

iChip
CO710AG
CO710AG-XM
Internet Controller

General Description:

iChip™ CO710AG is a high performance Internet Controller™ chip that enables installed devices to connect to the Internet via 10/100BaseT LANs, dial-up and wireless modems.

Packaged in a MCP-BGA form factor, CO710AG is a firmware-based, remotely updateable chip that stores the Internet protocol stack and Internet configuration parameters in updateable flash memory. iChip firmware can be remotely updated over the Internet via a Web browser or email, in addition to being locally updateable.

CO710AG is designed for high-bandwidth applications. Its host interface supports 230 kbits/second in Serial mode and up to 400 kBytes/second (3.2 Mbps) sustained throughput and 500 kBytes/second (4 Mbps) bursts in Parallel mode. The CO710AG also features a Power Save mode for saving energy. CO710AG operates in the industrial temperature range.

Connect One's AT+i™ protocol eliminates the need for Internet programming and minimizes changes to the host application. When using SerialNET mode, no changes to the host application are required. An extended memory version of this chip, CO710AG-XM, includes an extra 128KB SRAM and 1MB flash memory for storing a large Web site and general-purpose storage.

Application Program Interface:

- Connect One's AT+i™ protocol
- Hayes AT command set
- Connect One's SerialNET mode for transparent serial-to-Internet protocol conversion and routing

Internet Protocols:

- PPP, LCP, IPCP, PAP, CHAP, IP, ICMP, UDP, TCP, PING, DNS, DHCP, SMTP, POP3, MIME, HTTP, FTP, TELNET, NTP, and ARP
- Includes Web server / 32KB Web site
- Includes WAP server for device management via a WAP browser

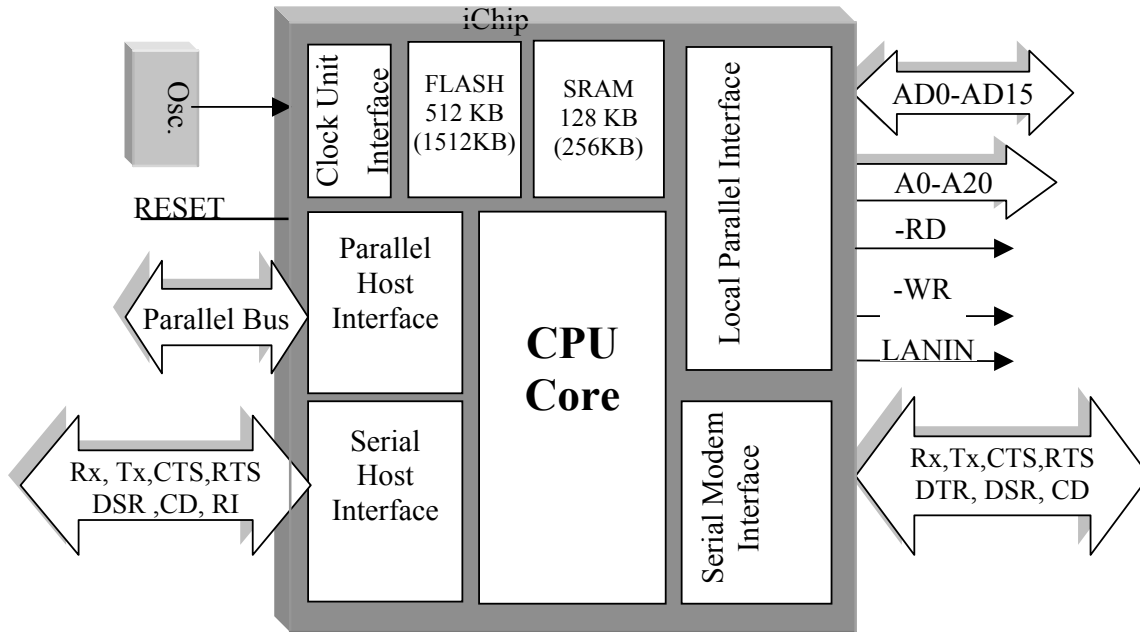
Hardware Description:

