# PRODUCT QUICK REFERENCE

# **Product Brief**

## **Carrier Infrastructure Solutions**

Product Model	IpLink™ Model 2888
Product Name	Multi-Megabit Inverse Mux
Usage	Transparent Ethernet Bridging of large Ethernet frames and jumbo Ethernet frames over Bonded T1/E1 circuits for Transparent Ethernet Backhaul

## **Product Description**

The Model 2888 Multi-Megabit Inverse Mux is a managed Ethernet bridge with two (2) Gigabit Ethernet ports and either two (2) or four (4) T1/E1 ports. The Inverse Mux transports jumbo Ethernet frames over bonded T1/E1 circuits using Multi-link PPP, creating up to an 8 Mbps transparent Ethernet connection over a TDM based infrastructure network. Complete with Layer 2 filtering, Layer 2 traffic shaping and Active Layer 2 QoS, the Model 2888 enhances a carrier's rapid service deployment capability when interconnecting NGN equipment or backhauling broadband traffic.



# Who is it for?

The Model 2888 Multi-Megabit Inverse Mux is designed for facilities based Tier I carriers with developed TDM networks or other service providers with access to wholesale T1/E1 circuits that need to rapidly expand Transparent Ethernet backhaul in areas where the network infrastructure is not yet in place due to a lack of fiber or other backhaul facilities.



## **Position Statement**

For carriers needing to backhaul Ethernet traffic from IPDSLAMs and 3G cell sites, the IpLink<sup>™</sup> Multi-Megabit Inverse Mux transparently carries large Ethernet frames over bonded T1/E1 circuits. Unlike other solutions, which do not support jumbo Ethernet frames, the Multi-Megabit Inverse Mux transparently passes ALL jumbo Ethernet frames to simplify configuration while applying ACTIVE Layer 2 QoS traffic shaping and filtering.

# Feature Benefit Summary

Feature	Advantage	Benefit	
Jumbo Ethernet	Transparently pass all Ethernet frames	Simplify configuration when all	
frames	including those with multiple VLAN, MPLS	that is needed is a high speed	
	tags or PBB encapsulation	backhaul or interconnect	
Active QoS	Prioritize different traffic flows and types	Optimize capital expenditures by	
	including ToS/DiffServ, VLAN Priority bits,	installing and managing one	
	and per MAC based ACL filters	multi-service backhaul network	
Bonded T1/E1	Stop over-provisioning, right-size the	Optimize capital expenditures	
	bandwidth needed to backhaul traffic		

# PRODUCT QUICK REFERENCE

# **Product Brief**

# **Solution Description**

Rapid service deployment is the key to grabbing market share, the lifeblood of carrier business economics. At times the infrastructure needed to support end user services is not in place, creating delays that cost millions in long-term lost revenues. To overcome these ills carriers with access to wholesale T1/E1 circuits can reuse the TDM network to bridge the bandwidth gap and continue deploying NGN services in areas where the infrastructure is developing.



Problem	Issue	Impact	Our Solution
Service Providers are Losing Market Share	Lack of installed fiber for backhaul is slowing customer acquisition	Millions of dollars lost every day in potential long-term revenue streams	Re-use installed TDM network for transparent Ethernet backhaul
Complex Network Infrastructure Installations	Complex equipment is installed for simple backhaul applications	Slows the pace of network expansion and makes troubleshooting problems difficult	Transparent Ethernet bridging with QoS installs and maintains easier than MPLS & PBB
The Need to Improve Profitability	Services are installed with new equipment raising customer acquisition costs	Customer acquisition becomes a capital intensive exercise	Re-use depreciated TDM network and postpone forklift upgrades until economics dictate

# **Unique Selling Position**

The IpLink<sup>™</sup> Model 2888 Multi-Megabit Inverse Mux is the only transparent Ethernet Bridge offering BOTH jumbo Ethernet frame and Active Layer 2 QoS at a fraction of the cost of other solutions.

# **Top FAQs**

## Q. Does the Inverse Mux support TDM over IP?

A. The Inverse Mux transports Ethernet/IP traffic over TDM. It is not designed to transport TDM traffic over Ethernet/IP.

## Q. Is the Inverse Mux offered with -48VDC power?

A. The Inverse is available with an internal or an external power supply.

## Q. Does the Inverse Mux support both clear channel and fractional T1/E1 operation?

**A.** Yes. Each T1/E1 circuit can be configured for clear channel or for fractional operation independently, facilitating incremental bandwidth growth.

## Q. What is the Jumbo Ethernet frame size supported?

A. The maximum jumbo Ethernet frame supported today is 2,072 bytes and 9,216 bytes via free software upgrade.

## Q. Does the Inverse Mux support fractional T1/E1 circuits.

A. Yes. Fractional circuits are supported on all T1/E1 ports and can be used to incrementally grow the bandwidth.