ALFOplus1 series

Product leaflet

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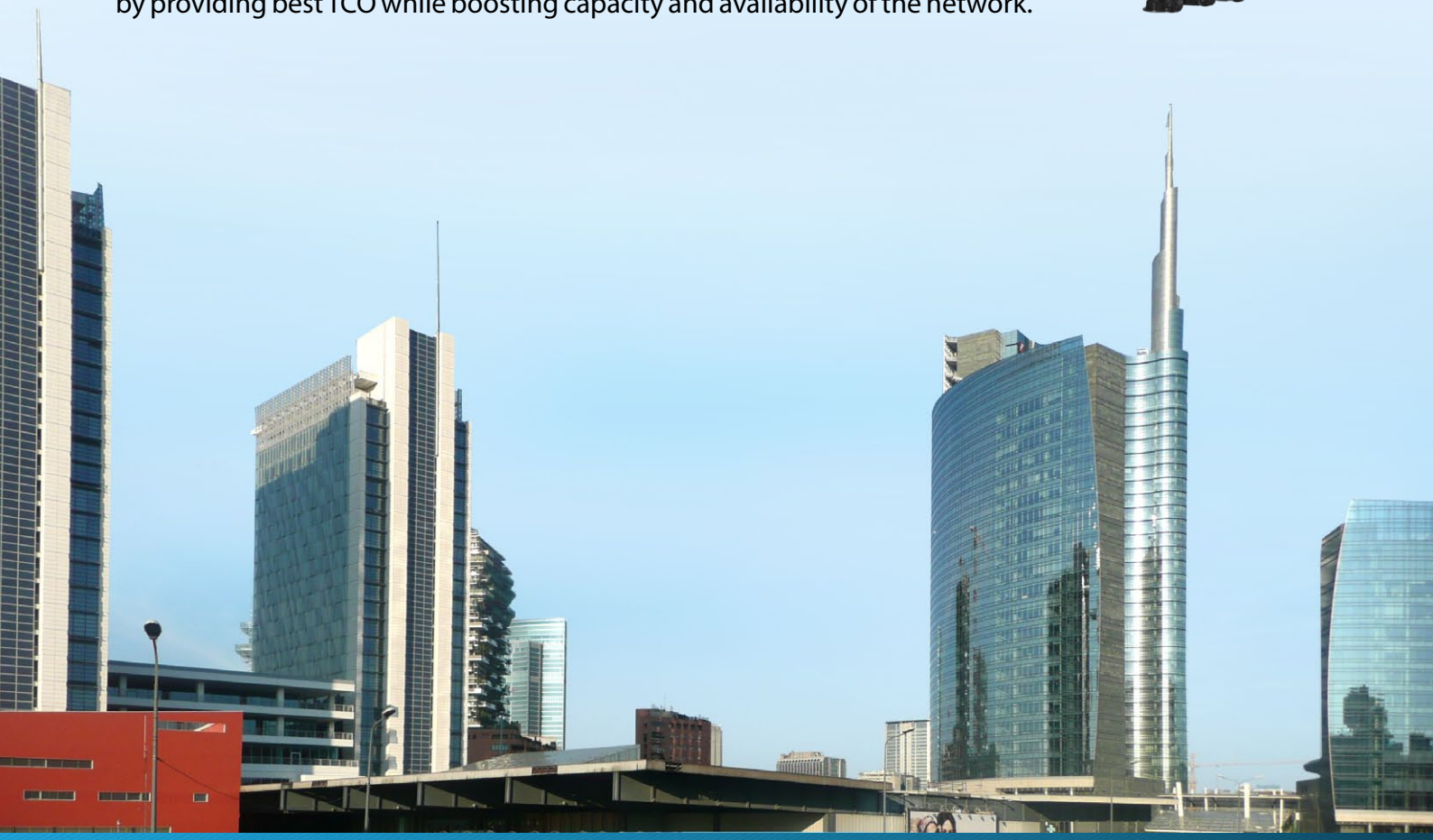
ALFOplus1

The Full Outdoor High Capacity solution

Microwave radio always played a key role in mobile backhauling, becoming the predominant technology in use. With the evolution of mobile technology, microwave radio has evolved to fit those requirements, always offering new and innovative way to enable fast RAN deployments. ALFOplus1 is the next generation 2/4 Gbps full outdoor solution to enable successful launch of LTE, by providing best TCO while boosting capacity and availability of the network.



