

IP2100 Control Module for the Stinger® DSL Access Concentrator

With the IP2100 Control Module installed, the Stinger® DSL Access Concentrator provides high-performance ATM switching and IP routing in the same chassis. This powerful combination delivers 4 Gbps of IP processing, giving you the capacity and QoS to maintain reliable performance for high-value data and video services. The module's advanced capabilities — including IP multicasting and integrated Broadband Remote Access Server (BRAS) — help you overcome the challenge of today's flat rates for Internet access, enable a "Triple Play" service bundle and streamline your migration to packet networks.

Features

- **Integrated IP and ATM functionality** – Delivers the performance, reliability and QoS required for sophisticated applications
- **Enhanced switching capacity** – Enables data forwarding throughput up to 4.0 Gbps, with support for PIM-SM
- **High reliability and QoS** – Allows you to offer a broad range of premium services, backed by SLAs
- **Gigabit Ethernet trunk interface** – Provides a low-cost alternative to ATM backhaul
- **High-density aggregation** – Supports up to 6,000 RFC1483 terminations and can aggregate traffic from multiple DSLAMs via subtending
- **Enhanced IP functionality** – Gives your Stinger® platform the capabilities of a full IP router, including PPP termination, L2TP, virtual router and OSPF
- **IP Multicast** – Optimizes backhaul bandwidth—and supports multi-channel video switching via standards-based IGMP and PIM SM

- **Integrated BRAS capabilities** – Allows you to terminate PPP sessions in your Stinger® chassis, which reduces provisioning time by up to 50 percent
- **Control and management functions** – Maintains initialization, virtual connection establishment, configuration and management

Benefits

- **Increased earning power** – Boost broadband revenues by delivering high-performance services, such as video-on-demand, broadcast T.V. and interactive gaming
- **Competitive edge** – Gain the capabilities required for a Triple-Play service bundle that can compete with cable operators
- **Reduced operating costs** – Cut deployment and backhaul costs significantly with integrated IP functionality
- **Cost-effective migration** – Integrate IP capabilities into your DSL network seamlessly—even maintain ATM and IP in parallel on the same system

- **Reliability** – Offer advanced services with confidence, backed by ATM QoS, IP intelligence and built-in redundancy

Applications

- **IP Video over DSL** – Provide leading-edge services, including streaming multimedia, interactive gaming, broadcast TV, pay-per-view and video-on-demand
- **High Performance Data** – Deliver bandwidth-intensive data services, including business-class broadband, intranets, extranets and fast Internet access
- **IP Network Backhaul** – Lower recurring backhaul costs by deploying a pure IP network infrastructure
- **ATM to IP migration** – Eliminate hardware swap outs or forklift upgrades with the Stinger® platform's "future proof" architecture



Technical Specifications

Hardware Specifications

1. Dimensions

- Height: 15 in. (38.1 cm)
- Width: 1.06 in. (2.69 cm)
- Depth: 9 in. (22.8 cm)

2. Weight

3.4 lbs. (1.5 Kg)

3. Power Requirements

80 Watts maximum

4. Operating Requirements

- Temperature:
 - FS/LS version: 32°–131° F (0°–55° C)
 - RT version: 40°–149° F (-40°–65° C)
- Relative humidity: 10%–95% (non-condensing)
- Operating altitude:
 - Up to 13,123 ft (4,000 m)

5. LAN Interface

Two Gigabit Ethernet Ports

- Fiber option
 - Modular Small Form Factor Pluggable (SFP) transceiver with duplex LC connector
 - IEEE 802.3z 1000BASE-SX (short haul) over multi-mode fiber, distance support to 550m
 - IEEE 802.3z 1000BASE-LX (long haul) over single mode fiber, distance support to 10km

6. Management Interfaces

RS-232 serial port, 10/100BASE-T Ethernet

7. Status Indicators

- 10/100BASE-T Management Interface
 - 10 (Green): 10 Mbps speed
 - 100 (Green): 100 Mbps speed
 - LINK (Green): Operational link
 - ACT (Green): Traffic activity
- Gigabit Ethernet Interface
 - LINK (Green): Operational link
 - ACT (Green): Traffic activity
- Others
 - MAJOR (Red): Critical major alarm detected
 - MINOR (Red): Minor alarm detected
 - TRUNK STATUS 1-6 (Amber): Trunk port status
 - MASTER (Green): IP2100 is operating as master

8. Electromagnetic Compliance

FCC Part 15 Class A
EN55022 Class A
AS/NZS 3548 Class A
VCCI Class A
CISPR 22 Class A
EN 300386-2

9. Certification

Telcordia-GR-63-CORE (NEBS Level 1-3)
Telcordia-GR-1089-CORE
EN / IEC 60950

10. Expansion Slot

One PC card slot for upgrades or configuration parameter storage

11. Switching Fabric

Network processor based design for ATM as well as Ip functionality

Software Specifications

1. Termination

MPOA (RFC 1483)
PPP termination
PPP over Ethernet
PPP over ATM termination
3,000 sessions

2. IP Routing

RIP v1, RIP v2
OSPF

3. Multicast

IGMP v1, v2
PIM-SM v2
Tunneling
L2TP tunneling, serving as an LNS

4. VLANs

IEEE 802.1Q tagged VLANs
Stacked VLAN support

5. IP Class of Service (CoS)

Per VC queuing
Dynamic 3-level IP CoS queuing
Downstream traffic shaping

6. ATM Protocols

ATM Forum UNI (v3.0 and v3.1)
ATM Forum Interim Interswitch Signaling Protocol (IISP)
ATM Forum Traffic Management v4.0
ATM Forum PNNI 1.0 (optional)

7. Security

RADIUS, Extended RADIUS, Password Authentication Protocol (PAP), Challenge Authentication Protocol (CHAP), profile based Access

Model Numbers

STGR-CM-IP2100-F:

IP2100 Control Module with modular IEEE 802.3z fiber Gigabit Ethernet interface

STGRR-CM-IP2000-F:

Environmentally hardened version of STGR-CM-IP2000-F

STGR-SFP-LX:

Long haul single mode fiber Gigabit Ethernet SFP module

STGRR-SFP-LX:

Environmentally hardened version of STGR-SFP-LX

STGR-SFP-SX:

Short haul multi-mode fiber Gigabit Ethernet SFP module

STGR-SO-IGMP:

IGMP multicast software option for Stinger FS and FS+

STGRL-SO-IGMP:

IGMP multicast software option for Stinger LS and RT

STGR-SO-VLAN:

802.1Q VLAN software option for Stinger FS and FS+

STGRL-SO-VLAN:

802.1Q VLAN software option for Stinger LS and RT

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