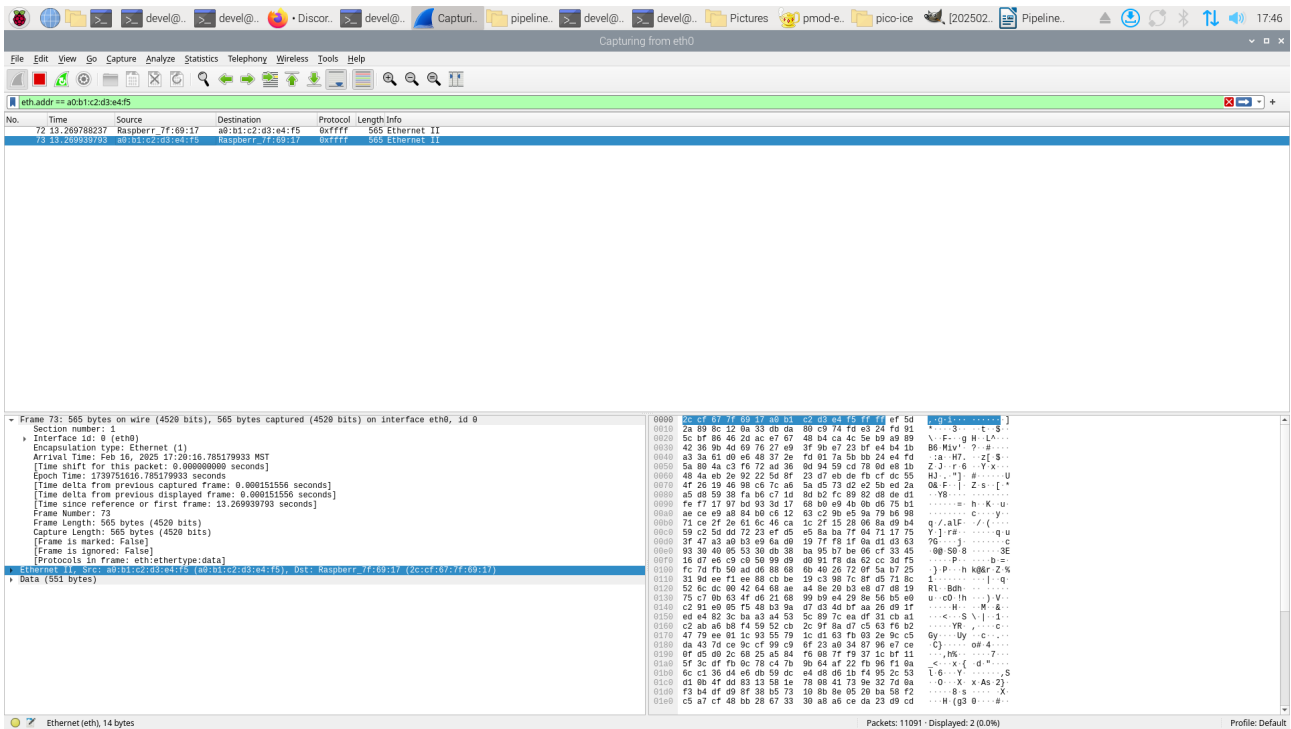
Data (565 bytes)

Ethernet (eth), 14 bytes

Packets: 10207 - Displayed: 2 (0.0%)

Profile: Default

pico-ice with Ethernet pmod devel@pi5-90:~/PipelineC/examples/arty/src/eth \$ sudo
./loopback_test
Test passed!











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The diagram shows the pinout of the Pico Pro USB-C board, organized into functional groups:

- ICE Flash:** ICE_FLASH_I02 (Pin 1), ICE_FLASH_I03 (Pin 3).
- ICE PMOD:** ICE_28 (Pin 9), ICE_32 (Pin 11), ICE_36 (Pin 13), ICE_42 (Pin 15), SRAM_SS (Pin 17), ICE_11 (Pin 19), ICE_10/PB (Pin 21), VIO_BANK_2 (Pin 23).
- ICE Misc:** ICE_28 (Pin 9), ICE_32 (Pin 11), ICE_36 (Pin 13), ICE_42 (Pin 15), SRAM_SS (Pin 17), ICE_11 (Pin 19), ICE_10/PB (Pin 21), VIO_BANK_2 (Pin 23).
- ICE PMOD:** ICE_44_G6 (Pin 27), ICE_46 (Pin 29), ICE_48 (Pin 31), ICE_3 (Pin 33), SWD (Pin 35), SWCLK (Pin 37), PICO_CLKOUT (Pin 39).
- Debug:** PICO_CLKOUT (Pin 39).
- USB-C:** ICE_RST (Pin 2), ICE_31 (Pin 10), ICE_34 (Pin 12), ICE_38 (Pin 14), ICE_43 (Pin 16), ICE_38_G6 (Pin 18), ICE_6 (Pin 20), ICE_9 (Pin 22), VIO_BANK_2 (Pin 24), ICE_45 (Pin 28), ICE_47 (Pin 30), ICE_2 (Pin 32), ICE_4 (Pin 34), RESET (Pin 36), USB_BOOT (Pin 40).
- Power:** +3V3 (Pin 4), +3V3 (Pin 6), +3V3 (Pin 8), +3V3 (Pin 16), +3V3 (Pin 18), +3V3 (Pin 20), +3V3 (Pin 22), +3V3 (Pin 24), +3V3 (Pin 26), +3V3 (Pin 28), +3V3 (Pin 30), +3V3 (Pin 32), +3V3 (Pin 34), +3V3 (Pin 36), +3V3 (Pin 38), +3V3 (Pin 40), +3V3_STDBY (Pin 33), VSYS (Pin 35), PWR_EN (Pin 37).
- ICE Prog:** ICE_SS0 (Pin 1), ICE_SCK (Pin 3), ICE_23 (Pin 5), ICE_18 (Pin 7), ICE_26 (Pin 9), ICE_20_G3 (Pin 11).
- LED/ADC:** LED_B (Pin 17), LED_R (Pin 19), LED_G (Pin 21).
- Pico PMOD:** PICO_PMOD_B1 (Pin 23), PICO_PMOD_B2 (Pin 25), PICO_PMOD_B3 (Pin 27), PICO_PMOD_B4 (Pin 29).

A small, low cost board featuring:

- a Raspberry Pi Pico processor (RP2040)

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|---|---|--|--|
|  RP2040 pin |  iCE40 pin |  Pmod 1: ICE Pmod |  Ground pin |
|  ~R ~G ~B: LED |  SS SCK SI SO: SPI |  Pmod 2: ICE Pmod |  Power pin |