Milano, Italy

MICROWAVE RADIO

ALFOplus1 series

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MAIN FEATURES

- Single carrier, Single Core
- 6 GHz to 42 GHz licensed bands
- In-house single-chip RF Multicore technology
- Up to 112 MHz channels
- 4 QAM - 4096 QAM with ACM
- SM-OS based platform
- 4 x 1/2.5 Gbps Ethernet ports
- Multilayer Header Compression
- Synchronous Ethernet and 1588v2 support
- MEF Carrier Ethernet platform
- 46 Gbps Switch fabric
- PoE and dedicated power feeder connectors
- HQoS and traffic shaping
- OAM 802.1ag/ITU-T Y 1731
- MPLS ready platform
- SDN ready platform
- AES128/256 Encryption
- Microwave Adaptive Bandwidth (Y.1731)

CONSUMER BENEFITS

SM-OS Single Operating system common to all the SIAE MICROELETTRONICA's product platform.
The SM-OS accelerates the distribution of new carrier grade features throughout the network. It guarantees common consistent behaviour and operational capacity for the entire portfolio. It brings flexibility where it is needed.
Unmatched spectrum efficiency and larger channel selection (from 14 MHz up to 112 MHz channels).
Future proof architecture that achieves better link availability and reduces the antenna size.
Best in class system gain for Microwave Backhaul in all the frequency bands.
Drastic reduction in TCO thanks to high level of integration and Zero foot print.
Ready to support L3 services with IP/MPLS

Supported Configurations	Single Unit : 1+0
Supported Bandwidth	14 MHz / 28 MHz / 40 MHz / 56 MHz / 112 MHz (ETSI) 30 MHz / 60 MHz (ANSI) software selectable bandwidths
Modulations	4QAM – 4096 QAM with ACM
Ethernet Service	MEF defined E-Line and E-LAN service support Carrier Ethernet CE2.0 compliant H-QoS (per port, Service and Class of service) Flow-Based Traffic Shaping ITU-T Synchronous Ethernet and IEEE1588v2 native support
Compliant with	ETSI , FCC

MEMBER OF: ETSI MEF IWPC

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV GL = ISO 9001:2015 =

ALFOplus Technical Specifications

Frequency Band (GHz)		6L	6U	6L	6U
Modulation Schemes		4 QAM / 16 QAM / 32 QAM / 64 QAM / 128 QAM / 256 QAM / 512 QAM / 1024 QAM / 2048 QAM / 4096 QAM			
Channel Spacing		14 MHz / 28 MHz / 40 MHz / 56 MHz / 112 MHz (ETSI)		30 MHz / 60 MHz (ANSI)	
Throughput		Up to 1 Gbs			
Output Power (dBm) at Point C'*					
	4QAM	31	31	31	30
	16 QAM	28	28	28	27
	32 QAM	28	28	28	27
	64 QAM	27	27	27	26
	128 QAM	27	27	27	26
	256 QAM	26	26	26	25
	512 QAM	26	26	26	25
	1024 QAM	25	25	25	24
	2048 QAM	25	25	25	24
	4096 QAM	25	25	25	24
Receiver Sensitivity (dBm) at BER 10-6 at Point C (1+0, 28/30 MHz BW, RF Iter losses included)					
	4QAM	-88,5	-88,5	-88,5	-87,5
	16 QAM	-82,5	-82,5	-82,5	-81,5
	32 QAM	-77,5	-77,5	-77,5	-76,5
	64 QAM	-74,5	-74,5	-74,5	-73,5
	128 QAM	-71	-71	-71	-70
	256 QAM	-68	-68	-68	-67
	512 QAM	-64,5	-64,5	-64,5	-63,5
	1024 QAM	-61	-61	-61	-60
	2048 QAM	-59,5	-59,5	-59	-58
	4096 QAM	-56	-56	-55,5	-54,5
Frequency Stability		±5 ppm			
Frequency Agility		250 KHz (software programmable)			
RTPC		Up to 30 in 1 dB steps			
ATPC		Up to 30 in 1 dB steps			
Dimensions (WxHxD)		254mm x 320mm x 176mm		10 inch x 12.6 inch x 6.9 inch	
Weight		7.2 kg		15.8 lbs	
Power Supply		-48 Vdc (-15%, +20%)			
Power Consumption		52 W (with ATPC)			
Environmental Performance		ODU Weather Proo-fing Class: IP65	Operational Temperature Range: -33°C ÷ +55°C Temperature range degraded performances: -40°C ÷ +60°C		

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