Parallel Interface

Parallel Interfaces

- History
  - In the context of PCs, a "parallel interface" implies a Centronics-compatible printer interface
  - Originally developed by printer company, Centronics
  - Introduced on the IBM PC (1981) as an LPT ("line printer") port
  - Improvements
    - EPP (Enhanced Parallel Port), development by Intel, Xircom, Xenith
    - Enshrined in the standard IEEE-1284 (1994)
      - "Standard Signaling Method for a Bi-directional Parallel Peripheral Interface for Personal Computers"
      - Includes Centronics/LPT mode, EPP mode, and...
      - ECP mode (Enhanced Capability Port)

Parallel Interfaces

- Data Rate
  - 150 Kbytes/s (LPT) to 1.5 Mbytes/s (ECP)
- Configuration
  - Parallel, point-to-point

Typical Printer Cable

DB25P (male)
• Connects to PC

Centronics male
• 36 pins
• Connects to printer

Pinouts

Direction	DB25 Pin	Cent. Pin	Signal	Function
out	1	1	/Strobe	low pulse (>0.5 µs) to send
out	2	2	Data0	LSB
out	3	3	Data1	.
out	4	4	Data2	.
out	5	5	Data3	.
out	6	6	Data4	.
out	7	7	Data5	.
out	8	8	Data6	.
out	9	9	Data7	MSB
in	10	10	/Ack	Low pulse ack. (~5 µs)
in	11	11	Busy	High for busy/offline/error
in	12	12	PaperEnd	High for out of paper
in	13	13	SelectIn	High for printer selected
out	14	14	/AutoFd	Low to autofeed one line
in	15	32	/Error	Low for Error
out	16	31	/Init	Low pulse (>50 s) to init
out	17	36	/Select	Low to select printer
-	18-25	19-30, 33,17,16	Ground	-