

Advanced

Telecommunications

Solutions

SHORT CATALOG



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Side



SHORT CATALOG

Short catalog

SHORT CATALOG SHORT CATALOG SHORT CATALOG Short catalog

ACCESS LINK SERIES SPLIT MOUNT

IP PDH SDH Medium & High Capacity

MICROWAVE RADIO



ALS SERIES

Frequency	AS ODU / ASN ODU	4	6L	6U	7	7U	8	10	11	13	15	18	23	25	28	32	38	42		
IDU Model		IP - PDH Solutions AL / ALplus					IP - SDH Solutions ALS					IP - PDH - SDH Solutions ALplus2 / ALplus2e*								
IDU 1RU (1 rack unit) - Compact Version		ALC / ALCplus					ALS-C					ALCplus2 / ALCplus2e*								
Configuration		1+0 / 1+1					1+0 / 1+1 / 2x(1+0)					1+0 / 1+1 / 2x(1+0) / XPIC								
TDM Transmission Capacity		Up to 32xE1					1xSTM1 / 2xSTM1 / 63-126xE1					Up to 160xE1 per radio direction								
Throughput		Up 100 Mbps					-					Up to 500 Mbps (per radio channel - 1 Gbps with XPIC)								
Modulation		4 to 32QAM					32 and 128QAM					4 to 1024QAM with ACM								
Tributary interfaces		16xE1 + 3xFE 32xE1 + 3xFE					2xSTM1					(16+2)xE1 + 2xSTM1 (32+2)xE1 + 2xSTM1 TDM Cross Connection capability 2xGE Electrical + 2xGE Optical/Electrical Synchronous Ethernet Support - 1588 v2 PWE3 transport option								
Maintenance Interfaces		2x10BaseT + USB + RS232 + G704 (E1)					2x10BaseT + USB + RS232					2x10BaseT + USB + G704 (E1)								
IDU 1RU (1 rack unit) - Modular Version		AL / ALplus					ALS					ALplus2								
Configuration		1+0 / 1+1					1+0 / 1+1 / 2x(1+0) / XPIC					1+0 / 1+1 / 2x(1+0)								
TDM Transmission Capacity		Up to 32xE1					1xSTM1 / 2xSTM1 / 4xSTM1					Up to 80xE1 (per radio channel)								
Throughput		Up 100 Mbps					155 / 310 / 620 Mbps					Up to 400 Mbps (per radio channel)								
Modulation		4 to 32QAM					32 and 128QAM					4 to 256QAM with ACM								
Tributary interfaces		32xE1 24xE1 + 4xFE					2xSTM1 4xSTM1 8xE1 + 2xFE + 1xGE					16xE1 + 2xSTM1 TDM Cross Connection capability 1xGE Electrical/Optical + 1xGE Electrical + 1xGE Optical								
Maintenance Interfaces		2x10BaseT + USB + RS232 + G704 (E1)					2x10BaseT + USB + RS232					2x10BaseT + USB + RS232 + G704 (E1)								
IDU - Nodal		Modular 2RU					Modular 2RU					Nx1RU								
Configuration		1+0 / 1+1 / 4x(1+0) / 2x(1+1) Drop/Insert					1+0 / 1+1 / 2x(1+0) / 2x(1+1) XPIC					Nx(1+0), Nx(1+1) Drop/Insert Nx2x(1+0), Drop/Insert								
TDM Transmission Capacity		Up to 53xE1					1xSTM1 / 2xSTM1 / 4xSTM1					Up to 160xE1 (per radio direction)								
Throughput		Up 100 Mbps					145 / 290 / 580 Mbps					Up to 500 Mbps (per radio channel - 1 Gbps with XPIC)								
Modulation		4 to 32QAM					32 and 128QAM					4 to 1024QAM with ACM								
Tributary interfaces		53xE1 53xE1 + 4xFE 2xSTM1 + 16xE1 + Nodal Connection 2xSTM1 + 16xE1 + 1xFE + 1xGE + Nodal Connection					2xSTM1 4xSTM1 8xE1 + 2xFE + 1xGE					Nx2xSTM1 Nx16xE1 Nx2xGE TDM Cross Connection capability Synchronous Ethernet Support - 1588 v2								
Maintenance Interfaces		2x10BaseT + USB + RS232 + G704 (E1)					2x10BaseT + USB + RS232					2x10/100BaseT + USB + G704 (E1)								

* Cisco IOT Certified [Cisco ASR 901 / ASR 903 / ASR 9000 Series]

* Cisco Microwave Adaptive Bandwidth feature interworking certified [Cisco ASR 901 / ASR 903 Series]



ACCESS LINK SERIES FULL OUTDOOR

MICROWAVE RADIO (◀◀ ▶▶)

High Capacity IP Full Outdoor



ALFOplus*

Frequency	6L	6U	7	7U	8	10	11	13	15	18	23	25	28	32	38	42
Throughput	Up to 500 Mbps (per radio channel)															
Modulation	Up to 1024 QAM with ACM															
Baseband interfaces	2xGE (Electrical/Optical)															
Protection schemes	Unprotected, 1+1 HSB, 1+1, 2x(1+0)															



