The pin-out for the **DB25 Male Modem Port is** perfectly laid out. Since one could be using a **Raspberry Pi Pico W**, one don't need to worry about most of those pins. To get the Atari ST online, we only need to focus on a few "essential" connections. Below is how oner will map the specific Atari pins to a Pico W hardware:
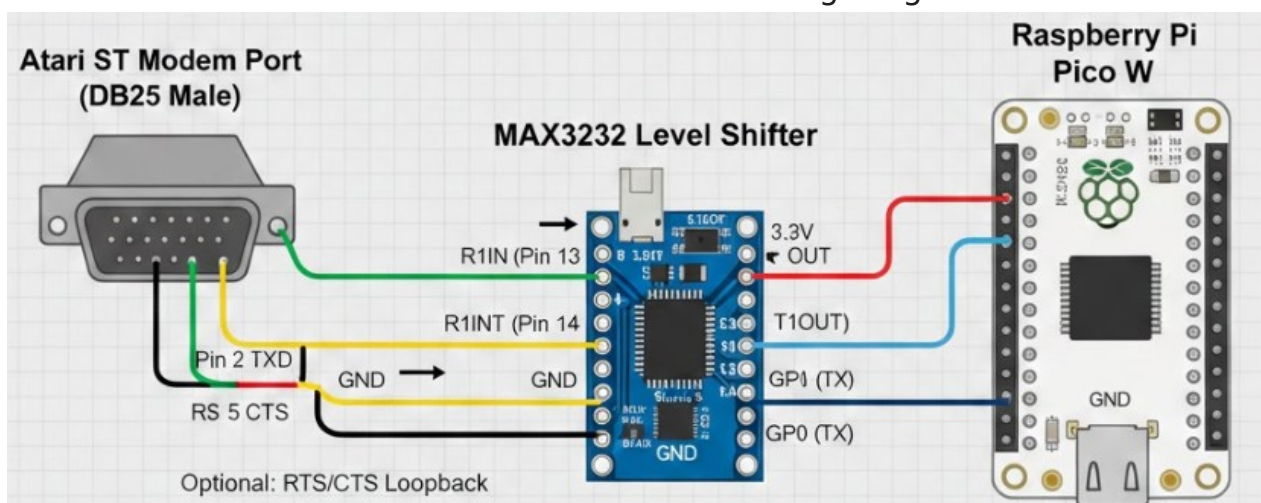
The Wiring Map

Because the Atari ST uses RS-232 (+12V/-12V) and the Pico W uses TTL (3.3V), you cannot wire them directly. You must put a MAX3232 Level Shifter in the middle.

Atari DB25 Pin	Signal	Connect to MAX3232	Connect to Pico W
Pin 2	TXD	RS232 IN (Pin 13)	GP1 (RX)
Pin 3	RXD	RS232 OUT (Pin 14)	GP0 (TX)
Pin 7	GND	GND	GND
Pin 4 & 5	RTS/ CTS	*Jump them together*	*(Optional for hardware flow)*

Crucial Note: On the Atari side, TXD (Pin 2) is an *output*. On the Pico side, you want that data to *enter* the board, so it goes to RX. Always remember: TX → RX and RX ← TX.

Atari ST to Pico Wifi Modem Wiring Diagram

Hardware Flow Control (The "Loopback" Trick)

Most modern Wi-Fi modem sketches for the Pico W don't strictly require Hardware Flow Control. If your terminal software on the Atari (like *Uniterm*) hangs or refuses to send data:

- The Quick Fix: Take a small piece of wire and bridge Pin 4 (RTS) and Pin 5 (CTS) together inside your DB25 connector. This tells the Atari it is always "Clear to Send."

