



O V E R V I E W   B R O C H U R E

# MULTIFUNCTION POLE TELECOMMUNICATIONS CAPABILITY

# CONTENTS

<b>Telecommunications Technologies Supported</b>	3
<b>How We Accommodate Telecommunications Technologies</b>	4
Beacon Range	4
Koala	6
SMART.HUB	8
MFP Base	9
TOWER.NODE	10
<b>Telecommunications Technologies Accommodated</b>	11
Ericsson/Tongyu	11
Nokia	12
Other	13

# TELECOMMUNICATIONS TECHNOLOGIES SUPPORTED

HUB Digital Enablers support a range of telecommunications devices used by mobile network operators and municipalities across the globe.

Supported technologies include 5G, mmWave 5G, 4G, Wi-Fi, and IoT antennae, radios and gateways.



4G/5G

## INTEGRATED, 5G COVERAGE

Enhance connectivity and coverage by placing 4G and 5G small cells and antenna's from multiple carriers inside SMART.NODE's or onto SMART.POLE or SMART.HUB.



SMART.NODE  
Beacon Suite

## ENABLE ALL RADIO NETWORK SOLUTIONS

Our beacons are designed to accommodate your Radio Access Solutions on a neutral host basis. The SMART.NODE internally accommodates 4G and 5G radio access equipment while delivering optimum network performance for carriers.



Wi-Fi

## PUBLIC AND PRIVATE NETWORKS

Create Wi-Fi networks to support staff, contractors, the public and countless IoT applications, with low latency and high reliability.



LoRaWAN  
Gateway

## SUPPORT LARGE-SCALE IOT APPLICATIONS

Open the way for interoperability between smart devices and machines through the use of low-power wide-area networks. Use in tandem with Wi-Fi to support a vast array of IoT applications.

# HOW WE ACCOMMODATE TELECOMMUNICATIONS TECHNOLOGIES

## B E A C O N R A N G E



### Beacon 260

The Beacon is a programmable multi-coloured LED light, designed to support and enhance special events and celebrations, whilst discretely housing Wi-Fi antenna and Small Cell housing.



### mBeacon 400

The mBeacon 400 is designed to house a mix of antennas and radio systems which enable 4G and 5G capabilities in the traditional radio frequencies as well as the new mmWave frequencies. The mBeacon retains the programmable multicoloured LED light, designed to support and enhance special events and celebrations.

The mBeacon can accommodate:

- 4G/5G omni-directional antenna
- Flat panel directional antenna
- Active antenna
- Wi-Fi antenna
- mmWave antenna



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- mmWave antenna

# BEACON RANGE PRODUCT OPTIONS

Product Name	Current Product Options	Product Code	Telco Equipment
Beacon 260	1300mm Programmable multi-coloured LED light, Wi-Fi antenna and Small Cell housing	DS-CM-LIT-LUM-SN-002-A	2x Tongyu T0002W6F033
mBeacon 400	3200mm Nokia, including programmable multi-coloured LED light	DS-CM-LIT-LUM-SN-004-A	2x Nokia AWEUD 2x Tongyu T0004W6F034 1x Terminal Box 56CTP
	2900mm Ericsson Type B, including programmable multi-coloured LED light	DS-CM-LIT-LUM-SN-006-A	2x Ericsson AIR5322 2x Tongyu T0002W6F033 (x 2) 1x Terminal Box 56CTP
	2900mm Ericsson Type A, including programmable multi-coloured LED light	DS-CM-LIT-LUM-SN-008-A	3x Ericsson 4402 3x Ericsson AIR5322
mBeacon 260	2900mm Ericsson Type A, including programmable multi-coloured LED light	DS-CM-LIT-LUM-SN-009-A	3x Ericsson 4402 3x Ericsson AIR5322
	2900mm Ericsson Type B, including programmable multi-coloured LED light	DS-CM-LIT-LUM-SN-010-A	1x Ericsson AIR5322

# KOALA – MOUNTED TO THE SMART.POLE

The Koala is a powder-coated sheet metal enclosure that accommodates different carrier configurations of 4G & 5G RRU (Remote Radio Units), power supply & fibre box.

