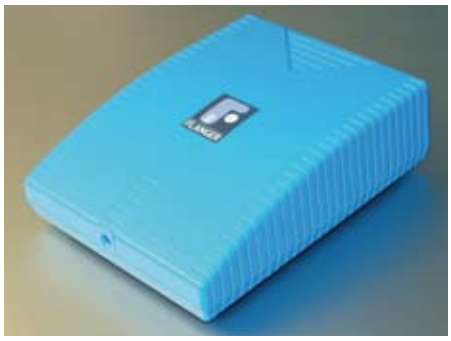
Flanger Backhaul™ Wireless Cellular Backhaul Over Unlicensed Spectrum



"Flanger from MemoryLink was simple to install in our GSM network, with no interruption of our network services through the wireless T1 link. Flanger is a reliable product and will save Airadigm a substantial amount of money over time by replacing leased lines."

— Kenneth R. Hoefle, President and COO
Airadigm Communications (RCA Member)

Flanger Backhaul from MemoryLink—
The smart backhaul alternative

- Highly Reliable
- Very cost effective compared to leased lines or licensed microwave
- Simple to install and manage
- A proven backhaul alternative

Cellular networks around the world are growing at a tremendous pace, even in the most rural areas. Mobile network operators' expenses associated with backhaul of the cellular services will continue to grow with the rapid deployment of 2G and 3G networks. Operators should consider all of their options when developing their backhaul strategy to optimize the cost efficiencies of their network.

Growing Demand for Wireless Backhaul

Wireless links represent over 50% of all backhaul connections worldwide and can significantly reduce costs when replacing terrestrial leased lines while enabling rapid deployment of services, especially in rural or remote areas. The use of unlicensed radio spectrum can offer even more dramatic cost savings when compared to traditional licensed microwave solutions. Unlicensed backhaul solutions primarily in the 5Ghz range are becoming a common choice for mobile network operators all over the world as they provide an unparalleled combination of reliability and cost effectiveness.

Highly Reliable

Flanger Backhaul from MemoryLink is a highly reliable alternative to expensive microwave backhaul products or leased lines. Flanger Backhaul delivers TDM services over unlicensed wireless links. Flanger Backhaul encapsulates full and fractional DS1 circuits into IP packets along with their framing and signaling bits. Each DS1 interface can be configured to provide independent protocol, clocking, coding, impedance and line build out. It features a high precision clock recovery system that supports the operation of both GSM and CDMA platforms. Flanger Backhaul can deliver from 1 to 8 E1/T1 over a single wireless link. A rack mount configuration is also available.

