IP-BASED DSLAM
(Digital Subscriber Line Access Multplexer)

ISAP-2100

Description

The ISAP-2100 Series is an advanced IP-based DSLAM that can be used by service providers interested to offer broadband multi-service features. It enables high bandwidth, high quality data and voice transmission for applications such as multimedia and video streaming, interactive paid TV channels, online gaming, video conferencing, telecommunication, VoIP and distance learning, etc...
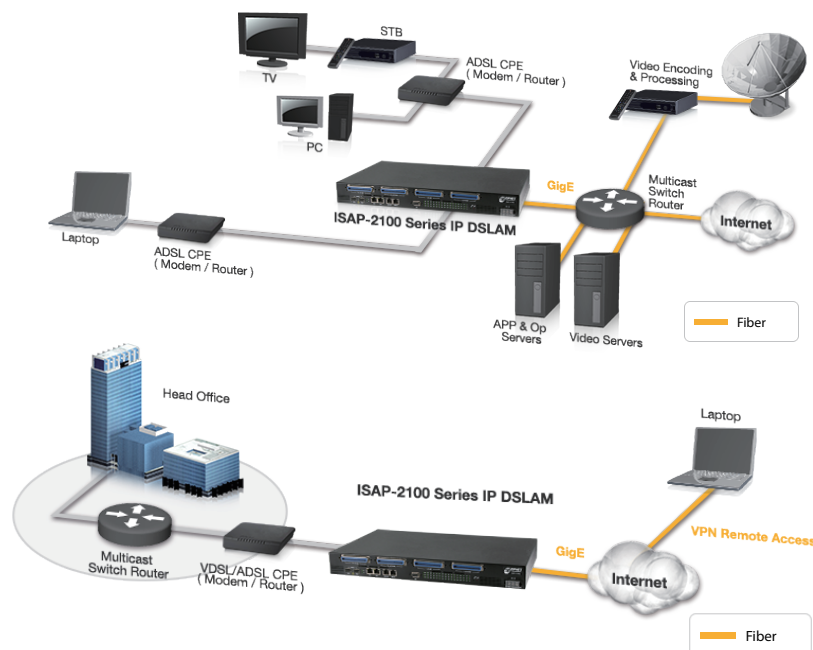
Hardware Features

- Compact design in nearly one RU height unit
- Service capacity expansion via units stacking
- Two 100/1000Base Combo Gigabit Ethernet uplink network interfaces
- 24/48-ADSL2+ ports with or without built-in POTS Splitter
- Non-blocking switching fabric and wire-speed switching capability
- On board LEDs for system status indications
- Dual power supply modes, DC and AC
- High reliability design
- SELT Subscriber Loop testing

Software Features

- Subscriber traffic isolation among ADSL2+ line ports
- Subscriber rate limiting
- Configurable mapping between VLAN tag and ATM PVC RFC 2684 multi-protocol over AAL5, RFC 2516 PPPoE packet forwarding
- QoS for IEEE 802.1p priority queues
- OAM F5 fault diagnostic
- IEEE 802.1D spanning tree bridging
- IEEE 802.1Q VLAN tagging
- IEEE 802.3ad link aggregation on network interface
- IGMP snooping/proxy
- Windows based and GUI management system with different user access levels
- Remote system configuration by using Telnet, SNMP v1/v2c management
- In-band management channel

Application

Internet Service

◆ With the ADSL CPE connecting to ISAP-2100 Series, packets will be encapsulated in accordance with QoS to optimize connection quality

◆ ISAP-2100 Series IP-DSLAM has ability to convey transparently the protocols from ADSL CPE or end user PC to service applications such as PPPoE (RFC 2516), RFC 2684 Bridge, and L2TP, L2F, PPTP, IP-Sec. tunneling

Virtual Private Network Service

◆ The ISP is offering VPN (Virtual Private Network) service to corporations

◆ The retail business is currently selling only high-speed Internet access to residential consumers but wants to offer some value-add services to the current offerings with the proper device supporting the VPN applications for small-to-medium business.

◆ ISAP-2100 Series transfers their tunnel protocol to upper layer broadband router securely

Specifications

1. Gigabit Ethernet Interface

◆ Two 100/1000Base Combo uplink interfaces (electrical and optical)

◆ The throughput at least 80,000 packets per second for 1518 bytes packet size both upstream and downstream.

◆ Cascading connection for multi-system application

2. Subscriber Line Interface

◆ 24/48-port ADSL2+ Subscriber line which enables multimedia services.

◆ Consolidates ADSL, ADSL2, and ADSL2+ connection interfaces with max. of 24Mbps down stream and 3Mbps up stream.

◆ Loop test supported (SELT)

◆ Up to 8 VPC/VCC per ADSL port

◆ Impulse noise protection

3. Interface Connection

◆ RS-232 Female DB-9 for Console Management access interface

◆ 2xRJ-45+2*SFP for Network uplink interface

◆ 2xTelco50 for ADSL Subscriber interface

◆ 2xTelco50 for POTS line Subscriber interface (in ISAP-2100S)

◆ 2xRJ-45 for Alarm I/O contacts

◆ In-band Network Managament

4. Standard Compatibility

◆ ITU-T Rec.G.992.1, G.992.2, G.992.3 and G.992.5 with Annex A, G.994.1, G.997.1, ANSI T1.413 Issue 2

5. Application Services

◆ Static IP service at bridge mode
  It associates the incoming traffic and tag the VLAN ID to switching into Layer 2 network.

◆ PPPoE Services
  Provides effective way to summarize the assigned subscribers among different ISPs.

◆ DHCP Services
  Assigns a DHCP server for centralize IP manage under bridged mode.

◆ Video on Demand Services
  • Supports multicasting with stream channels by enable IGMPv2 snooping function and supports up to 256 multicast groups per set.
  • Supports Multicast VLAN Registration(MVR)

◆ VLAN Pass-through Services
  Under bridged mode, it allows subscriber deployed their own VLAN ID to associate in the network.

◆ VPN Pass-through Services
  Supports tunneling mechanisms service like IPSec. L2TP, and PPTP for VPN pass-through application under bridged mode.

6. Subrack / Models

◆ Dimensions: 436mm x 320mm x 44.5mm (WxDxH)

◆ Weight (2100/2100S): 4/6 kgs

◆ 19"rack mountable pizza box in nearly 1U height

◆ ISAP-2100 Series consists of four models:
  • ISAP-2100: 48 ports ADSL2+ IP-DSLAM.
  • ISAP-2100S: 48 ports ADSL2+ IP-DSLAM with built-in splitters.
  • ISAP-2102: 24 ports ADSL2+ IP-DSLAM.
  • ISAP-2102S: 24 ports ADSL2+ IP-DSLAM with built-in splitters