DATA SHEET

The PL1253A EtherCast™ Video IP Engine™

Real-time, high-quality transport of HDV™ video over standard, low-cost Ethernet LANs/WANs

Pleora's PL1253A EtherCast Video IP Engine is a palm-sized, low-power, affordable device that reliably transports HDV digital video and audio in real time over standard Fast Ethernet or Gigabit Ethernet networks.

The engine takes the IEEE 1394 signal from an HDV camera, converts it quickly and efficiently to IP packets, and pumps it continuously over a managed Ethernet LAN/WAN.

At the other end of the connection, a second engine converts the signal back to IEEE 1394. From there, the signal can be routed to a PC or other 1394-compatible video equipment.

Pleora's PL1253A EtherCast Video IP Engine does not alter the video stream, and there are no video quality compromises. An intelligent, bandwidth-efficient, sub-millisecond data resend scheme ensures 100% packet delivery, guaranteed.

The engine converts the entire 1394 stream, including the audio/video payload on the isochronous channel, and all audio/video control information on the asynchronous channel. Remote HDV camera control from a PC is thus fully retained.

With the PL1253A engine, HDV users can immediately benefit from Ethernet's long-distance reach, low-cost infrastructure, and ease of use.

HDV video can be reliably transmitted, for example, between two cities over multi-hop, long-distance LAN/WAN connections. This is ideal for live broadcast feeds, distance learning systems, the transport of dailies to post facilities, and many other applications.

The PL1253A engine includes the EtherCast Configuration Utility, a PC-based Windows application for detecting PL1253A engines on a network, checking their status, assigning them names and IP addresses, setting packet timeouts, and other functions.

Pleora's PL1253A EtherCast Video IP Engine is offered in a box or as an OEM board. A rack-mounted version, with four boards to a 1U chassis, is also available.

Applications

- **Transport of dailies to post facilities**
  Instantaneous and efficient
- **Premise-to-premise transport of digital footage**
  No lost data
- **Distance learning**
  Affordable, high-quality video
- ***Live broadcast feeds***
  Direct from the camera

EtherCast PL1253A Features

Complies with HDV format	• Supports both 720p and 1080i line specifications • Transfers HDV data at full 19 Mb/s (720p) or 25 Mb/s (1080i) rate • Supports MPEG-1 Audio Layer II • Packetizes both asynchronous and isochronous IEEE 1394 channels • Transfers AV/C commands using FCP (Function Control Protocol) as per IEC61883 • Transfers CMP (Connection Management Procedures) packets
WAN support	• Communicates with other PL1253A engines over managed Ethernet WAN
Programmable latency	• Configuration register allows latency to be tailored to transfer characteristics in the user's managed Ethernet LAN/WAN
Disconnect detect and recovery	• In cases of cable disconnects or system faults, the engines attempt to recover their previous state as per IEC61883
Isochronous stream locking	• Isochronous cycle intervals are matched across the Ethernet network to maintain system synchronization
Efficient packet ordering	• Packets placed in correct order regardless of the order in which they are received
Built-in network traffic shaper	• Steady and consistent packet transmission rate
Automatic lost packet detection	• Intelligent, bandwidth-efficient, sub-millisecond data resend scheme
Intelligent idle detection	• Minimizes bandwidth utilization when video stream not present
Configuration via either PC Utility or DIP switches	• Network and/or engine configured from PC using EtherCast Configuration Utility • In absence of network-connected PC, configurable using DIP switches
Setting retention	• Retains settings upon power-off with write-to-flash via PC or DIP switches
LED status indicators	• Green – device is powered and waiting for a connection • Orange – engine is connected to another EtherCast PL1253A engine

EtherCast PL1253A Characteristics

Package	• Boxed: 9.3 cm x 9.8 cm x 3.7 cm (L x W x H) • OEM: 8.6 cm x 5.6 cm x 2.1 cm (L x W x H) • Rack mount: 19"
Operating temperature and humidity	• Boxed / Racked: 0˚C to +50˚C • OEM: 0˚C to +70˚C • Humidity: 10 to 90% non-condensing
Power supply	• +4.5 V to 16 V DC for boxed and OEM versions
Power consumption	• 3.75 W

EtherCast PL1253A Connectors

Power	• Boxed: Hirose 4-pin (HR10A-7R-4P) • OEM: Molex 4-pin 6373 series (22-23-2041)
Network	• RJ-45, copper, 10/100/1000BaseT
Video	• 1x IEEE1394 4-pin female (input or output)
GPIO	• For future use