

Ultra Narrow Band (UNB) Lighting Control Network



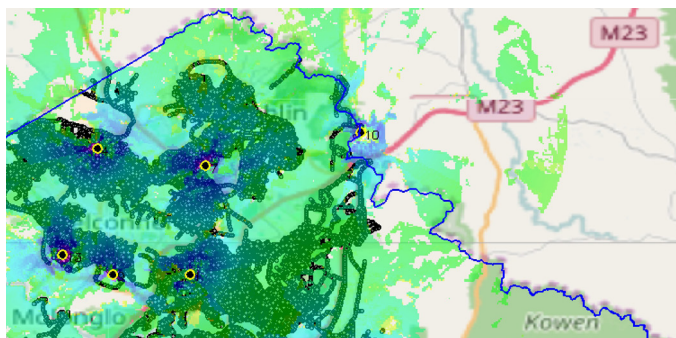
Ultra Narrow Band (UNB) Lighting Control Network

Base station

Telensa Ultra-Narrow Band (UNB) base stations provide dedicated wireless connectivity for controlling large populations of things across cities and wider areas. Deployed in a matter of days, the network is designed to run for decades at minimal operational cost.

Long range system	up to 10 miles (16 km) range (non-line-of-sight)
High device capacity	each base station can connect up to 5,000 devices
No cell site costs	simple light pole installation can cover a city in a few days
Full coverage	coverage with large overlaps and relay mode means complete coverage
Robust backhaul	multiple cellular and Ethernet modules
Resilient coverage	devices are covered by multiple base stations
Flexible coverage	owner retains control
Low data costs	minimal recurring subscriptions costs
Simple deployment	minimal UNB Base Stations required
Long life	Industrial, Scientific and Medical (ISM) radio bands have proven longevity

Planning system



Telensa's sophisticated planning system designs the network before the first truck rolls, allowing customers to see coverage before rollout and making the deployment simple and rapid for installation teams. Extending coverage or capacity is a simple re-plan function.

- The system combines detailed map topography with streetlight asset data
- If no accurate asset data is available, the system can synthesize lights on the map
- Planning system identifies optimal light poles for installing base stations, enabling the city or large campus to choose the precise deployment locations
- The coverage map enables the city to decide the right balance between cost and coverage
- Relay mode provides service into areas without base station coverage



Base station B4

Regulatory	Standards available	FCC/ETSI/international ISM standards
Radio	Protocol	UNB
	Global: 902-928 MHz (regional variations)	
	Receiver sensitivity (minimum)	-139 dBm conducted
	Transmit power (maximum)	US 4 W EIRP, EU 500mW ERP Other: Contact Telensa for details
Environmental	Rating	IP66
	Operating temperature (°C /°F)	-40 to +60 / -40 to +140
Power	Consumption	15W*
	Surge protection	Tested to ANSI C136.10 (20kV/10kA)
Capacity	Max number of supported telecells	up to 5000
Physical	Connections	Ethernet (optional), power
	Dimensions (WxHxD)	13.3 x 12.8 x 6.8" / 339 x 326 x 111mm (incl. solar shield, excluding antennas)
	UNB antenna	Length 50.4" / 1280mm
	Weight	15.6lb / 7.1kg (incl. solar shield, antennas and backplate)
	Mounting	Direct pole mount or sign strapping options
Global Positioning		GPS as standard Contact Telensa for more GNSS options
Connectivity	Backhaul	2x 4G / 3G / 2G cellular and Ethernet (optional)
	Bands	Contact Telensa for details
Environmental protection	Heater	As standard
	Solar shield	As standard
Time synchronisation		GPS as standard NTP

* 30W max with heater on



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