

# Accelleran E4000 Series High Capacity Small Cells

### 600Mbps MULTICARRIER CAPACITY IN A BOX

Accelleran E4000 Series is the solution to provide high-capacity, LTE advanced and 5G architecture ready multicarrier (CA, 4-sector Multicell or MORAN Neutral Host Multicell) network capacity for:

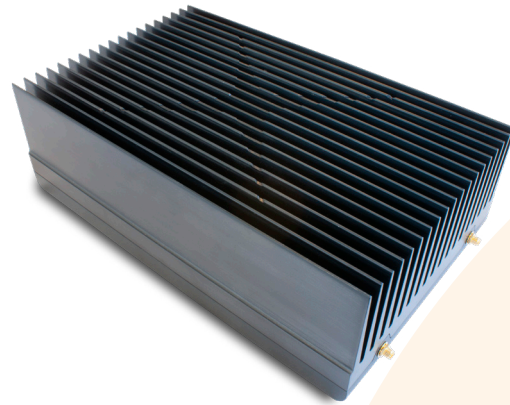
- Outdoor urban to rural capacity for fixed or mobile access
- Indoor capacity and coverage from medium to large size office environments, venues, shopping malls,...
- Private LTE for industrial and remote applications providing carrier and mission-critical grade RAN engineering in a compact form factor

### EASE OF DEPLOYMENT

The E4000 Series is designed to be easily and flexibly deployed as a classic embedded eNB or in an RRU configuration as part of a virtualized RAN architecture. Its open management and orchestration interfaces support integration into a full range of OSS environments

### LOWEST COST

The E4000 Series supports up to four 2x2 MIMO carriers in different LTE FDD and TDD band combinations to deliver network capacity at the point of need at an optimized price point. With our optional integrated EPC we can deliver a complete “network in a box” for remote and standalone solutions



## PRODUCT DESCRIPTION

**The E4000 Series is a compact High Capacity Multicarrier Advanced LTE Small Cell, supporting up to 4 carriers of 2x2 MIMO (2 carriers of 4x4 MIMO), 512 users and 24 dBm / 250 mW power per antenna port.**

It is intended for public and private deployments in enterprise, urban and suburban scenarios, supporting pre-5G dense networking both outdoors and indoors. Alternatively, it can also be deployed for Fixed Wireless Access deployments in urban, suburban, remote and rural scenarios. It allows the aggregation of up to 4 carriers (80MHz total BW), implement a 4-sector multicell solution or support 4 different operator frequencies via Neutral Host MORAN, depending on band combination.

- Its sleek appearance makes it very suitable for deployments in aesthetically sensitive locations.
- Its truly carrier grade RAN and vRAN network node supports fully embedded eNB to 5G-like virtualised multilayer architectures.
- The E4000 is fully software upgradeable to support a roadmap of LTE Advanced and 5G features.
- The E4000 offers great flexibility for backhaul connectivity via its two 1Gbps Ethernet ports and Pluggable SFP option.

- LTE FDD or TDD 3GPP Compliant Local Area BS Class Small Cell
- 4 transceivers (cells) per unit (multicarrier) and up to 512 users
- 24 dBm/250 mW Tx power per port
- 2x2 MIMO per carrier (cell) for 4 carriers or 4x4 MIMO per carrier for 2 carriers
- 5, 10, 15 & 20 MHz channels per carrier with up to 80 MHz CA
- Different TDD and FDD Band combinations: 1, 2, 3, 5, 6, 7, 8, 12, 38, 40, 41, 42, 43, 46, 48/CBRS,...
- Integrated GNSS (GPS, GLONASS, BDS) and 1588v2
- 2 x Gigabit Ethernet Connectivity
- Optional SFP Pluggable (optical, coax,....)
- Neutral Host MOCN/MORAN/Slicing
- vRAN/MEC/5G Architecture Ready
- Optional Embedded EPC
- Flexible Remote Management Interface

### • Best in Class Silicon

The beating heart of the E4000 unit is the Cavium Octeon Fusion-M 73xx baseband processor which delivers unequalled processing power in a single SOC. Accelleran, as a leading vendor of Cavium-based solutions, is one of the first to bring products leveraging this new generation of silicon to the small cell market.

### • Carrier & Mission-Critical Grade Quality

We insist on SW development standards and practices from the safety-critical industries in order to ensure our products deliver “five nine’s” reliability out of the box.

### • Flexibility for RAN & vRAN Deployment

We have architected our solutions from the beginning with hardware platform independence in mind. The same software solution can be deployed from fully embedded RAN architecture to 5G disaggregated and virtualised vRAN.