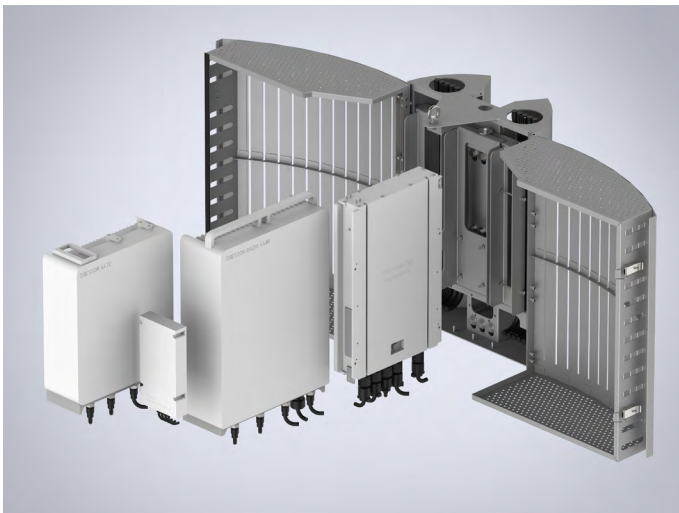
The Koala enclosure is mounted to the SMART.POLE integral track system typically below the streetlight outreach.

Supporting the Koala at the top of the SMART.POLE is the antenna array assembly. The antenna array assembly supports dual band, 1, 2 & 3 sectors.

Stainless steel sheet metal brackets allow the antenna to be fixed to the collars and offers 360-degree pan adjustment & down-tilt adjustment.

The top collar supports passive antenna, the lower collar supports mmWave antenna.

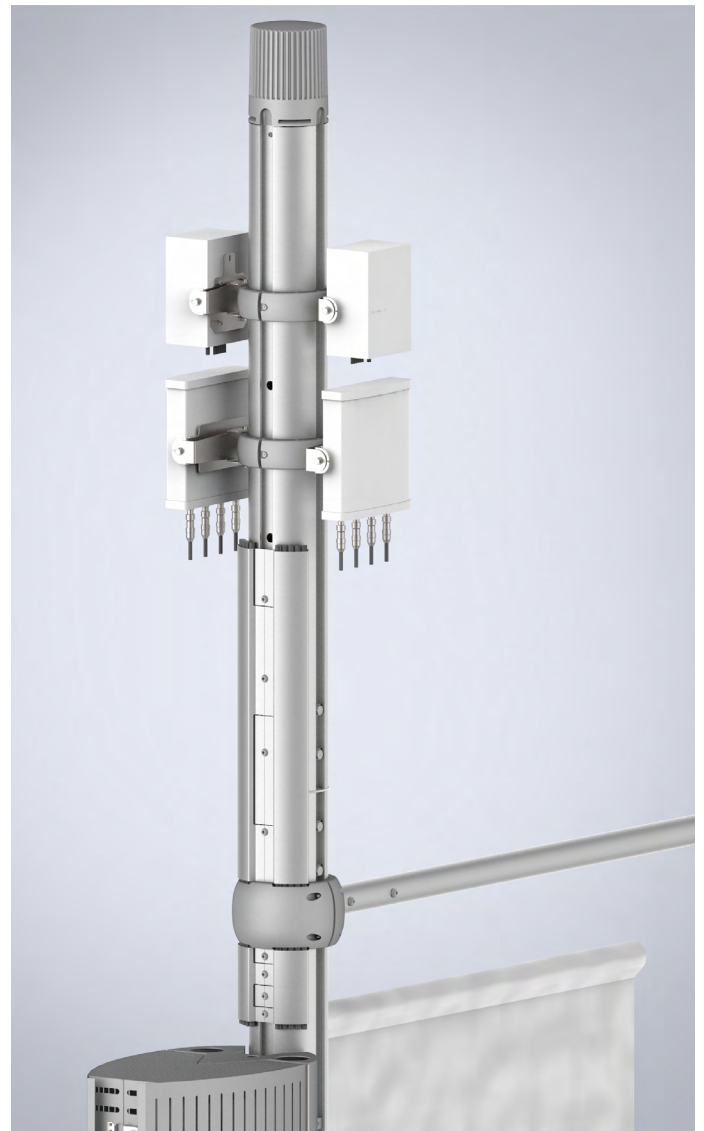
All cabling between the Koala and antenna array is neatly concealed within an aluminium extruded duct.



