

Welcome to the CityLink LightZone  
Transform your network

# The LightZone

## CityLink Ethernet Products for Retail Service Providers

The LightZone is CityLink's pioneering metropolitan ultra-fast fibre optic broadband network. It offers Retail Service Providers a flexible ecosystem of network components which enables your services to be delivered to customers. LightZone network components are unbundled and designed to offer maximum flexibility, so that you can select the components you need in order to connect your customers and differentiate your services.



### The Light Zone Features and Benefits

#### Flexibility

The key benefit of the LightZone is the flexibility it provides; it is a tool kit of service components that can be drawn together in a range of configurations to enable you to differentiate and target your services at your unique markets. The LightZone enables you to mix and match your network architecture and access services giving you greater control over your network.

#### Network Architectures

CityLink now offers two complementary network architectures for Service Providers: E-Line and E-LAN. Both architectures can be delivered to a single Network to Network Interface (NNI) for no additional cost enabling you to take advantage of the benefits of each.

- The E-Line architecture creates point-to-point connections that can be multiplexed at your Service Provider NNI, each with a separate VLAN ID. E-Line is an industry standard architecture that enables you to segregate your individual customers, offer unlimited MAC addresses and connect at greater than 1Gbps speeds.
- CityLink's traditional model, E-LAN, is a multipoint-to-multipoint architecture which lets you to create a flat network or manage your customer's VLANs across your dedicated Service Provider VLAN. Depending on the routing you configure, E-LAN services can allow customer traffic to flow directly between sites without transiting through your head end, or allow you to terminate customers on multiple diverse NNIs, enabling you to create networks with greater throughput and resiliency.

#### Access Services

The LightZone enables service providers to offer a range of access circuits to end users.

- Opta uses a cost effective network design to pass on industry leading pricing to Retail Service Providers. This enables you to target price conscious markets with a fit for purpose service. Opta supports both flat and VLAN aware options over an E-LAN EVC.
- Quanta uses a high performance combination of carrier grade layer-1 and layer-2 networking to offer high availability uncontended bandwidth to premium users. Quanta can be delivered as either an E-Line or E-LAN EVC.



## Ethernet Network and RSP Network-to-Network Interface (NNI) Specifications

	E-Line	E-LAN
<b>Ethernet Virtual Connection (EVC) Attributes</b>		
EVC Type	point-to-point	multipoint-to-multipoint
CE-VLAN ID Preservation	<i>UNI Dependant</i>	
CE-VLAN Limit	4095	
CE-VLAN CoS preservation	Yes	
Unicast frame delivery	Yes	Yes
Multicast frame delivery	Yes	Yes (limited to 200kbps/0.1% of speed)
Broadcast frame delivery	Yes	Yes (limited to 200kbps/0.1% of speed)
<b>NNI Performance Parameters</b>		
Speed (Mbps)	100, 1000 (>10 POA)	
Target Availability	99.95%	
Frame Delay	<i>UNI Dependant</i>	
Frame Jitter	<i>UNI Dependant</i>	
Frame Loss	<i>UNI Dependant</i>	
Service Support	24 hours x 7 days	
Service Restoration	24 hours x 7 days	
<b>NNI Physical Interface</b>		
UNI Physical Medium	1000BaseT, 1000Base, 10GBase	
UNI Interface Speed (Gbps)	1 Gbps, 10 Gbps	
MAC address limit	Unlimited	50 +
Maximum NNI MTU Size	9050 bytes	9000 bytes
NNI Duplex Mode	Auto	
MAC Layer	IEEE 802.3	
Service Multiplexing	Yes	
All to one bundling	No	

### CityLink and the LightZone

CityLink, part of the TeamTalk group of companies, is a leading supplier of high performance broadband solutions throughout New Zealand. We have been transforming broadband and business since 1995. The LightZone is CityLink's pioneering metropolitan ultra-fast fibre network. It offers Retail Service Providers a flexible ecosystem of network components which enables services to be delivered to your customers. LightZone services are unbundled and designed to offer maximum flexibility, so that you can select the components you need in order to connect your customers and differentiate your services.



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