

from the hub is connected to the network providing access to the Internet/Intranet. A fourth cable can connect to the existing internal network allowing local PCs to also view the video.

Network Protocols and Ports

The i-Serve HNC300 can use both TCP/IP and UDP/IP transport for delivery of the video data. While maximum efficiency is achieved with UDP, TCP/IP guarantees delivery even when GPRS networks are extremely busy. For maximum flexibility you should ensure that all of the ports indicated in Table 1 are left open. When the unit is operating inside a firewall then your IT department may insist on restricting operation to ports 80 and 8000 or 8080.

Table 1

Transport Type	Ports used
Tunnelled HTTP streaming	8000, 8080
RTSP over TCP streaming	554, 7070
UDP streaming	554, 6970 to 9999
Web Server	80

Access Media

The streamed media may be viewed locally or remotely using a PC or Laptop computer. In order to view the multimedia remotely from a mobile terminal over a GPRS network you will require a GPRS enabled PDA. The MPEG4 media player software is freely available on the Internet and HomeNet can provide this on a CD for ease of installation.

Site Requirements

The installation will require a minimum of one 96-240VAC-power connection:

1. i-Serve number 1 to N. (Each i-Serve unit requires 7 Watts.)
2. Ethernet Hub (If more than one i-Serve is installed.)
3. RJ45 cable for connection to a hub/router/high speed modem

Physical Area

Each i-Serve requires an area of 300X150X50-mm plus clearance area to allow for adequate ventilation. An i-Serve can be mounted in a 19" communications rack.

Security Access

The i-Serve has two groups of User and Administrator. A User can access the unit and select cameras for viewing while the administrator has the flexibility to configure the unit for operation over various networks, monitor user access logs, control user access and the number of simultaneous sessions. As the media is streamed there is no media stored on the client devices and as such should a terminal be lost or stolen there will be no media on the terminal.

Software Applications

- HTTP server
- FTP server
- Real Time Media Streaming Server
- DHCP
- Web based configuration and management

Audio Interface

- 2 Audio inputs, 2Vrms
- MPEG-4 ISO/IEC 14496-3 AAC LC
- Sample rate 8KHz to 96KHz
- Encoder bit rate 8Kbps to 320Kbps mono
- Encoder bit rate 8Kbps to 160Kbps stereo

Video Interface

- 8 CCTV inputs PAL/NTSC, 75R, 1Vpp
- MPEG-4 ISO/IEC 14496-2 SVProfile @ L1-3
- Frame Sizes - 176x144, 240X192, 352x288, 640X480, 720X576
- Encoder bit rate from 10Kbps to 2Mbps
- Field rate from 1fps to 50fps
- Variable Group Of Pictures
- 1 monitor output, 75R, 1Vpp

Performance

- 60 unicast live video streaming sessions at 46Kbps
- Multicast support

Standards

- ISMA Profile 0 and 1 compatible
- MP4 file format for storage and playback

Hardware

Electrical

- Input Volts: 6 to 12 volts DC
- Power consumption: 7 Watts maximum

Mechanical

- Unit dimensions 300 X 150 X 60 mm
- Video ports connector BNC
- Audio ports RCA
- Modem port RJ11 4pin
- LAN RJ45
- Serial 9 way D Type
- Compact flash Type 1/2

Memory

- 64 MB Internal RAM
- Compact Flash card 16MB to 2GB

Communications

LAN

- 1 port 10/100 Mbps

WAN

- V.90 modem

Serial Ports

- 2 RS232C – 110bps to 250Kbps
- Infrared - IRDA 1.0

Protocols

- HTTP, FTP, ARP, DHCP, RTSP, RTP/RTCP, UDP, TCP/IP, PPP, CHAP, SNMP

Management Interface

- Control maximum number of simultaneous users
- Control maximum aggregate bandwidth usage

Terminal Software

- MPEG4 media streaming player such as Apple QuickTime or Philips player for Pocket PC