

# LTE FDD or LTE TDD Local Area Small Cells

## LBSC-AX SERIES

LINDSAY  
BROADBAND

Lindsay's LBSC-Ax device is a small form factor local area LTE FDD or LTE TDD small cell, supporting by default a single cell capable of providing up to 100 mW (FDD)/ 250 mW (TDD) RF power per antenna port.

It is intended for deployment in enterprise, public urban and suburban scenarios, where typically a planned inside-out/outside-in deployment of small cells will complement macro coverage adding significantly to network capacity by offloading the macro and increasing the available coverage in the enterprises, venues, shopping centers, urban hotspots, etc. or as a single-layer ultra-dense small cell only network. Alternatively, it can also be deployed for fixed wireless access deployments in urban/suburban and in remote and rural scenarios.



LBSC-Ax  
(front angled view)

### FEATURES

- LTE FDD or LTE TDD 3GPP compliant local area small cells
- 1 transceiver per unit (single cell)
- 20 dBm/100 mW (FDD) or 24 dBm/250 mW (TDD) TX power per antenna port
- 2x2 MIMO
- 5, 10, 15 & 20 MHz channels
- TDD bands 38, 40, 41, 42, 43<sup>(1)</sup>, B48/CBRS<sup>(1)</sup>
- FDD bands 3, 7 (other bands on request)
- Integrated GNSS (GPS, GLONASS, BDS)
- Gigabit Ethernet connectivity (PoE+)
- Neutral host MOCN/MORAN/Slicing
- Optional embedded EPC (Network-in-a-Box)
- vRAN/MEC/5G architecture ready
- Flexible remote management interface
- Its sleek appearance makes it very suitable for any type of environment. It is truly a carrier grade RAN network node with the skin and appearance of a normal router product
- As a result of its flexible software architecture, the LBSC-Ax outdoor is software upgradeable to support a roadmap of new features
- The LBSC-Ax outdoor offers great flexibility for backhaul connectivity via its 1 Gbps Ethernet port
- Best-in-Class Silicon: The beating heart of the LBSC-Ax unit is the Cavium Octeon Fusion-M CNF7130 baseband processor which delivers unequalled processing power in a single SOC. This is one of the first products leveraging this new generation of silicon in 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 nines" 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 virtualized vRAN
- Best-in-Class Manageability: We understand the increasing demands for real-time 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
- LTE FDD or LTE TDD Local Area Coverage in Smallest Form Factor: Lindsay's LBSC-Ax outdoor local area small cell is the solution to provide LTE FDD or LTE TDD outdoor network coverage in medium-sized office environments, venues, shopping centers, urban/suburban/rural and remote areas, etc. providing carrier and mission-critical grade RAN engineering in a small form factor
- Ease of Deployment: The LBSC-Ax outdoor local area device is designed to be easily and flexibly deployed by a normal user by just connecting an PoE+/Ethernet cable. Its plug and play capabilities do the rest
- Lowest Cost: For lowest cost solution the LBSC-Ax outdoor local area small cell supports a single 2x2 MIMO transceiver chain (cell) in different LTE FDD or LTE TDD bands and can optionally integrate embedded EPC functionality (Network-in-a-Box), neutral host (GWCN, MOCN) functionality or work in conjunction with dRAX™ vRAN
- Deploy the LBSC-Ax outdoor local area small cell in medium-sized enterprise, venues, shopping centers, urban hotspots, etc. to enable inside-out/outside-in HetNet or ultra-dense scenarios to cost-effectively provide coverage and capacity, or in rural, suburban and remote scenarios to provide coverage. Whether you are deploying an isolated enterprise solution for your verticals, an integrated multiple layer network or an integrated single layer network with key interference cancellation techniques, you will always get the most out of the licensed and lightly licensed spectrum capabilities of your network



## SPECIFICATIONS

Parameter	Specification
<b>Single Cell LTE FDD or LTE TDD Local Area Small Cell</b>	
Transceiver	2 x 2 MIMO
	Local area basestation class
	20 dBm/ 100 mW RF power per antenna port (FDD)
	24 dBm/ 250 mW RF power per antenna port (TDD)
	1 transceiver per unit (single cell)
Band Support	LTE FDD bands 3, 7
	LTE TDD bands 38, 40, 41, 42, 43 <sup>(1)</sup> , 48/CBRS <sup>(1) (2)</sup>
	Other FDD & TDD bands available on request
<b>Network Interfaces</b>	
Layer 1 & 2	1 GbE port
	IPv4/IPv6
Layer 3 & OAM	S1 or SGi (Network-in-a-Box)
	Type 1 OAM (TR-069/TR-196), Type 2 OAM (SNMP), Kuha, OAM Webserver or CLI SAS (CBRS)
	Alternative OAM interface possible (XML, Netconf, Proprietary)
<b>LTE Feature Support</b>	
3GPP Release 9 (upgradable to release 10)	
Up to 64 Active Users	
LTE FDD or LTE TDD	
Integrated GNSS (GPS, GLONASS, BDS)	
Cell Selection/ Re-selection	
Radio Bearer Control	
Admission Control	
Scheduler & Rate Control	
Neutral Host (MOCN, Slicing)	
Optional Embedded EPC (Network-in-a-Box)	
vRAN/MEC/5G Architecture Ready	
OAM (CM,PM,FM, Diagnostics) & SON	
<b>Security</b>	
3GPP Standard LTE Air Interface Security	
IPSec AES Encrypted Tunnels on all Network Connections	
Trusted Platform Technology Embedded in Silicon	
Per Device PKI Key Pairs	
Secure Boot through Digital Signatures of all Executables	
<b>Power, Environmental &amp; Physical</b>	
Input Voltage	56 V PoE+
Power Consumption (Max. TX power, full data traffic)	< 21 W
Operating Temperature	-40 °C to +50 °C (-40 °F to +122 °F)
Ingress Protection	IP67
Dimensions (H x W x D)	7.9"H x 10.6"W x 2.6"D (20.0H x 27.0W x 6.5D cm)
Weight	6.2 lb (2.8 kg)

### NOTE:

(1) 23 dBm/ 200 mW per antenna port

(2) Industry certification may be a requirement in your area



## ORDERING INFORMATION

Radio (Mode/Band) <sup>(1)</sup>		
LBSC	-	A
x		
1 = TDD mode, band B42, 24 dBm/250 mW RF power/antenna port		
2 = TDD mode, band B43, 24 dBm/250 mW RF power/antenna port		
3 = TDD mode, band B48/CBRS, 24 dBm/250 mW RF power/antenna port		
4 = TDD mode, band 38/41, 24 dBm/250 mW RF power/antenna port		
5 = TDD mode, band B40, 24 dBm/250 mW RF power/antenna port		
6 = FDD mode, band B7, 20 dBm/100 mW RF power/antenna port		
7 = FDD mode, band B3, 20 dBm/100 mW RF power/antenna port		

### NOTE:

(1) Other bands available upon request. Contact factory for details

### EXAMPLE:

#### Part # LBSC-A1

LTE TDD local area small cell: TDD mode, band B42, 24 dBm/250 mW RF power/antenna port