



# **TD-5600 Series IP DSLAM**



# **Product Overview**

TD-5600 series DSLAM have 32/64/96/128 ports subscriber line interface with POTS splitter built-in achieved 2U height space saving design.TD-5600 Series came with unique bandwidth management, flow prioritization and data flow security control key feature. TD-5600 Series provided QoS (Quality of Service) capability to meet triple play (voice, data, video) requirement, support ADSL /ADSL2/ADSL2+/ G.SHDSL/VOIP interface, No matters in features, performance, and cost wise, TD-5600 Series is the best choice for NSP (network service provider)

### **Product Characteristics**

Plug-and-Play Service Provisioning

Superior Maintainability and Manageability

**High-Density Subscriber Access** 

Flexible Configuration of Multiple Service Boards

Carrier-Class Reliability Design

Energy Saving and Noise Reduction

High and Guaranteed QoS

Strict Security

**Operable IPTV Service** 

Perfect Voice Features



## **Product Description Positioning and Features**

Provides lightning protection and anti-interference functions.

Starts up at -25°C.

Endures high temperatures and it can work normally for a long time at 65°C (the maximum working temperature).

Supports the temperature detection function, When the temperature exceeds the threshold, the system generates an alarm.

Supports protection of the subscriber port:

DSL port: enhanced K20, common mode 4 kV OTS port: common mode and differential mode, 4 kV

Supports the power protection (2 kV in differential mode and 4 kV in common mode).

In the AC + backup power configuration, the battery can be used as the backup power. When the AC power supply fails, the battery supplies power to the system. In this case, the broadband services are shut off, and the narrowband services are normal.

Supports the intelligent speed adjustment of the fan. The system can automatically adjust the fan rotating speed according to the working temperature, which brings positive effect to the reliable energy saving and noise reduction.

Supports replacing the fan tray independently.

Adopts the de rating design for the electronic components to improve the reliability.

Provides the corrosion proof design and reduces the cable routing on the board surface. The heat dissipation layout is reasonable (to prevent the condensation from forming because of the temperature difference).

Supports the MGCP/H248/SIP dual homing. When the MGCP/H.248/SIP protocol is used, the MDU can be configured with up to two MGCs. When the MGC is switched over or the MDU detects the fault of the primary uplink, the system automatically switches to the other MGC.



Supports emergency standalone. When the MDU upstream port is interrupted, the system automatically starts the emergency standalone function. Then, the subscribers of the same MDU can call and communicate with each other.

Supports virtual noise. The system uses the virtual noise mechanism to decrease the line rate (the system adjusts the line rate according to the SNR), which improves the anti-interference capability of the system.

# **High and Guaranteed QoS**

The TD-5600 Series has a high and guaranteed QoS, which lays the foundation for service management.

Traffic-stream-based priority marking

ACL-based priority marking

Three scheduling modes, namely priority queuing (PQ), weighted round robin (WRR), and PQ+WRR

DBA-based bandwidth management of the GPON port

Mapping upstream/downstream services to different priority queues for scheduling based on the priority

ACL-based access control

Two rate three color marker (TRTCM)-based IP traffic profile, and rate limitation on a subscriber port

TCONT-based priority service in the upstream GPON transmission direction of the MDU.

### **System Security**

Filters the packets by specified IP address, port, and protocol type.

Filters the packets by the source MAC address and destination MAC address of the packets.

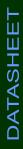
Filters the packets by the source route options.

Supports ACL-based (allow/deny) access control.

Supports static binding of the MAC addresses.

Supports suppression of broadcast, multicast and unknown unicast packets of the GPON port Ethernet port.

Supports SNMPv3 on the basis of SNMPv1 and SNMPv2c. Provides three key services, namely, authentication, encryption, and access control, considering the security defect in SNMPv1 and SNMPv2c. Note: The device on the CO side must also support SNMPV3.)





Supports changing the password for the Root user.

Supports GEM portbased encryption through the PLOAM messages in the downstream direction, by using the Advanced Encryption Standard (AES) 128 encryption algorithm.

