

**iChipSec  
CO711AG  
Internet Controller**

**General Description:**

iChipSec™ CO711AG is a high performance Internet Controller™ and security offload chip that enables installed devices to connect to the Internet via 802.11b/g Wireless LANs, 10/100BaseT LANs, dial-up and wireless modems.

Packaged in a micro BGA form factor, CO711AG is a firmware-based, remotely updateable chip that stores the Internet protocol stack, security protocols, and Internet configuration parameters in updateable flash memory. iChipSec firmware can be remotely updated over the Internet via sockets, a Web browser or FTP, in addition to being locally updateable.

iChipSec CO711AG is designed for high-bandwidth applications. Its host interface supports 230 kbits/second in Serial mode and will support up to 400 kBytes/second (3.2 Mbps) sustained throughput and 500 kBytes/second (4 Mbps) bursts with a Parallel mode (to be developed). CO711AG also features a Power Save mode for saving energy. The chip 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.

**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

**General Security Features:**

- 3DES, AES-128, AES-256, ARC4, MD5 and SHA-1 Cipher suites.
- RSA public and private key encryption.

**Internet Protocols:**

- PPP, LCP, IPCP, PAP, CHAP, IP, ICMP, UDP, TCP, PING, DNS, DHCP, SMTP, POP3, MIME, HTTP, FTP, TELNET, NTP, ARP, SSL3/TLS1, FTPS
- Includes Web server / 64KB Web site

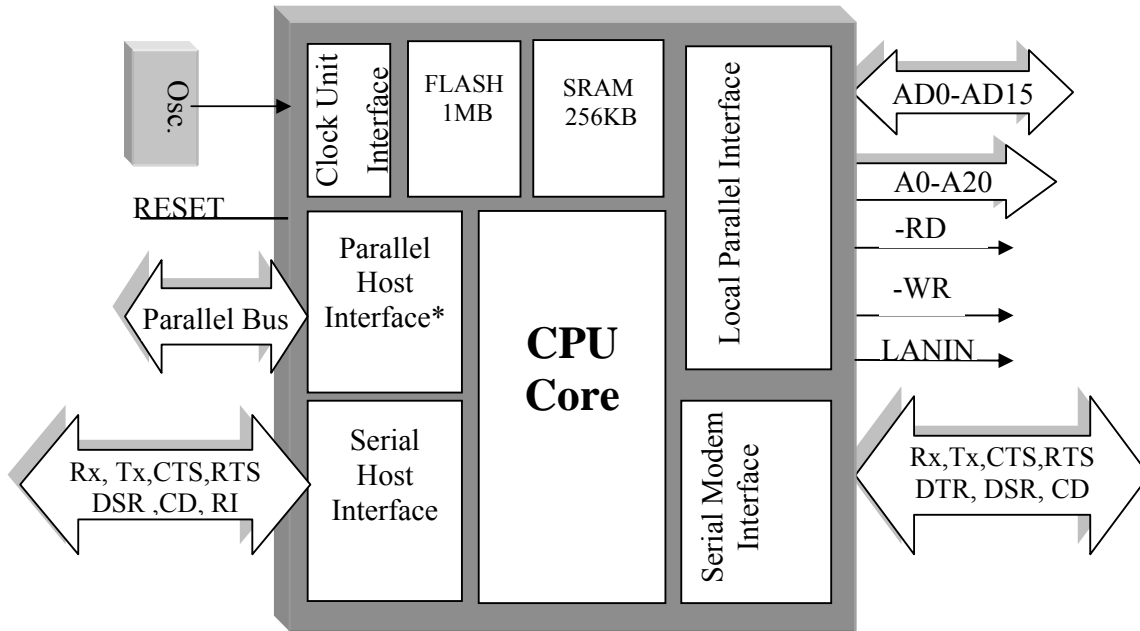
**Hardware Description:**

- 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: 256KB
- Flash: 1MB
- 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:**

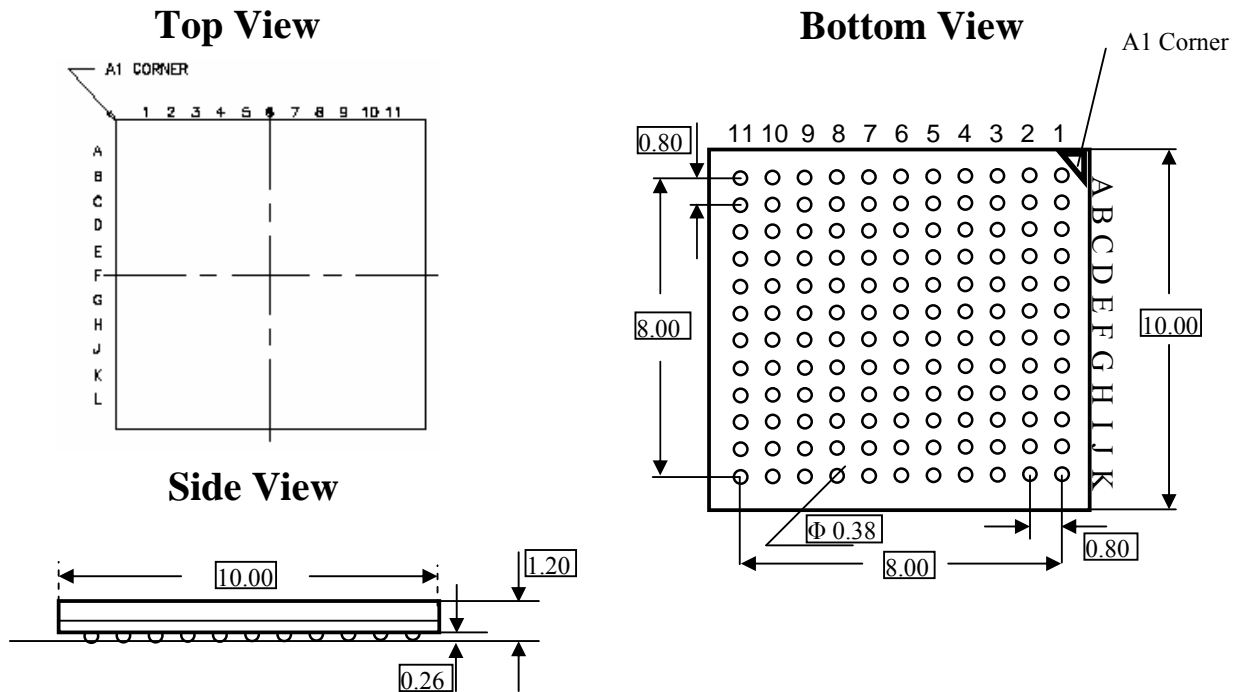
- Host Data Rate: up to 230,400 bps in Serial mode. Parallel mode up to 400 kBytes/second (3.2Mbps) sustained throughput and 500 kBytes/second (4 Mbps) bursts (to be implemented).
- Serial Data Format (AT+i mode): Asynchronous character, binary, 8 data bits, no parity, 1 stop bit.
- Serial Data Format (SerialNET mode): Asynchronous character, binary, 7 or 8 data bits, odd, even or no parity, 1 stop bit.
- Flow Control: hardware (DTR, RTS, CTS, DCD) and software flow control.

**Block Diagram:**



\* To be implemented

**Mechanical Drawings:**



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