ALFOplus2*

Frequency	6L	6U	7	7U	8	10	11	13	15	18	23	25	28	32	38	42
Throughput	2,8 Gbps / 5 Gbps															
Modulation	Up to 2048 QAM with ACM															
Baseband interfaces	4xGE (electrical/optical)															
Protection schemes	Unprotected, 2x(1+0), 1+1, 4x4 MIMO (LOS), XPIC, Dual Carrier															

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* Cisco Microwave Adaptive Bandwidth feature interworking certified [Cisco ASR 901 / ASR 903 Series]

E-band High Capacity IP Full Outdoor

MILLIMETER WAVE RADIO (◀◀ ▶▶)



ALFOplus80

Frequency	80 GHz frequency band, 750 / 1000 MHz channel bandwidth															
Throughput	1 Gbps															
Modulation	4 QAM															
Baseband interfaces	GE (electrical/optical) - 1 Gbps (electrical/optical) 2xSTM1 + 16xE1 available with AGS-H															
Protection schemes	1+0, 1+1, 2x(1+0)															

ALFOplus80HD

Frequency	80 GHz frequency band, 250 / 500 / 1000 MHz channel bandwidth															
Throughput	Up to 2.5 Gbps															
Modulation	Up to 64 QAM, with ACM + ASR															
Baseband interfaces	GE (electrical/optical) - 2.5 Gbps (CPRI compliant) 2xSTM1 + 16xE1 available with AGS-H															
Protection schemes	1+0, 1+1, 2x(1+0)															

Optional IDU



AGS-H

Functionality	Native TDM (2xSTM1 + 16xE1) + enhanced Ethernet transport over E-band															
Switching Capacity	Up to 5 Gbps															
Baseband Interfaces	4xGE + 2xSTM1 + 16xE1															

TRUNK LINK SERIES

MICROWAVE RADIO (◀◀ ▶▶)

IP / SDH N+1 or N+0 Mixed Configuration



TL

Frequency	4	4U	5	6L	6U	7L	7U	8	11	13
Throughput	Up to 4 Gbps and up to 16STM1 or any mixed configurations									
Modulation	up to 1024 QAM with ACM									
Baseband interfaces	NxSTM1, 2x NxSTM1, NxGE Optical/Electrical									
Protection schemes	Up to 16+0, 15+1, 2x(7+1)									



ACCESS GATEWAY SERIES

Network Advanced Functionalities

NETWORKING / AGGREGATION 

AGS10

Functionality	GE L2 Switch, MLPPP
Switching Capacity	32xE1 MLPPP, 4Gbps switching
Baseband Interfaces	GE (electrical/optical) - E1 - STM-1

AGS20

Functionality	L2/MPLS-TP Aggregation
Switching Capacity	10 Gbps switching
Baseband Interfaces	GE (electrical/optical) - E1 PWE3 - PoE ports

AGS30

Functionality	L2/MPLS-TP Aggregation
Switching Capacity	20 Gbps switching
Baseband Interfaces	1 and 100 GE (electrical/optical) - PoE ports



ADM and FAM Series

MULTIPLEXERS 

	ADM-1		ADM-4	ADM-16	FAM	
	4RU version	2RU version	4RU version	2RU version	5RU version	2.5RU version
	STM-1	STM-1	STM1/4	STM4/16		
Aggregate Interfaces	4xSTM1	2xSTM1	4xSTM1/4	4xSTM1/4/16	NxE1	NxE1
Cross-Connect capacity	11xSTM1	10xSTM1	Up to 24xSTM1	Up to 80xSTM1	128 Mbps (DSO level)	56 Mbps (DSO level)
Tributary Interfaces	E1	126	63			
	E1/T1			3+8	504	
	E3/T3	12	12	18	24	
	FE	12	12	48	64	
	GE	12	12	6	8	
	STM1	8	8	8	16	
	STM4			1	4	
	Voice				FXO, FXS, E&M (2/4W)	
	Data				V.35,V.36, X.21, G.703, X.50 Substrating	
	Ethernet				10/100 BaseT	
Protection Schemes	MSP, SNCP	MSP, SNCP	MSP, SNCP	MSP, SNCP	Full System redundancy	



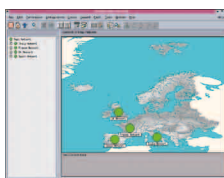
NETWORK MANAGEMENT SYSTEM

NETWORK MANAGEMENT 

	NMS5-UX	NMS5-LX	SCT
Operating System	Unix	Linux	Windows
Hardware Platform	HP-UX Server	PC Server	PC Laptop
Client/Server architecture	Yes	Yes	-
Supported equipment	All equipment in SIAE MICROELETRONICA catalog		
Protected server configuration	Yes	Yes	-
Geographical system redundancy	Yes	Yes	-
N°of managed NEs per server	20000	5000	100
Max N°of concurrent users	50	10	-

IP BOX

Functionality	Bridge / Router
Router Capacity	Nx 64 Kbps
Bridge Capacity	Nx64 Kbps N= 1...30
WAN Interfaces	RS232, RS422, V11, USB / 2 x channelized E1 (G704)
LAN Interfaces	2xFE



NETWORK PLANNING

SITE ACQUISITION

CIVIL WORKS

INSTALLATION & COMMISSIONING

TRAINING

NETWORK MAINTENANCE

AFTER SALES ASSISTANCE



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SIOE