Supports dynamic key switching based on ITU-T G.984 through the PLOAM messages.

Supports dual GE port (backup for each other) upstream transmission.

Supports the virtual MAC (VMAC).

Supports anti-ICMP/IP attacks.

Supports setting the anti-DOS attack function through the CLI and Telnet.

### **Subscriber Security**

Supports L2 isolation and controlled mutual access of the subscribers.

Supports the global Policy Information Transfer Protocol (PITP) and the PITP controlled by VLANs.

Supports global DHCP Option82 and the DHCP Option82 controlled by VLANs.

Supports DHCP Option82 so that the information about the physical location of a subscriber is contained in the authentication packet, thus enhancing the DHCP security.

Supports globalevel dynamic anti-MAC address spoofing. After the subscriber passes the authentication, the MAC address of the subscriber is bound with the service stream dynamically.

Supports the global and VLANlevel anti-MAC address spoofing and anti-IP address spoofing based on the DHCP protocol.

Supports the anti-MAC address spoofing function for the subscriber who uses the PPPoE protocol.

Supports the management of the operation rights of the maintenance and management personnel according to different right levels.

#### **Multicast Protocol**

Internet Group Management Protocol (IGMP) V2 and IGMP V3 IGMP proxy and IGMP snooping



#### **Multicast Service**

Up to 32 multicast VLANs and 1024 programs for each multicast VLAN

1024 multicast groups

Up to 16 multicast groups that the subscribers under each service port can join concurrently

Delay shorter than 50 ms for joining or leaving the multicast group

Flexible and easy channel control

IGMP packet statistics

High performance processing of IGMP packets, which enables the broadband TV (BTV) service

Multicast VLAN, program, and subscriber management

Setting and querying the quick-leave function through the NMS or the CLI

Global-level switching of IGMP modes

Filtering downstream multicast packets (The downstream multicast traffic that is not contained in the multicast filtering table is discarded.)

Statically joining a multicast program Adding, modifying, and deleting programs in batches

#### **Perfect Voice Features**

The TD-5600 Series has built-in access gateways (AGs) and inherits the platform capability and Intercommunication capability of large-capacity AGs:

Supports configuring the signaling IP address, media IP address, and management IP address to be the same or different.

Provides multiple voice service configuration profiles, which facilitates the configuration process.

Supports the configuration and delivery of the voice service.

Supports H.248/MGCP/SIP.

Supports the POTS basic service and supplementary service defined in the AG device standards.

Complies with ITU-T/IETF standards.





Supports dynamic jitter buffer and static jitter buffer.

Supports the media IP address and signaling IP address management. Delivers signal tones to local and remote subscribers. Supports H.248/MGCP/SIP dual homing. Supports the H.248 performance statistics and call statistics. Supports service performance requirements such as long duration calls. Supports the fax/modem service in the VBD mode. Supports T.38 fax. Supports flexible configuration of narrowband and broadband services. Supports the loop line test, circuit test, and call emulation test. Supports the remote packet capture. Supports the emergency standalone service. Supports the enhanced fax/modem service. Supports obtaining the IP address through DHCP. Supports the global digitmap configuration. Supports the flexible configuration of signaling transfer protocols. Supports the local announcement (ring back tone).



# **Order Information**

TD-5600 Chassis with AC Power Supply	4 Slots Chassis with 220VAC Power Supply
TD-5600 Chassis with DC Power Supply	4 Slots Chassis with 48VDC Power Supply
TD-5600 Chassis with AC+DC Power Supply	4 Slots Chassis with 220VAC & 48VDC Power Supply
Gigabit Ethernet Card	1xGigabit Combo (RJ45/SFP) Port+1xGigabit SFP Port
32*PORTS ADSL2+ Card	32*PORTS ADSL2+ Card
Telco Cable with 3 Meter Length	Telco Cable with 3 Meter Length



For More details: visit : www.techroutes.com Or contact sales@techroutes.com info@techroutes.com