### • Best-in-Class Manageability

We understand the increasing demands for realtime insight into network performance and end user experience. We have engineered an open and flexible management platform designed to enable easy integration with standards-based or proprietary OSS, orchestration and SON systems.

# The E4000 Series High Capacity Small Cells for dense and programmable networks

## ABOUT ACCELLERAN

The Accelleran team has been a recognized leader in the small cell industry for more than ten years. With an average experience of 20+ years each, the team offers unrivalled expertise across the full range of skillsets required for success in the challenging RAN solution market.

The E4000 is the result of a collaboration between Accelleran and cellXica. Accelleran's expertise in carrier-grade RAN and vRAN software solutions combined with cellXica's expertise in base station hardware and software ensure the E4000 delivers an exceptional combination of features, performance and reliability.



## FURTHER INFORMATION

Please visit our website  
[www.accelleran.com](http://www.accelleran.com)

## Contact us

info@accelleran.com  
 Accelleran N.V.  
 Quellinstraat 49  
 2018 Antwerp  
 Belgium

Configuration	Application
Single Cell Carrier Aggregated	Aggregating up to 80MHz spectrum in different bands
Multicell 4-sector	Enabling 4-sectors for single operator
Multicell MORAN	Enabling 4-operators for neutral host

With its unrivalled versatility and performance, the E4000 offers an optimal dense networking solution for a wide range of applications and deployment modes. Neutral host operators can support up to four licensed carrier frequencies in a single SKU. Service providers with access to multiple spectrum allocations can cost-effectively offer high bandwidth services.

## E4000 Series Technical Specification

High Capacity Multicarrier Advanced LTE Small Cells	
Transceiver Specification	Band Support
<ul style="list-style-type: none"> <li>Local Area Basestation Class</li> <li>4 transceivers (cells) per unit (CA or Multicell)</li> <li>2 x 2 MIMO per transceiver (cell) SW upgradeable to 4 x 4 MIMO (with 2 transceivers)</li> <li>24dBm/250mW RF power per antenna port</li> </ul>	<ul style="list-style-type: none"> <li>Different TDD and FDD Band combinations: 1, 2, 3, 5, 6, 7, 8, 12, 38, 40, 41, 42, 43, 46, 48/ CBRS,...</li> </ul>
Network Interfaces	
Layer 1 & 2	Layer 3 and OAM
<ul style="list-style-type: none"> <li>2 GBE ports</li> <li>Optional SFP Pluggable port (optical, coax,...)</li> <li>IPv4/IPv6</li> </ul>	<ul style="list-style-type: none"> <li>S1 or SGi (Network-in-a-Box)</li> <li>Type 1 OAM (TR-069/TR-196), Type 2 OAM (SNMP), Kuha, OAM Webserver, or CLI</li> <li>Alternative OAM interface possible (XML, Netconf, Proprietary)</li> </ul>
LTE Feature Support	
<ul style="list-style-type: none"> <li>3GPP Release 11 (upgradeable to Release 13)</li> <li>Up to 512 active users</li> <li>Multicell or CA on LTE FDD or TDD</li> <li>64QAM DL / 16QAM UL SW upgradeable to 256QAM DL / 64QAM UL</li> <li>Integrated GNSS (GPS, GLONASS, BDS) &amp; 1588v2</li> <li>Cell Selection/Re-selection</li> </ul>	<ul style="list-style-type: none"> <li>Radio Bearer Control</li> <li>Admission Control</li> <li>Scheduler &amp; Rate Control (PFS)</li> <li>Neutral Host (MOCN, MORAN, Slicing)</li> <li>Optional Embedded EPC (Network-in-a-box)</li> <li>vRAN/MEC/5G Architecture Ready</li> <li>OAM (CM, PM, FM, Diagnostics) &amp; SON</li> </ul>
Security	
<ul style="list-style-type: none"> <li>3GPP standard LTE air interface security</li> <li>IPSec AES encrypted tunnels on all network connections</li> </ul>	<ul style="list-style-type: none"> <li>Trusted Platform technology</li> <li>Secure Dual Boot through digital signatures of all executables</li> </ul>
Power	
<ul style="list-style-type: none"> <li>48VDC</li> </ul>	<ul style="list-style-type: none"> <li>&lt;100W (Max Tx power, full data traffic)</li> </ul>
Physical	Environmental
<ul style="list-style-type: none"> <li>Dimensions: 500 x 300 x 150mm (22.5 litres, exc. antenna)</li> <li>Ingress Protection: IP67</li> </ul>	<ul style="list-style-type: none"> <li>Weight : 8 Kgs</li> <li>Temperature: -40 to +50 °C (operating)</li> </ul>

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