IPDSLAM Specification

IPDSLAM Combines with ADSL 2/+ multiservice CPE, to provide POTS and integrated VoIP, wireless and rish content application. The stackable design for future expansion is up to 168 ports with a combination of xDSL technology. Service providers can benefit from low initial investment cost by purchasing only the number of ports immediately required, and then upgrade them to additional ports later.

Standard

The Standard of ADSL2/+ provides flexible multimode including G.992.5, G.992.3 ADSL2, T1.413, G.dmt and G.lite. The downstream rate is up to 24Mbps, and the upstream rate is up to 1Mbps. The backward compatibility feature is for multimode adaptation.

The uplink of IPDSLAM slave is compatible with IEEE 802.3ab 1000Base-T, and IEEE 802.3x for flow control.

The uplink of IPDSLAM master could be Gigabit optical interface with SC or LC connector and complied with IEEE 802.3z Gigabit Ethernet standard.

Rate Adaptation (SRA)

The SRA is on-line configuration mechanism specified in ITU-T Rec. G.992.5. By using SRA, the downstream and upstream net data rates during showtime shall be automatically increased and decreased according to the line condition.

Multi-Media Application

The Backward compatibility to ADSL, ADSL2 ADSL2/+ offers multimedia application, high-speed Internet access through IP network. It supports POTS and data services simultaneously.

The system can provide local content and rich application for FTTB solution on MTU, MDU, MHU and MPU market. Applications also follow the FSAN specification. These applications include high speed Ethernet, LAN-to-LAN connection, Fiber extension, home networking and wireless base station connection.

By integrated voice gateway on CPE side, the solution provides a cost effective voice communication through the Internet. VoIP feature on IPDSLAM provides toll quality voice communication in terms of voice quality and reliability for the users.

IPDSLAM Specification

Network Management

The master IPSDLAM can manage many slaves by single IP. The system provides GUI on EMS system for remote provision, monitoring, and easy configuration, Trivial File Transfer Protocol (TFTP) for firmware and configuration upgrade.
The system can be configured, monitored and managed by EMS or NMS system.

QoS Guarantee

To ensure appropriate QoS, the telephony traffic is prioritized and assigned to a service flow, which is handled by ToS control and TCP/IP throttling.

IPDSLAM should implement the IP packet classification function to support priority data flow to guarantee the quality of service. It might be necessary to assign voice packet a higher priority queue and assign data a lower priority queue.

Single IP Management

The IPDSLAM provides the feature for single IP management. It can reduce maintenance overhead.

Scalable Benefits

The system is designed to be stackable with uplink Ethernet interface expansion. The port number is up to 168 ports
with a combination of xDSL. Service.
By using scalable architecture, equipment provider can scale up easily with benefit from low-initial investment cost as subscribers increase

Master Technical Specification

Master Feature

Dimensions (w/d/h)

44x28x4.5 cm

Weight **6.5**Kg

Power Requirement

100-240V AC or -42V～-56V DC

Power Consumption

70 W typical

Network Interface

- Selective one or two Optional Interface
- Gigabit copper, Gigabit Optical LX or SX with LC or SC connector.

Cascade Interface

- Six 1000 BASE-T cascade interface

DSL Interface Options

- 24-port 50-pin RJ-21 connector
- Backward compatible to ITU-T G.992.1 G.dmt, ITU-T G.992.2 G.lite, ANSI T1.413 issue 2, ITU-T G.992.3 ADLS2, ITU-T G.992.5 ADSL2/+ and Long reach DSL
- FSRA (Fast Seamless Rate Adaptation)
- SELT (Single Ended Line Testing) for ADSL
- DELT (Dual End Loop Testing) for ADSL2.

POTS Interface

- 24-port POTS Splitter G.992.1 Annex E
- POTS Subscriber Line Interface 50-pin RJ-21
- Support 600ohm, 900ohm and other impedances on request

Console Interface

- RJ45 RS232 Console Port

LED

- Power, Active, Critical/Major/Minor Alarm, DSL for link Activity

Alarm Relay Contact

Reliability

- MTBF: 55,000 hours

Network Management

- TFTP firmware upgrade utility via EMS
- Telnet server for remote management
- SNMP enabled for network management function

Command Line

- Console or Telnet CLI for configuration or status monitor

Encapsulation Mode

- RFC 2684 MPoA

ATM Feature

- 8 PVCs per subscriber line
- End-to-end OAM loopback
- UNI 3.1/4.0 PVC

Bridge Feature

- IEEE 802.1p CoS prioritization
- IEEE 802.1Q VLAN support
- IGMP Snooping and 150 multicast group
- 802.1d STP
- GARP/GVRP
- Packet Filter and Classifier

Regulatory Safety Compliance

EMC

CE: EN550221-1 & EN50082-

Safety

EN60950

Operating Environment

Temperature:

Operating conditions: -10 to 65° C

(14 to 149° F)

Non-Operating conditions: -10 to 85 °C

(14 to 185 °F)

Relative Humidity:

10 to 90 %

DrayTek

Slave Feature

Slave Technical Specification

Dimensions (w/d/h)

44x28x4.5 cm

Weight **6**Kg

Power Requirement

100-240V AC or -42V～-56V DC

Power Consumption

60 W typical

Network Interface

- Selective 2 Fast Ethernet or one Gigabit copper.