EXPLODED VIEW



KOALA ON SMART.POLE



ANTENNA ARRAY ASSEMBLY

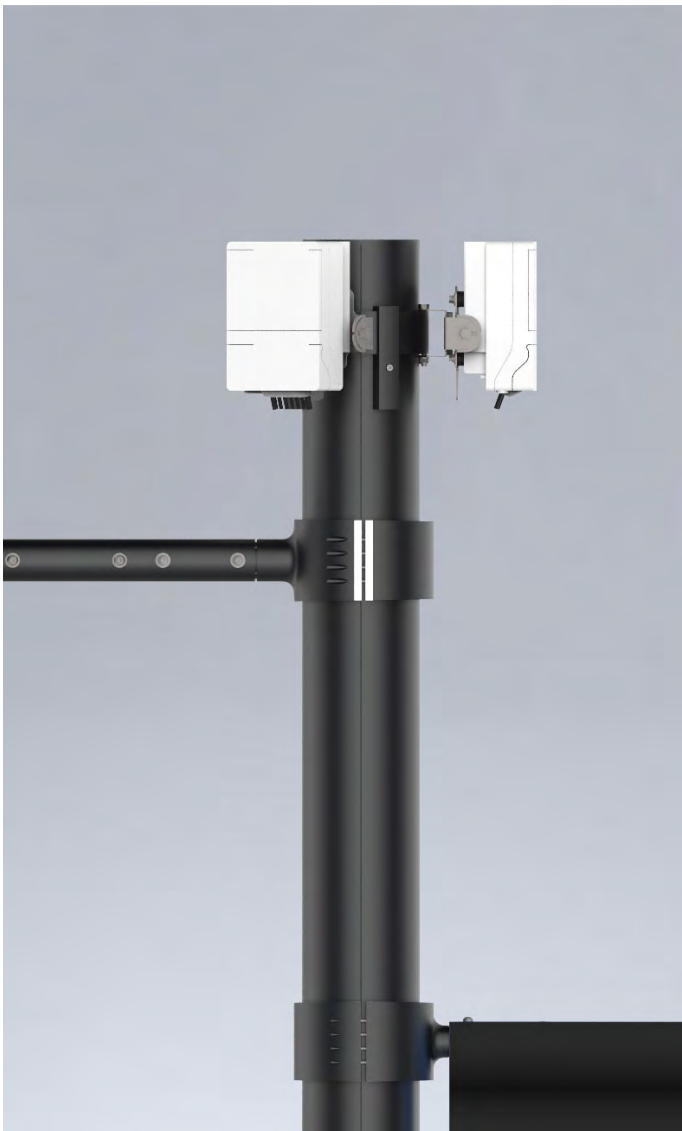
# KOALA PRODUCT OPTIONS

Product Name	Product Description	Product Code	Telco Equipment
Ericsson Koala V1	Koala V1 Enclosure and Equipment Mounting Brackets	AS-CM-ENC-ERB-SP-001-A	1x Delta DPR 2000N PSU 1x Ericsson RRU 4422 1x Ericsson RRU 4480
Ericsson Koala V1 (Insulated)	Insulated Koala V1 Enclosure & Equipment Mounting Brackets	AS-CM-ENC-ERB-SP-002-A	1x Delta DPR 2000N PSU 1x Ericsson RRU 4422 1x Ericsson RRU 4480
Brackets	Ericsson Type A Antenna Array Sector Brackets - Single Band - 1, 2, 3	AS-CM-BRA-ERA-SP-001-A	3x Ericsson 4402 3x Ericsson AIR5322
	Ericsson Type A Antenna Array Sector Brackets (Insulated) - Single Band - 1, 2, 3	AS-CM-BRA-ERA-SP-003-A	3x Ericsson 4402 3x Ericsson AIR5322
	Ericsson Type A Antenna Array Repeater Brackets	AS-CM-BRA-ERA-SP-002-A	
	Ericsson Type B Antenna Array Sector Brackets - Single Band - 1, 2, 3 (166 and 215 Diameter)	AS-CM-BRA-ERB-SP-001-A	2x Ericsson AIR1281 2x Tongyu T0004W6F034
	Ericsson Type B Antenna Array Sector Brackets (Insulated) - Single Band - 1, 2, 3 (260 and 360 Diameter)	AS-CM-BRA-ERB-SP-002-A	2x Ericsson AIR1281 2x Tongyu T0004W6F034
Cable Ducts	External Cable Ducts 441mm (Diam 215/260)	AS-CM-DCT-441-SP-001-A	
	External Cable Ducts 665mm (Diam 215/260)	AS-CM-DCT-665-SP-001-A	
	External Cable Ducts 800mm (Diam 215/260)	AS-CM-DCT-800-SP-001-A	
Collars	Collar For Antenna Array Bracket (166mm)	AS-CM-COL-166-SP-001-A	
	Collar For Antenna Array Bracket (215mm)	AS-CM-COL-215-SP-001-A	
	Collar For Antenna Array Bracket (260mm)	AS-CM-COL-260-SP-001-A	
	Collar For Antenna Array Bracket (360mm)	AS-CM-COL-360-SP-001-A	

# SMART.HUB

At the top of the SMART.HUB is the antenna array assembly that supports mobile networks, with multiple 4G and 5G small cells and antennae.

