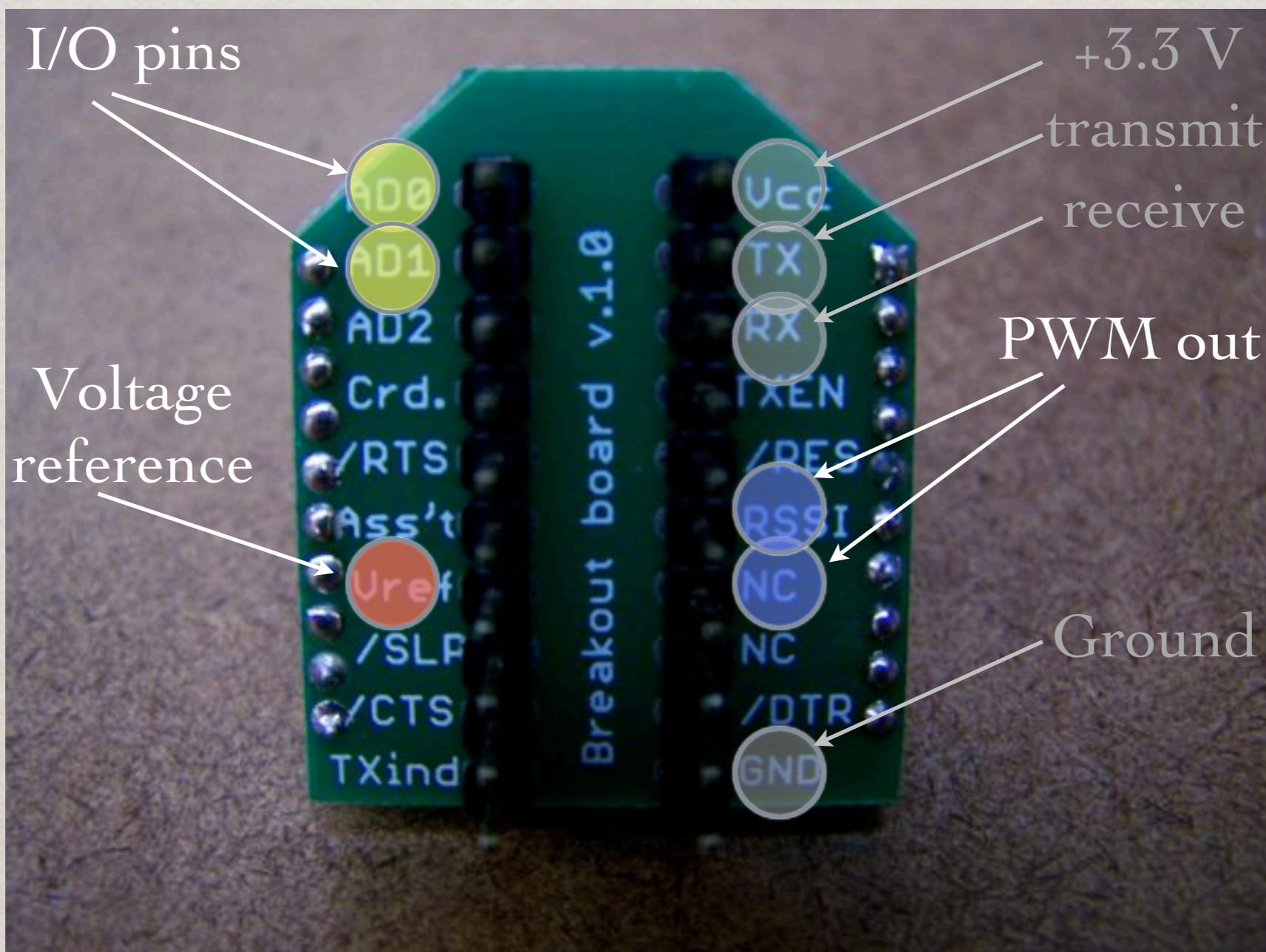


XBEE DIRECT

D I G I T A L & A N A L O G
W I T H O U T
M I C R O C O N T R O L L E R S

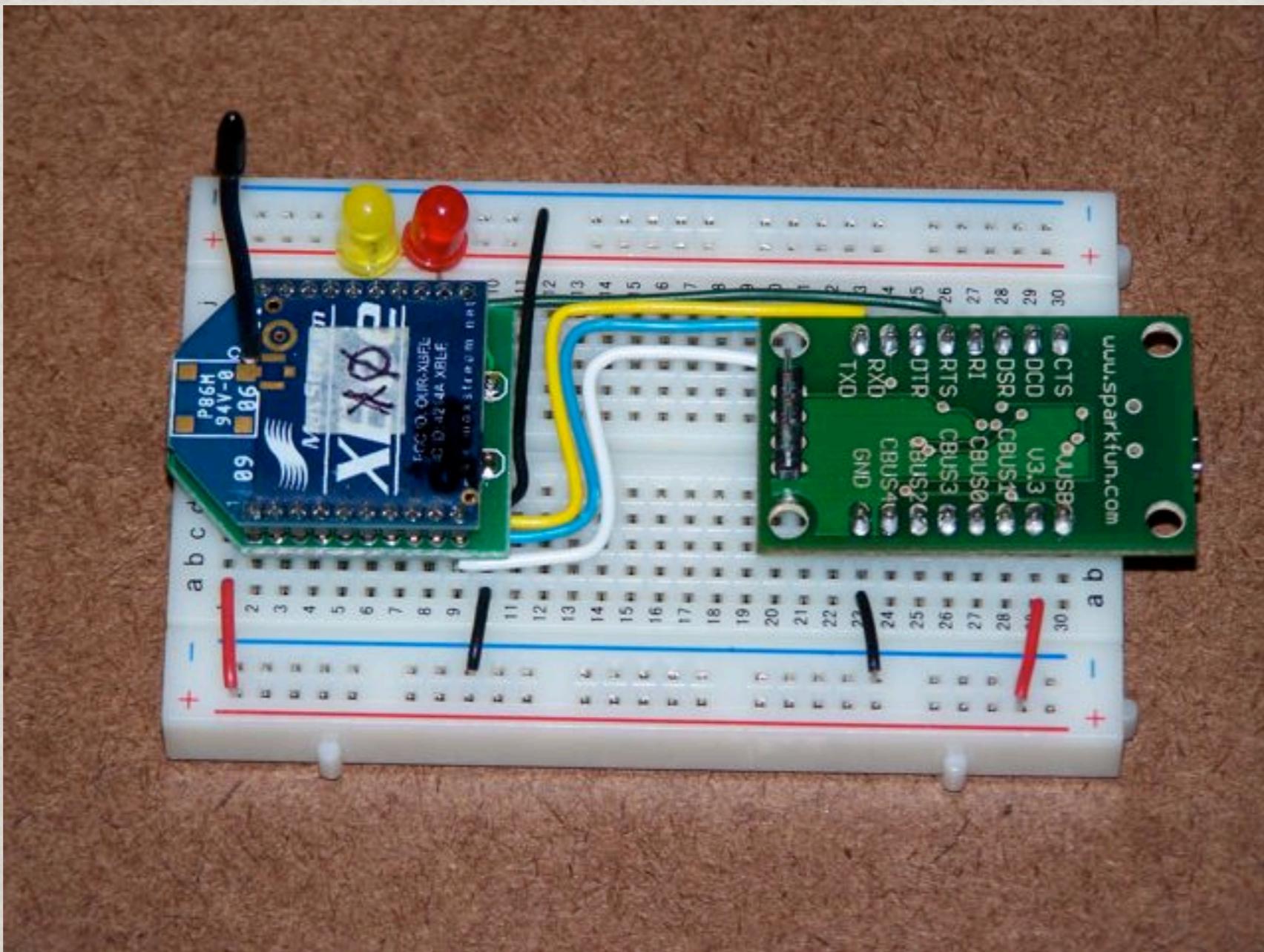
INPUT/OUTPUT WIRING



FIRMWARE UPLOAD

- ✿ X-CTU Program
- ✿ Special circuit or development board
- ✿ Firmware, command interface, test area,
terminal all Windows-only

FIRMWARE UPLOAD BOARD



SparkFun part#PCB-FT232RL, wired to RX, TX, RTS, DTR, 3.3V, Gnd

DATA MODE VS. COMMAND MODE

- ✿ Idle Mode, transmit and receive data
- ✿ Command Mode, talk to the XBee itself
 - ✿ +++ "*Yo, XBee*"
 - ✿ AT "*Attention!*" (Hayes command set)

SOME AT COMMANDS

- ✿ AT -> OK
- ✿ ATMY -> my address
- ✿ ATDH, ATDL -> destination address hi/lo
- ✿ ATID -> personal area network ID
- ✿ ATCN -> end command mode

I/O AT COMMANDS

- ✿ ATD0...D8 -> configure pins for I/O
- ✿ ATIR -> sample rate
- ✿ ATIT -> samples before transmit
- ✿ ATP0...P1 -> PWM configuration
- ✿ ATIU -> I/O output enable (UART)
- ✿ ATIA -> I/O input address

EXAMPLE CONFIGURATION

- ATID3456 (PAN ID)
 - ATMY1 my address 1
 - ATDL2 destination address 2
 - ATD02 output 0 in analog mode
 - ATD13 output 1 in digital out mode
 - ATIR14 sample rate 20 milliseconds (hex 14)
 - ATIT5 samples before transmit 5

- ATID3456 (PAN ID)
 - ATMY2 my address 2
 - ATDL1 destination address 1
 - ATP02 PWM 0 in PWM mode
 - ATD15 output 1 in digital out high mode
 - ATIU1 I/O output enabled
 - ATIA1 I/O input from address 1

LIVE DEMO

D I G I T A L & A N A L O G
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