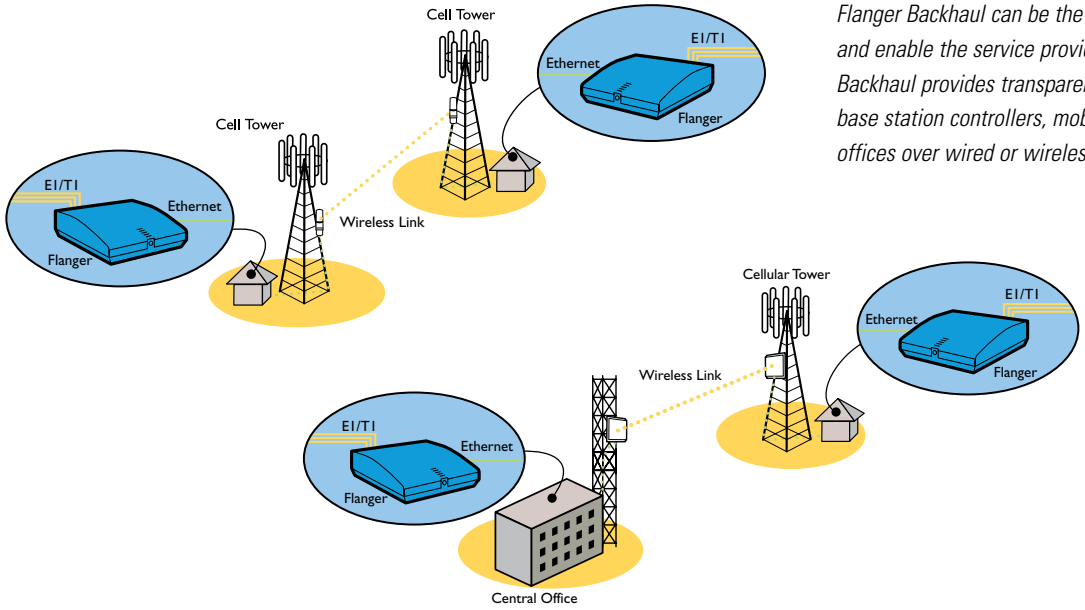
Eliminate Monthly Operating Expenses

A complete Flanger Backhaul configuration, including the radio, can cost less than USD$5,000. When compared to leasing expensive E1/T1 circuits from a Telco, network operators receive a fast return on their investment, in most cases between six months to one year. They can also manage these portions of the network internally, eliminating dependence on the Telco. Flanger Backhaul is also a fraction of the cost when compared to licensed microwave products making it **The Most Cost Effective Solution Available.**

Easy Set-Up and Configuration

Flanger Backhaul's simple set-up and configuration allows a complete link to be installed in hours versus waiting for weeks or months for the Telco to provision E1/T1 circuits. Flanger Backhaul's set-up page is preconfigured for the radio and also contains set-up profiles for several market leading radios including Motorola Canopy, Orthogon, Proxim, and Trango. These profiles contain the values of packet sizes and buffer depths that achieve optimal performance. Additionally, custom profiles may be specified by the user.

Typical Deployments



Flanger Backhaul can be the key to substantial cost savings and enable the service provider to control the network. Flanger Backhaul provides transparent interconnection of base stations, base station controllers, mobile switching centers and central offices over wired or wireless IP networks.

Specifications

General	
T1 (E1)	
Standards	AT&T TR-62411, ITU-T Rec., G.703, G.704, ANSI T1.403, G.824 (ITU-T Rec. G.703, G.704, G.706, G.732, G.823)
Jitter and Wander Tolerances	AT&T Pub 62411, ITU-T G.824 (ITU-T G.824)
Coding	AMI, B8ZS (HDB3I, B8ZS)
Clock Mode	Per port configurable as generate, pass, or recover
Port Impedence	Selectable 100, 110 ohms (75, 120 ohms)
Line Buildout	Short/Longhaul 0-133ft, 133-266ft, 266-399ft, 399-533ft, 533-655ft
Management	
Type	CLI (Command Line Interface)
	Telnet
	Serial
	Web interface
Interface	Serial (RJ45) and Ethernet (RJ45)
Connections	
DS1	1 to 4 X T1 (E1)
LAN	10BaseT Full/Half Ethernet auto or configured speed and duplex, IEEE 802.3
WAN	10BaseT Full/Half Ethernet auto or configured speed and duplex, IEEE 802.3
Pimary Power	100-240V Power over CAT5 converter supplied; optional 48VDC converter
Supplied Power	Power over CAT 5 for supported radios
Protection	Each port lightning and power protected
Mechanical	
Enclosure	Indoor tabletop; optional 19" rack mount for two enclosures
Dimensions	Width 5.5" (14cm) Height 2.3" (5.9cm) Depth 7" (18cm)
Weight	0.8 lb (0.36 kg)
Operating Temperatures	0° C to 50° C (32° F to 122° F) ambient
Standards	
FCC Approved	Title 47 Part 15, subpart B, Class A devices
CE Approved	

For more information, please call: 1-866-398-4336 or 847-259-9680
www.memorylink.com

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MEMORYlink
MemoryLink
36 Jewelers Park Drive
Neenah, WI 54957