

# LAN-to-LAN RADIO SOLUTIONS

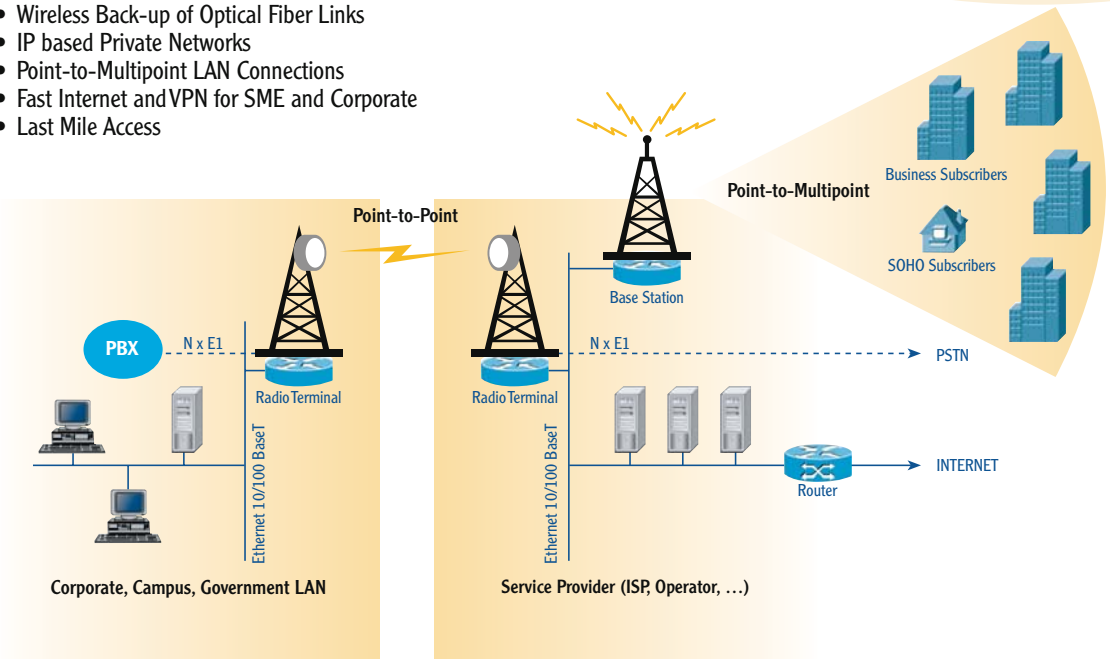
## Carrier Class Microwave Radio Systems

SIAE Radio Products enable the deployment of High-Throughput, High-Reliability, Ethernet LAN-to-LAN Radio Connections in both Point-to-Point and Point-to-Multipoint Technology. Available in a wide range of Frequency Bands, Modulation Schemes and Capacities, SIAE LAN-to-LAN Radio Solutions offer an unparalleled Flexibility and provide the Answer to any Wireless LAN-to-LAN Design.

### APPLICATIONS:

- High Speed Point-to-Point Ethernet Connections
- Spur Links from Gigabit Ethernet Backbones
- 3G Mobile Backhauling
- Wireless Back-up of Optical Fiber Links
- IP based Private Networks
- Point-to-Multipoint LAN Connections
- Fast Internet and VPN for SME and Corporate
- Last Mile Access

- ▶ From 2 to 516 Mbit/s full-duplex Throughput
- ▶ Frequency Bands from 2 to 40 Ghz
- ▶ Point-to-Point and Point-to-Multipoint
- ▶ SDH and PDH Technologies



### FEATURES

- Carrier Class Availability
- Frequency Bands from 2 to 40 GHz
- Up to 516 Mbit/s Full-Duplex Throughput
- Embedded Multi-port Ethernet Switch
- Physical LANs Segmentation
- Virtual LAN Segmentation (VLAN)
- Nx E1 G.703 Additional Ports
- Full Support of Layer2 Functionalities
- SNMP Management
- Common Network Management System

## Access Link Synchronous & Urban Synchronous Series (ALS, US)



Type	Point-to-Point Microwave radio - SDH Technology			
Application	High Capacity over SDH Technology - Protected and Unprotected			
Frequency Bands	6 - 7 - 8 - 11 - 13 - 15 - 18 - 23 - 25 - 28 - 32 - 38			
Modulation scheme	128 QAM		32 QAM	
Radio Capacity [Mbit/s]	622 (note 1)	311 (note 1)	155	155
RF Channel Spacing [MHz]	2x56 (co-channel)	56	28	56
Physical Ethernet Ports	1000 BaseSX or 1000 BaseLX 10/100 BaseT 100 Base FX			
Additional Interfaces	Nx E1 In-band & Wayside			

(Note 1) ALS series



## Access Link Series (AL)



Type	Point-to-Point Microwave radio - PDH Technology									
Application	Low and High Capacity – High Spectral Efficiency - Protected and Unprotected									
Frequency Bands	5 - 7 - 8(*) - 10(*) - 13 - 15 - 18 - 23 - 25 - 28 - 32(*) - 38									
Modulation Scheme	4QAM					16QAM			32QAM	
Radio Capacity [Mbit/s]	4	8	16	34	8	16	34	68	105	
RF Channel Spacing [MHz]	3,5	7	14	28	3,5	7	14	28	28	
Physical Ethernet Ports	3 x 10/100 BaseT									
Additional Interfaces	up to 16xE1 G.703 (Note 2)									

(Note 2) For up to 68 Mbit/s version, 16 QAM



## Access Link Full Outdoor Series (ALFO) & Easy Link Full Outdoor Series (ELFO)



Type	Point-to-Point Microwave radio - PDH Technology									
Application	Low and High Capacity – High Spectral Efficiency - Protected and Unprotected									
Frequency Bands	3,5 (Note 3) - 7 - 8(*) - 10(*) - 13 - 15 - 18 - 23 - 25 - 28 - 32(*) - 38									
Modulation scheme	4 QAM					16 QAM			32 QAM	
Radio Capacity [Mbit/s]	4 (Note 3)	8 (Note 3)	16	34 (Note 3)	8	16	34	68	105	
RF Channel Spacing [MHz]	3,5	7	14	28	3,5	7	14	28	28	
Physical Ethernet Ports	4 x 10/100 BaseT (Note 4)									
Additional Interfaces	1xE1 G.703									

(Note 3) ELFO series also

(Note 4) Two interfaces for ELFO series



## Starlight Series (Point-to-Multipoint System)



Type	Point-to-Multipoint Digital Radio System - TDMA Technology	
Application	Multi-service Access Platform - Dynamic Bandwidth Allocation	
Frequency Bands [GHz]	2.2 - 2.4 - 3.5 - 10.5 - 26	
Modulation Scheme	4/16QAM	
Full-Duplex Capacity per RF Carrier [Mbit/s]	7,68	
Channel Spacing per Carrier [MHz]	3,5	
BS Physical Ethernet ports	2 x Ethernet 10/100 BaseT N x E1 G.703	
Additional Interfaces	ISDN-PRI - ISDN-BRI - POTS - V.35 - V.11 - E1	



### L2 Switch Functionalities (all families)

- MAC Address switching, ageing and learning
- VLAN (IEEE 802.1q)
- Ethernet QoS (IEEE 802.1p)
- Flow Control (IEEE 802.3x)
- IP-V4 ToS