DSL Interface Options

- 24-port 50-pin RJ-21 connector
- Backward compatible to ITU-T G.992.1 G.dmt, ITU-T G.992.2 G.lite, ANSI T1.413 issue 2, ITU-T G.992.3 ADLS2, ITU-T G.992.5 ADSL2/+ and Long reach DSL
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ADSL Feature

Feature Set on DSL

- >24Mbps ADSL2+ Performance Annex A
- ADSL2+ Annex A Overlapped Mode 2
- Auto fallback from ADSL2+ to ADSL2 to Re-ADSL2
- RE-ADSL2: Boosted Downstream PSD (Annex L)
- TR-67 Performance- TR-48
- Train up time < 1 minute
- (Includes G.DMT and ANSI CPEs)
- Backwards compatibility to ADSL (TR-48 to specific CPEs)
- Bit Constellation
- Trellis Coding
- Data on Pilot Tone
- Receiver Determined Pilot Tone
- Fast Seamless Rate Adaptation (*Fast* SRA) Downstream
- Single Ended Line Testing (SELT) for ADSL
- Dual Ended Loop Testing (DELT) for ADSL2

Product Model Series

- IPDSLAM-S-24-FE-A2+-DC-L-I: 24 port ADSL 2+ IPDLAM slave with 2 FE uplink, DC power
- IPDSLAM-S-24-FE-A2+-AC-L-I: 24 port ADSL 2+ IPDLAM slave with 2 FE uplink, AC power
- IPDSLAM-S-24-GE-A2+-DC-L-I: 24 port ADSL2+ IPDLAM slave with 1 GE copper uplink, DC power
- IPDSLAM-S-24-GE-A2+-AC-L-I: 24 port ADSL2+ IPDLAM slave with 1 GE copper uplink, AC power
- IPDSLAM-M-24-1GE-A2+-DC-L-I: 24 port ADSL2+ IPDLAM Master with 1 GE copper outgoing link, 5 subtend, DC power
- IPDSLAM-M-24-1GE-A2+-AC-L-I: 24 port ADSL2+ IPDLAM Master with 1 GE copper outgoing link, 5 subtend, AC power
- IPDSLAM-M-24-2GE-A2+-DC-L-I: 24 port ADSL2+ IPDLAM Master with 2 GE copper outgoing link, 4 subtend, DC power
- IPDSLAM-M-24-2GE-A2+-AC-L-I: 24 port ADSL2+ IPDLAM Master with 2 GE copper outgoing link, 4 subtend, AC power
- IPDSLAM-M-24-1LX-A2+-DC-L-I: 24 port ADSL2+ IPDLAM Master with 1 LX outgoing link, 6 GE subtend, DC power
- IPDSLAM-M-24-1LX-A2+-AC-L-I: 24 port ADSL2+ IPDLAM Master with 1 LX outgoing link, 6 GE subtend, AC power
- IPDSLAM-M-24-2LX-A2+-DC-L-I: 24 port ADSL2+ IPDLAM Master with 2 LX outgoing link, 6 GE subtend, DC power
- IPDSLAM-M-24-2LX-A2+-AC-L-I: 24 port ADSL2+ IPDLAM Master with 2 LX outgoing link, 6 GE subtend, AC power
- IPDSLAM-M-24-1SX-A2+-DC-L-I: 24 port ADSL2+ IPDLAM Master with 1 SX outgoing link, 6 GE subtend, DC power
- IPDSLAM-M-24-1SX-A2+-AC-L-I: 24 port ADSL2+ IPDLAM Master with 1 SX outgoing link, 6 GE subtend, AC power
- IPDSLAM-M-24-2SX-A2+-DC-L-I: 24 port ADSL2+ IPDLAM Master with 1 LX outgoing link, 6 GE subtend, DC power
- IPDSLAM-M-24-2SX-A2+-AC-L-I: 24 port ADSL2+ IPDLAM Master with 1 LX outgoing link, 6 GE subtend, AC power