

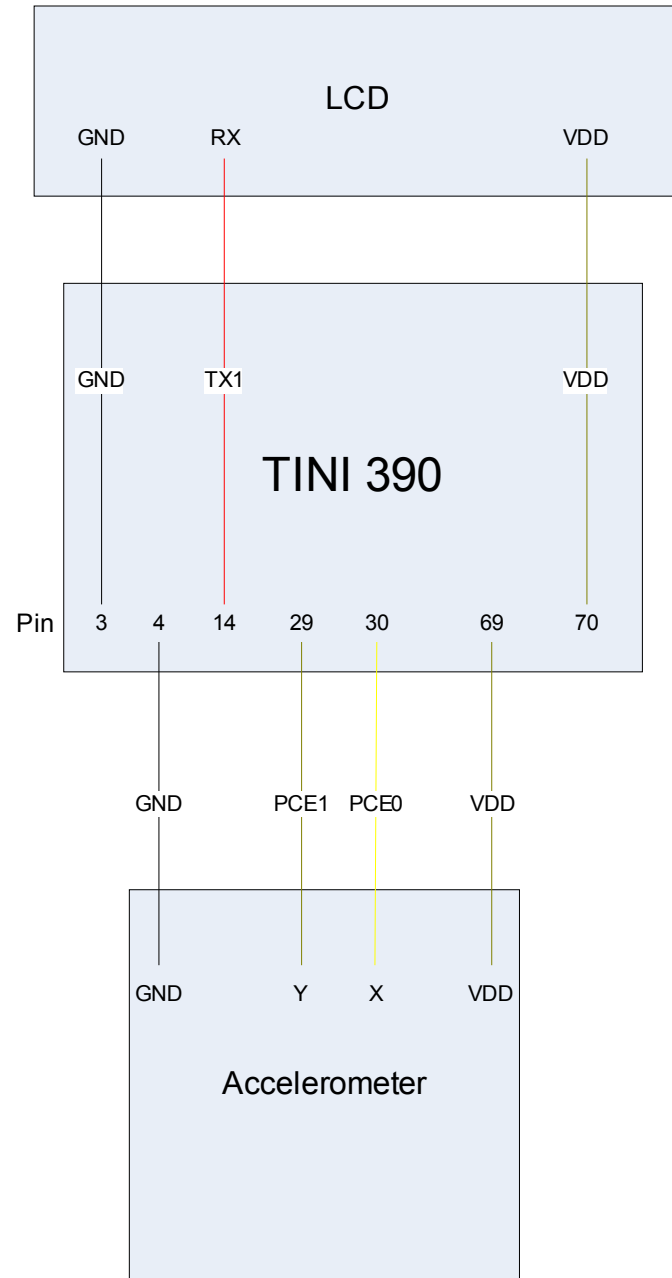
RSS Reader 0.1

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Overview

- A TINI board
 - Downloads RSS feed
- An LCD
 - Displays the feed
- An accelerometer
 - Controls which direction to scroll the feed on the display

Hardware Diagram



SerLCD

- Sparkfun.com SerLCD v1.1
 - Based on HD44780 Controller
 - Serial based, uses UART
 - Accepts ASCII Characters
 - Hex Commands control:
 - Backlight
 - Clear Display
 - Scroll left
 - Scroll right

TINI

- TINI 390 Microcontroller
 - Has its own JVM
 - Serial Port
 - Ethernet Jack
 - TCP/IP Protocols supported:
 - PPP
 - IP v4/v6
 - TCP
 - UDP
 - IGMP
 - ICMP
 - DAD
 - SMTP
 - DHCP
 - FTP
 - HTTP
 - TELNET

TINI (cont'd)

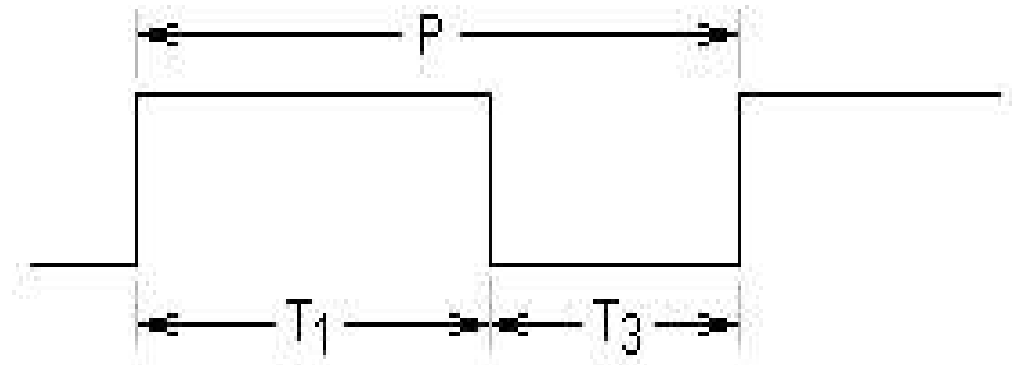
- Slush
 - OS for the TINI
 - Runs two important services:
 - FTP Server
 - To upload programs to TINI
 - Telnet Server
 - To run programs

ADXL202E

- Dual Axis Accelerometer with Duty Cycle Output
 - Dual Axis Accelerometer
 - Senses acceleration in x and y planes
 - Duty Cycle Output
 - Conversion of analog signal to a digital form

ADXL202E

- Duty Cycles looks like this:



- P – total length
- T_1 = Time “on”
- T_3 = Time “off”
- $A(g) = (T_1/T_2 - 0.5) / 0.125$

Software Diagram

