

- > data
- > voice
- > video

*"The first full-service,  
next-generation VDSL  
solution to provide  
guaranteed quality  
of bandwidth across  
multiple applications  
running over a single  
pair of telephone wires."*

## IntelliPOP™ 5000 Platform

Re-defining Broadband Service Delivery  
for Multi-Tenant Buildings



### Service Centric Networking

IntelliPOP™ is the first full-service, next-generation VDSL solution to provide guaranteed quality of bandwidth across multiple applications running over a single pair of telephone wires. Speeds of up to 26 Mbps per line are supported, sufficient for HDTV video streams. Each VDSL line supports up to 16 individual secure bandwidth channels for precise traffic management per application. IntelliPOP is augmented by innovative Signatiure Switch™ technology that manages bandwidth and/or VLAN tags by application, by device, by protocol type, or by user.

The breadth of the IntelliPOP™ 5000 series allows customers the choice of either a system that connects directly to a WAN uplink such as T1 (Tut 5212) or an existing Ethernet-based network (Tut 5624).

All IntelliPOP units are managed by Tut Management System Software - a drag-and-drop, GUI-based policy and element management system.

### The IntelliPOP 5000 platform includes:

- > TUT 5212 - A 12-port Service Gateway w/ routing functions
- > TUT 5624 - A 24-port VDSL Concentrator

### CPE Units:

- > TUT 5102 - A 2-Ethernet port Service Access Unit w/ Signatiure Switch™, DHCP, and NAT
- > TUT 5112 - A 2-Ethernet port Service Adapter

### Features & Benefits

- 26 Mbps over a single telephone line
- Industry-leading rate-adaptive and noise-adaptive VDSL technology maximizes uptime for mission-critical applications
- 16 managed channels/applications per VDSL line
- Bandwidth and VLAN tagging managed per port, device, protocol, application, or user
- Advanced QoS for guaranteed services
- Centralized provisioning of services using a simple drag-and-drop GUI

## IntelliPOP Service Platform

The TUT5624 VDSL Concentrator combines the functionality of a high-speed switch and an access multiplexer with powerful service class management tools to distribute multiple IP-based services using existing copper wires. The TUT5212 Service Gateway adds the functionality of an edge router by supporting a variety of WAN interfaces, DHCP, and NAT.



VDSL Ports:	<b>TUT 5212</b> 12 full-duplex VDSL lines running up to 26 Mbps and 4000 ft* via RJ-21
	<b>TUT 5624</b> 24 full-duplex VDSL lines running up to 26 Mbps and 4000 ft* via RJ-21
Uplink Options:	<b>TUT 5212</b> 10/100Base-T Ethernet port(s), 4x T1, DS3, HSSI
	<b>TUT 5624</b> 2 10/100Base-T Ethernet ports
Console & Modem Ports:	2 RS-232 (DB-9) ports; one for local diagnostics and management, a second supports remote management via an external modem.
Physical Dimensions:	1RU-17.25" x 12.75" x 1.75" (43.8cm x 32.4cm x 4.4cm) rack or wall mt
Weight:	6.5 lbs. (2.9 Kg)
Power Consumption:	100 watts (TUT 5212, 5612), 200 Watts (TUT 5624)
Power Supply:	100 - 240 VAC, 50/60 Hz
Operating Temperature:	0° to 50°C
Relative Humidity:	5% to 95% (non-condensing)
Agency Compliance:	FCC Part 15, Class A, UL 1950, CSA, EN60950, CE and Part 68

\* Actual performance may vary depending on line conditions.

## Tut Management System Software (TMS)

TMS is an integrated policy and element management system for the IntelliPOP platform. It enables simplified maintenance and provisioning of multiple services.

- Drag-and-drop services to subscribers
- Management of IntelliPOP's software distribution
- Scalable to manage thousands of installations over a single user interface
- Utilization of SNMP and LDAP standards for integration into broader network management solutions

ORDER PART#	MODEL	DESCRIPTION
68000	TUT5212	12 port Service Gateway & routing functions
68004	TUT5624	24 port VDSL Concentrator
63000	TMS	Tut Management System
68055	TUT5102	Service Access Unit (N. America)
68052	TUT5112	Service Adapter (N. America)
CALL	TUT5102	International Service Access Unit
CALL	TUT5112	International Service Adapter

## IntelliPOP CPE Units

IntelliPOP CPE units deliver IP services to customer premises. With state-of-the-art service class management, these devices cost-effectively deliver multiple services, such as high-speed Internet access, streaming video, video conferencing and voice services.



<b>TUT 5102 -</b>	Full service solution (Bi-Directional QoS) with Signature Switch™, DHCP, NAT
<b>TUT 5112 -</b>	Bridge solution (downstream QoS)
VDSL Port:	1 full-duplex VDSL line running up to 26 Mbps via RJ-11
LAN Port:	2x RJ-45 Ethernet ports (10 Base-T, and 100 Base-T)
Physical Dimensions:	6.6" x 5.0" x 1.35"
Weight:	10 oz.
Power Consumption:	7 watts
Power Supply:	9VDC (unregulated), 800mA
Operating Temperature:	0° to 45°C
Relative Humidity:	5% to 95% (non-condensing)
Agency Compliance:	FCC Part 15, Class B, UL 1950, CSA, EN60950, CE and Part 68

## IntelliPOP Software Suite

The IntelliPOP system software provides plug-and-play installation, efficient IP addressing, and centralized management of the concentrators and CPE units. Service providers can secure their IntelliPOP system against unauthorized access by setting password-protected access levels. Industry-standard management options include SNMP and a powerful Command Line Interface (CLI).

Networking Protocols:	Ethernet data link protocols - 802.3, 802.1p, 802.1q IP routing (TCP/IP, UDP, ICMP, ARP, RIP v1, RIPv2) DHCP server & relay Network Address Translation (NAT) IP & Ethernet packets over frame relay (RFC 1490) ANSI T1.617 Annex D, Q.933 Annex A, FRF.1 PPP ML-PPP
Multicast Protocols:	IGMP, IGMP bridge snooping
Service Management:	Automatic rate adaptation 8 Signature Switch™ service classes per CPE Ethernet port (16 total) Traffic prioritization via IP ToS, 802.1p, 802.1q, port
Network Management:	Command Line Interface via Telnet or console GUI via Tut Management System (TMS) SNMP Software downloads via FTP Password-protected management levels (user, installer, and administrator) Syslog

## About Tut Systems, Inc.

Tut Systems, Inc. (Nasdaq: TUTS) is the leading provider of next-generation, full-service VDSL systems optimized for provisioning broadband services within neighborhood (NDUs) and multi-tenant unit properties (MTUs). Tut's full service gateways combine advanced technology in multi-layer real-time content switching, high-speed packet forwarding and MTU- and NDU - tuned transmission lines. Tut's systems use the existing copper wiring in buildings to simultaneously deliver multiple broadband services such as interactive digital broadcast services and video-on-demand services (VOD) as well as advanced data, Internet access, and high-quality voice services.

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