The antenna array assembly is attached using a unique collar design that allows the accessory to be moved up and down the pole, with the added functionality of rotating 360 degrees.



ANTENNA ARRAY ASSEMBLY



ANTENNA ARRAY ON SMART.HUB



EXPLODED VIEW

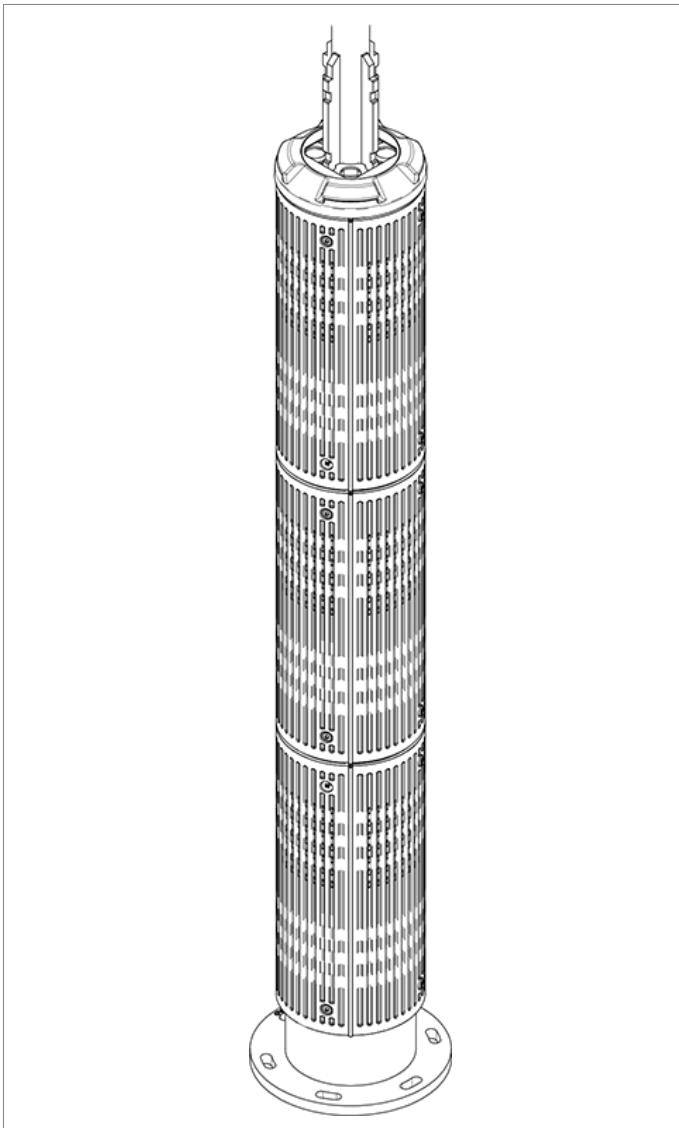


# MFP BASE ZONE

The Base of the SMART.NODE has three main purposes.

The lower hatch hosts the electrical and communications infrastructure of the SMART.NODE, while the middle and top hatches accommodate 4G/5G small cell technology.

Finally, the Base also accommodates a range of Digital Services.



ASSEMBLED VIEW



BASE OF SMART.NODE™

# TOWER.NODE

Sporting fields and similar public open spaces are crucial infrastructure for many land authorities, the potential of which can be truly harnessed with the TOWER.NODE.

Capable of discreetly housing 4G and 5G telecommunications infrastructure, this product delivers enhanced levels of mobile coverage as well as integrating a range of digital devices and IoT with customisable applications for communications, safety, energy and more. When telecommunications equipment is hosted at the top of the TOWER.NODE, it can be shrouded with the custom membrane enclosure or remain open. And in the

base of the tower, a purpose-designed 'base zone' which houses the necessary equipment to power and activate the antenna's, along with any other hardware required to operate additional IOT devices, such as CCTV, public address system, wayfinding and environmental sensing.

Given this unique base zone design it removes the need for mobile network operators to build additional supporting infrastructure, such as telecommunication huts, which preserves the surrounding spaces for public use and benefit.



