#Onewire:

- similiar concept to I2C
- lower data rates and longer range
- Feature: only use two wires: Data and Ground
- 75 devices can be found per second
- Examples: Java Ring (iButton), Apple MacSafe
- Master can be a PC or microcontroller
- Data include power supply model, wattage, serial number, commands to send full power and illuminate the connector
- Used for communication small inexpensive devices (e.g. digital thermometers/wheater instruments)
- also called MicroLAN
- Maximum Cable Length: 750 Meters
- Different forms (linear, stubbed, star topology)
- Master/Slaves[= 1-Wire-Devices]
- Slaves no longer stubs than three meters in linear topology
- In stubbed topology longer than three meters are possible
- Bus-topolgy up to 300 meters
- Star topology - any length (max 750 meter)
- 220Ohm Pullup resistor for the master
- Slaves are connected to the net
- 150Ohm resistor for the slaves which are connected to the net (reduction of reflections on the line)
- 15 microsec and 54 microsec/data package
- Protocol used: CMOS/TTL
- Supply voltage of 2.8V to 6V
- Sequential data flow in either direction
- serial and bidirectional
- ONLY one direction at a TIME! (half duplex)
- Data read and written = least significant bit first
- 16.3kBit/sec
- Home Automation classic use case