- Form Factor: 121-ball 10 x 10 x 1.2 mm BGA package with 0.8 mm ball pitch
- Core CPU: 32-bit RISC ARM7TDMI
- SRAM: 128KB (CO710AG), 256KB (CO710AG-XM)
- Flash: 512KB (CO710AG), 1,512 KB (CO710AG-XM)
- I/O Operating Range: 2.7V to 3.6V
- External memory bus
- Core Operating Range: 1.65V to 1.95V
- Operating Humidity: 90% maximum (non-condensing)
- Operating Temperature Range: -40° to 85°C (-40° to 185° F)
- Power Consumption: 25 mA Operating mode, 10 µA Power Save mode
- Host Interface: RS-232 Serial or Parallel

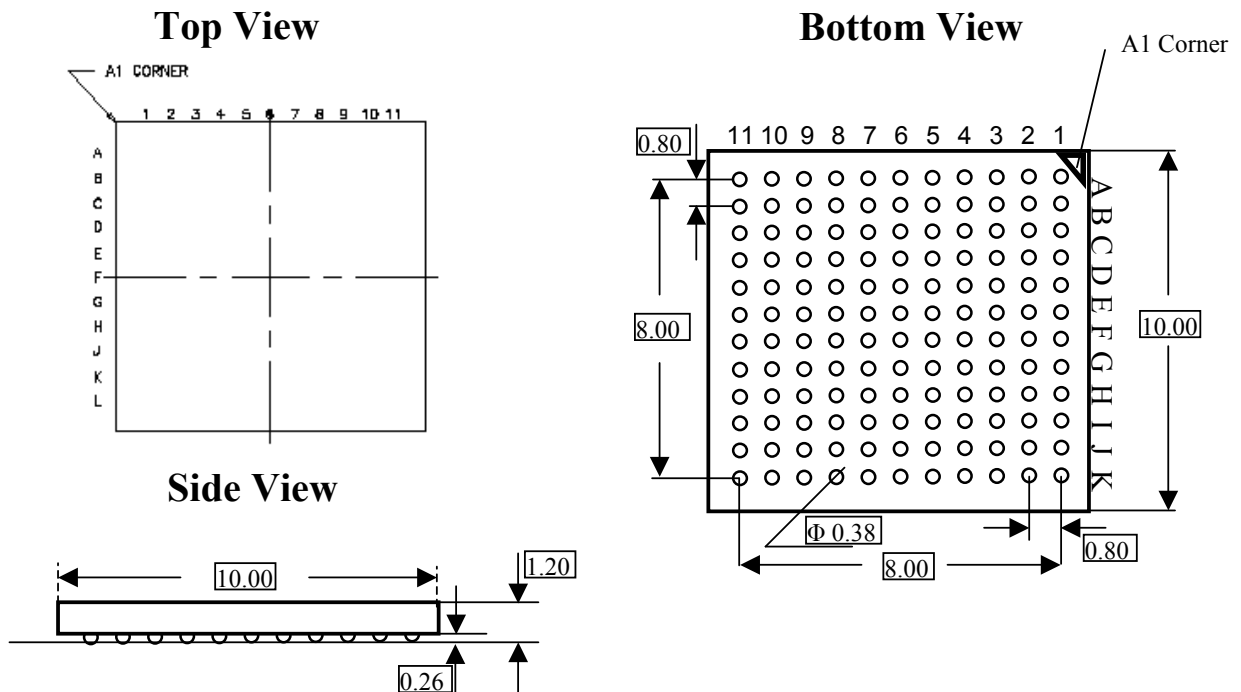
Performance Specifications:

- Host Data Rate: up to 230,400 bps in Serial mode. Parallel mode up to 400 kBytes/second (3.2Mbps) sustained throughput and 500 kBytes/second (4 Mbps) bursts.
- Serial Data Format: Asynchronous, character, binary, 8 data bits, no parity, 1 stop bit.
- Flow Control: hardware (DTR, RTS, CTS, DCD) and software flow control.

Block Diagram:



Mechanical Drawings:



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