

## Liberator-E1000c

The future of wireless backhaul

### Liberator-E1000c

#### Applications

Full Duplex Gigabit Backhaul

Fiber Extension

Macro Cell Backhaul

#### Highlights

Up to 5 km with 1 Gigabit net throughput

Robust carrier grade system for core networks

Up to 3 data interfaces with optional Fibre SM/MM/WDM

Optimized for extremely low latency

More than 2 Gbps on (1+1) / (2+0) operation

Optional 256 bit AES Encryption

Designed for easy deployment

#### About 70/80 GHz

The 70/80 GHz band is a 10 GHz wide band allowing much higher throughputs than traditional microwave. Compared to the 60 GHz band it offers longer transmission distances under any environmental condition. Multiple channel options in the 70/80 GHz band allow deployments without interference and support high capacity backhaul.

Sub10's combination of innovative design and Carrier Class features, gives the Liberator E-Series outstanding performance in many networks around the world.



### 70/80 GHz Wireless Backhaul for Macro Cell Backhaul & Enterprise Connectivity

The Liberator E1000c is a robust all-outdoor wireless Ethernet link operating in the 70/80 GHz band and delivering more than 1 Gigabit Full-Duplex capacity over distances of up to 5 km. By using (1+1) or (2+0) link mode it can provide close to 5 Gigabit aggregate capacity between two points. The Liberator E1000c has been designed to increase the data capacity in the carrier and enterprise sector offering a high level of flexibility on various data interfaces including support for single-mode, multi-mode, WDM fibre and Gigabit-Ethernet. Two antenna options (35cm and 65 cm dishes) and optimization for extremely low latency applications guarantee a high system reliability at carrier-grade level in all scenarios. Integrated installation and set-up tools make the E1000c an easy-to-deploy and easy-to-operate wireless backhaul solution.

The combination of these options and features position the Liberator E1000c as an ideal solution for backhauling LTE or 3G Macrocells, the extension of fibre in metropolitan networks, high bandwidth campus connectivity or as a backhaul for data centers.

For more information please contact us!

[www.sub10systems.com](http://www.sub10systems.com)

## Technical specifications for Liberator E1000c

Frequency Bands	71-76 / 81 - 86 GHz Band
Modulation	DBPSK
Range QPSK	up to 5000 metres
Ethernet throughput	1150 Mbps (full duplex)
Encryption	AES 256 bit as an option available
Max Tx Power	+20 dBm
Sensitivity	-63 dBm
Channel width	1250 MHz
Antenna gain	48 / 52 dBi
Link adaptation	ATPC
Interference immunity	Channel switch capability
Availability	Up to 99.999% (use Sub10 Link Availability Calculator)
MTBF	25 years
Wind load	120 km/h (operating) and 200 km/h (survival)
Ethernet frame size	64 bytes up to 10240 bytes
Latency	< 8 microseconds
Configurations	(1+0), (1+1) and (2+0)
VLAN for management	IEEE 802.1Q
QoS	Flow control, 802.1p, DiffServ, 4 queues
Network management	SNMP v1
GUI	HTTP web-browser
Connector	2x RJ-45, 1x RS232, optional 1x SFP (SM/MM/WDM)
Voltage alignment port	BNC connector on ODU
ODU size	255 x 309 x 175 mm
Weight	6,5 kg
Terminal box size	162 x 44 x 135 mm
Antenna	35 / 65 cm
Power supply	IEEE 802.3z, 36-72 V DC, consumption 45W
Operating temperature	-30°C to +55°C, optionally -60°C to +55°C

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