Preparing the Pico W

Since you have the pins ready, here is how you get the software side set up:
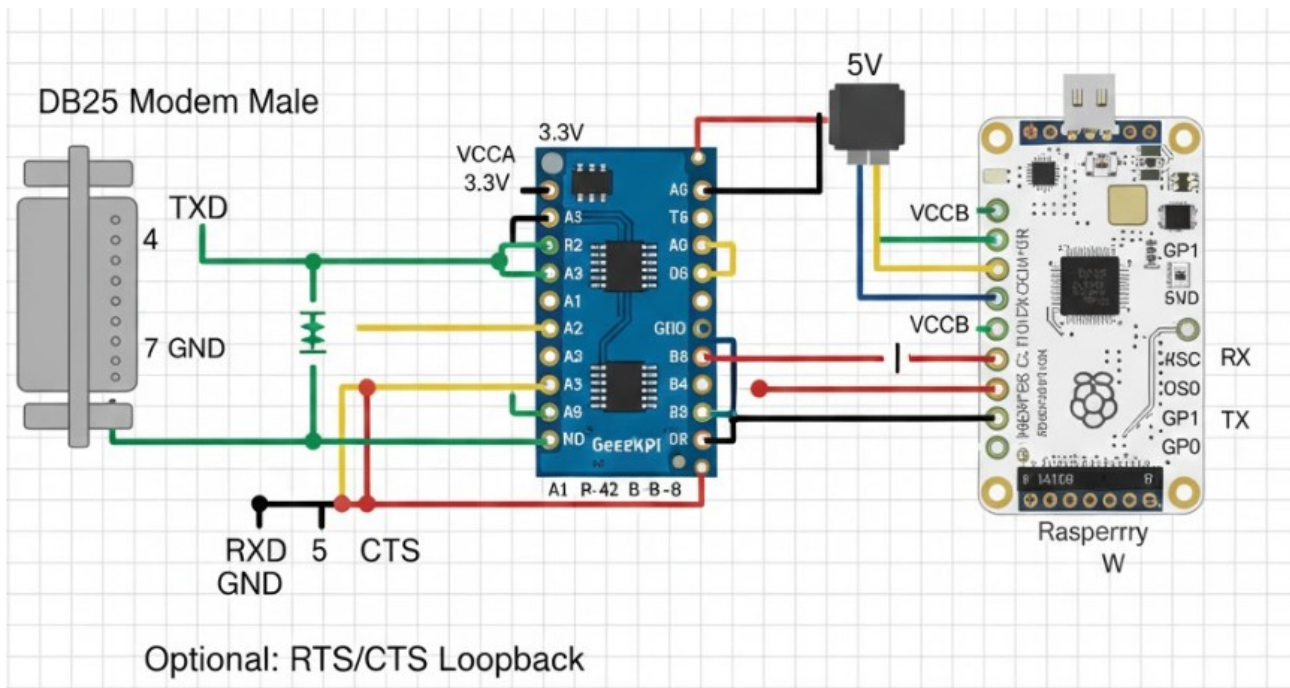
1. Get the Firmware: Search for the "Zimodem" or "PicoWiFiModem" firmware. These are designed to mimic the old Hayes Command set.
2. Flash it: Drag the .uf2 file onto the Pico W while holding the BOOTSEL button.
3. The Atari Side: Load a terminal program on your ST. Set the baud rate to 9600 or 19200 (start slow to ensure stability).
4. Test Command: Type AT and press Enter. If everything is wired correctly, the Pico W will reply with OK.

4. Helpful "AT" Commands for your Pico

Once you see that OK, you can use these commands to get onto your Wi-Fi:
- AT$SSID=YourWiFiName: Set your network name.
- AT$PASS=YourPassword: Set your password.
- ATC1: Connect to the Wi-Fi.
- ATDT bbs.fozztexx.com:23: This "dials" a famous retro BBS over the internet.

GeeekPi 6Pack TXS0108E 8 Channel Logic Level Converter Bi-Directional High Speed Full Duplex Shifter 3.3V 5V for Arduino Raspberry Pi

2PCS MAX3232 3.3V to 5V DB9 Male RS232 Serial Prot to TTL Converter Module Root Connector for Arduino Raspberry Pi and Microcontrollers