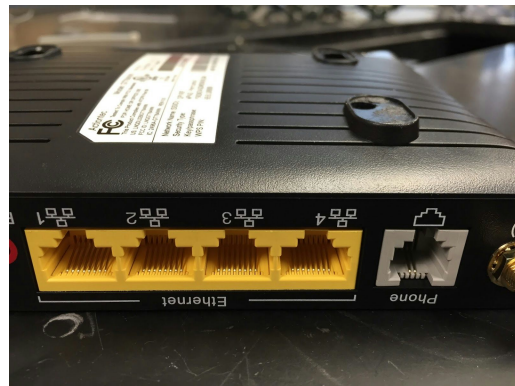


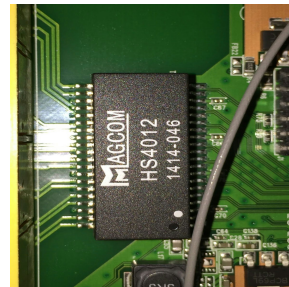
Texas Instruments Electronics Online Challenge

Team 7504X: Equilibrium

Our team decided to dismantle an Actiontec Model: GT784WN DSL modem, we felt this would be an excellent choice because there are a lot of components that go into making a device that can receive, process, and transmit data to and from multiple devices. This modem has a ADSL port (Asymmetric Digital Subscriber Line), ADSL is a type of DSL broadband communications technology used for connecting to the Internet. ADSL allows data to be sent over existing copper telephone lines (POTS). The modem also has four ethernet ports used to directly link devices to the modem for a faster, more reliable connection.



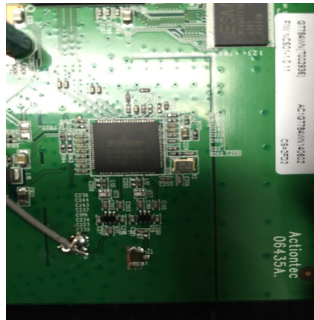
The modem includes a Magcom HS4012 1414-046 LAN transformer which is used to limit frequencies to prevent interference from other devices.



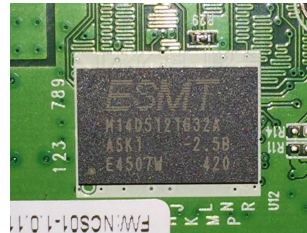
The second chip on the modem is the broadcom bcm63281kfbg which is a System on Chip OpenWRT embedded operating system this device is used in order to regulate the traffic going through the modem, it is used to regulate where each signal is going.



The broadcom bcm43225 mlg is a wireless LAN Driver this chip is used to create and connect devices to LAN (Local Area Network) this allows devices to have connection while still being able to move freely most WLAN drivers do this by using radio signals.



The ESMT M14D5121632A is a SDRAM (Synchronized Dynamic Random Access Memory) chip. SDRAM chips are used to increase the number of tasks a microprocessor can achieve at one time. Also the chip is synchronized with internal clock of the microprocessor so that they are compatible.



Also included is the Spansion FL064PIF, (Flash Memory Chip), a flash memory chip is used to process non-permanent data anything on it must be deleted from the chip before it is sent to the microprocessor.