TELCO ARRAY WITH TENSILE MEMBRANE



TELCO ARRAY ASSEMBLY



ANTENNA ARRAY ASSEMBLY

Product	Ericsson 4402	Ericsson AIR1281	Ericsson AIR5322	Ericsson DWDM - IP68 WDM Fibre Box XS	Ericsson RRU 4422	Ericsson RRU 4480	Tongyu T0002W6F033	Tongyu T0004W6F034
Ericsson Type B Antenna array sector brackets - Single band - 1, 2, 3 AS-CM-BRA-ERB-SP-001-A		2						2
Ericsson Koala V1 AS-CM-ENC-ERB-SP-001-A				1	1	1		
Ericsson Type B Antenna array sector brackets (Insulated) - Single band - 1, 2, 3 AS-CM-BRA-ERB-SP-002-A		2						2
Ericsson Koala V1 (Insulated) AS-CM-ENC-ERB-SP-002-A				1	1	1		
Ericsson Type A Antenna array sector brackets - Single band - 1, 2, 3 AS-CM-BRA-ERA-SP-001-A	3		3					
Ericsson Type A Antenna array sector brackets (Insulated) - Single band - 1, 2, 3 AS-CM-BRA-ERA-SP-003-A	3		3					
Beacon 260 DS-CM-LIT-LUM-SN-002-A							2	
mBeacon 400, Nokia DS-CM-LIT-LUM-SN-004-A								2
mBeacon 400, Ericsson Type B DS-CM-LIT-LUM-SN-006-A			2				2	
mBeacon 400 (Base) Ericsson Type B Equipment DS-CM-LIT-ERB-SN-001-A				1	1	1		
mBeacon 400, Ericsson Type A DS-CM-LIT-LUM-SN-008-A	3		3					
mBeacon 400 (Base) Ericsson Type A Equipment DS-CM-LIT-ERA-SN-001-A								
mBeacon 260, Ericsson Type A DS-CM-LIT-LUM-SN-009-A	3		3					
mBeacon 260, Ericsson Type B DS-CM-LIT-LUM-SN-010-A			1					

Product	Nokia AWEUD	Nokia DWDM - POD 8 VMM	Nokia RRU AHEGC + fan unit ASFC	Nokia RRU AZQI + fan unit ASFG	TBD
mBeacon 400, Nokia DS-CM-LIT-LUM-SN-004-A	2				
mBeacon 400 (Base) Nokia Equipment DS-CM-LIT-NOK-SN-001-A		1	1	1	
mBeacon 260 (Base) Ericsson Type A Equipment DS-CM-LIT-ERA-SN-002-A					1
mBeacon 260 (Base) Ericsson Type B Equipment DS-CM-LIT-ERB-SN-002-A					1

Product	Clipsal AC Distribution Box	Cosmoscope Combiner E14F55P89	Delta DPR 2000N PSU	DWDM - Huber & Suhner MUX	FRTeK DU	FRTeK Rectifier	FRTeK SU-C	FRTeK SU-E	Huawei QPM40M PSU	Isolation Unit - Clipsal 56 U5GT	Isolation Unit - Clipsal 56 U5GT & Clipsal 56 series Splitter Box	Isolation Unit - Valtex C66CB4N	Terminal Box 56CTP
Ericsson Koala V1 AS-CM-ENC-ERB-SP-001-A			1										
Ericsson Koala V1 (Insulated) AS-CM-ENC-ERB-SP-002-A			1										
Ericsson Type A Antenna array sector brackets - Single band - 1, 2, 3 AS-CM-BRA-ERA-SP-001-A	1			1									
Ericsson Type A Antenna array Repeater brackets AS-CM-BRA-ERA-SP-002-A					1	1	1	1		1			
Ericsson Type A Antenna array sector brackets (Insulated) - Single band - 1, 2, 3 AS-CM-BRA-ERA-SP-003-A	3			1									
mBeacon 400, Nokia DS-CM-LIT-LUM-SN-004-A													1
mBeacon 400 (Base) Nokia Equipment DS-CM-LIT-NOK-SN-001-A		2							1			1	
mBeacon 400, Ericsson Type B DS-CM-LIT-LUM-SN-006-A													1
mBeacon 400 (Base) Ericsson Type B Equipment DS-CM-LIT-ERB-SN-001-A		2							1			1	
mBeacon 400, Ericsson Type A DS-CM-LIT-LUM-SN-008-A	2			1									
mBeacon 400 (Base) Ericsson Type A Equipment DS-CM-LIT-ERA-SN-001-A											1		



## DESIGN INNOVATE ENABLE

HUB is a wholly owned subsidiary of Indara, Australia's leading owner and operator of digital infrastructure and majority owned by AustralianSuper.

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