

# XLT-402 Long-Distance Broadband Switch

**Fiber-like transmission over UTP copper**



- ✓ **75Mbps Symmetrical over UTP**  
*Superior signal/noise isolation*
- ✓ **Flexible Installation**  
*Multiple physical topologies; P2P, P2MP, P2MP with Daisy Chain*
- ✓ **Powerful Management**  
*Optional bit rates and proactive alerts of monitored links provide a reliable network.*

The XLT-402 Long-Distance Broadband Switch outperforms traditional or bonded xDSL solutions – providing up to 75Mbps symmetrical bit rates over two copper wire pairs. Applications with a limited number of copper wire pairs will appreciate the Tut Systems’ “spare the pairs” design.

A full-featured and user friendly management system easily integrates the XLT-402 into an existing Ethernet-based, managed topology. With powerful features and flexible installation; XLT is the key network component for Intelligent Transportation Systems (ITS), power stations, rail yards and stations, warehouse facilities, and extended campus networks.

## Management

Digitally programmable bandplans, embedded spectrum analyzer, and an integrated link algorithm allow XLT to outperform xDSL technologies – providing up to 75Mbps symmetrical bit rates over two copper wire pairs.

Manage XLT-402 units with features built to support an extensive enterprise network e.g. RADIUS/TACACS network authentication, user selectable alerts on link statistics, and automatic discovery of connected devices. Individual XLT units can be managed via remote network login, or groups of XLT units can be managed from a single “master” unit using one login – saving IP addresses and improving support response time. Operational status and link statistics are reported for each neighbor-connected XLT unit. SNMPv2c and future extensions for Ethernet OAM allow integration with any network management system.

## Intelligence

Advanced VLAN features support a services-centric network. Operators can assign each port a unique 802.1Q tag, trunk pre-tagged packets, or transport all packets transparently. XLT offers three distinct physical topologies; P2P, P2MP, or P2MP Daisy Chain. In applications with a limited amount of copper pairs, P2MP Daisy Chain links multiple locations into one high speed broadband copper network.

## Simplicity

Easily add/move/change to any location over existing or newly pulled wires. Quickly manage the individual node, or groups of nodes using the intuitive web UI. XLT is the third product from Tut Systems to use the same management framework, providing a short learning curve and fast installation.

## XLT-402 Long-Distance Broadband Switch

The XLT-402 is a single broadband switch with two UTP ports, and four 10/100Mb uplink ports. XLT-402 units can be installed on a Point-to-Point (P2P), Point-to-MultiPoint (P2MP), or P2MP Daisy Chain configuration. Two telephone grade UTP wire pairs are required for operation.

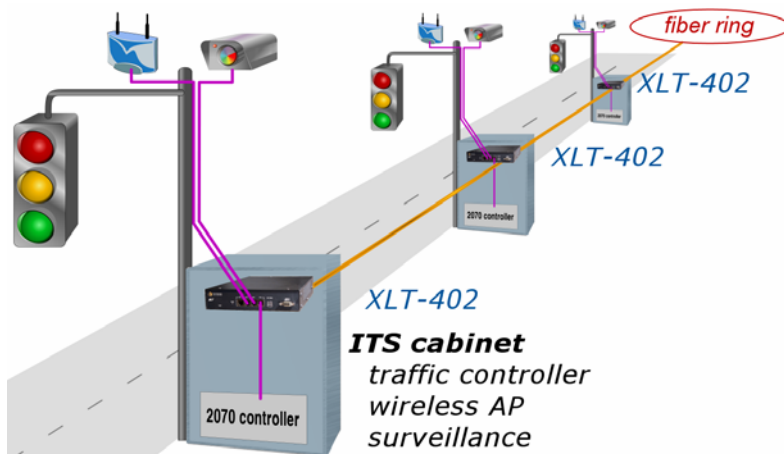
<b>Ethernet<sup>XD</sup></b>	Programmable QAM modulation Optimized Symmetrical data rates
<b>Interfaces</b>	4 x RJ45, 10/100Mbps auto-sensing 2 x keyed UTP Connectors 1 x dB9, female console port
<b>Power</b>	100 – 240VAC, 50/60Hz; 50 Watts
<b>Management</b>	Console, Telnet, Web UI SNMPv2c standard and enterprise MIB Ethernet OAM (future release) Multi-level Password protected Syslog server FTP software updates Config script support
<b>Physical</b>	Rack or wall mount (9" x 9" x 1.75") / (22.8cm x 22.8cm x 4.4cm)
<b>Environment</b>	Operating Temperature: -20c to +70c Humidity: 5% to 95%
<b>Compliance</b>	EN60950-1, UL60950-1, CE, FCC Part 15A (pending)
<b>Networking Protocols</b>	802.1, 802.3 Ethernet standard protocols TCP/IP protocol suite
<b>Multicast Protocols</b>	IGMP v1/v2 Proxy with IGMP Fast Leave 256 IP Multicast groups
<b>QoS</b>	2 transmission queues per port Packet classifier: 802.1P, Physical port
<b>VLAN</b>	802.1Q tagged VIDs: 2 – 4095 Port or Tagged based VLANs 128 concurrent tagged VLANs
<b>L2 switching</b>	8k MAC table

## XLT-402 Rate and Reach

Distance	Line Rate (Mb)
	2 wire pairs
500ft (150m)	75/75
1000ft (300m)	70/70
2000ft (600m)	60/60
3000ft (900m)	40/30
4000ft (1200m)	25/25
5000ft (1500m)	20/20
6000ft (1800m)	10/10
7000ft (2100m)	10/10
8000ft (2400m)	5/5
9000ft (2700m)	5/5
10kft (3km)	5/5

## Ordering Information

Part Number	Model	Description
42212	XLT-402	XLT Broadband Switch. 4 10/100Mb ports, 2 UTP ports for connection to other XLT-402 units up to 10,000ft away.



## Application Example – ITS Intelligent Transportation Systems

*XLT-402 leverages existing copper interconnects already installed in cities and municipalities. Enable video surveillance, intelligent traffic control, traffic message signs and offer public wireless access – all over one managed, broadband network.*