

DATASHEET AW3830-E-F

Common Name- 1.8M, 3.5GHz Concealed Antenna Node (CAN)

The CAN design encloses both Radios and Antennas in a single compact housing.

Back to Back Configuration 3300-380 Dual Sector Configuration 3300-380 Omni Configuration 3300-380 Tri-Sector Configuration 3300-380

4	eRET	13.5
8	eRET	17.9
4	eRET	11.5
12	eRET	17.9
	4 8 4 12	4eRET8eRET4eRET12eRET

17.9	65°
Gain	Beamwidth

65°/65°

65°

360°

PRODUCT INFORMATION

The Concealed Antenna Node (CAN) product was developed to provide a solution where both the radios and the antennas are integrated into a single housing operating between 3300-3800MHz covering LTE Bands B42, 43 & 48 and 5G NR Band n48, and n78. This is considered to be more attractive compared to having radios and antennas mounted separately. Its compact and tidy appearance is intended to facilitate zoning and deployment requirements.

Antennas, radios, and cables are all concealed inside the canister. Radios are installed in a cabinet located in the lower part of the structure. A range of different radio types can be accommodated in the AW3830 CAN. The antennas are located in the upper part of the structure. Similarly, a range of different antennas can be mounted in the CAN. This makes the Alpha Wireless CAN a highly customisable product that can suit a wide range of deployment requirements.

Radio integration can be performed before travel to the installation site. This enables equipment installation in a controlled environment which facilitates assembly checks. This process also reduces the installation time at the site. This configurable canister solution offers various antenna options - Back to Back (Peanut), Dual Sector, Omni and Tri-sector.

APPLICATION

Traditional mobile networks were designed for voice call continuity and principally relied on macro sites. This seemingly insatiable demand for data requires cell splitting at a much finer level, placing network access points closer to the subscriber. Network access points will be closer to where subscribers live, work and play. The CONCEALMENT set of solutions are designed to minimize the visual impact to the community.



FEATURES

- Wide-band antenna that covers LTE Bands 42, 43 & 48 and 5G NR Band n48, and n78. Includes CBRS Band.
- Compact design for low visual impact.
- Antennas, radios, and cables are concealed inside the canister
- Offers various antenna configurations for 4x4 MIMO
- Supports mounting of multiple radios behind the access doors.
- Cooling vents promote air circulation in the radio access hatch

STANDARD & CERTIFICATIONS

Certification BS EN ISO 9001:2015



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• eRET Tilt Range of 0 to 10 degrees.



AW3830-E-F

TECHNICAL SPECIFICATION

Electrical Spec	ifications					
Configuration			Back to Back	Dual Sector	Omni	Tri-Sector
Frequency Range	е	MHz	3300-3800	3300-3800	3300-3800	3300-3800
Polarisation		Degree		+/- 45° Sla	nt Linear	
Gain	Basta	dBi	13.1±0.5	17.4±0.5	11.1±0.5	17.4±0.5
	Max	dBi	13.6	17.9	11.6	17.9
Azimuth Beamw	idth	Degree	65°/ 65°	65°	360°	65°
Elevation Beamv	vidth	Degree	7.0°	7.0°	7.0°	7.0°
Electrical Downt	ilt	Degree	T0° - T10°	T0° - T10°	T0° - T10°	T0° - T10°
Electrical Downt	ilt Deviation	Degree<	1.5°	1.5°	1.5°	1.5°
Impedance		Ohms		50)	
VSWR		<		1.	5	
Return Loss		dB>	14			
Isolation		dB>	25 25 25 25			25
Cross-Polar Disc	rimination	dB>	16 16 16 16			16
Maximum Effect	ive Power Per Port	W	150	150	150	150

Representative Pattern Files





Dual-Sector





Dual-Sector / Tri-Sector



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TECHNICAL SPECIFICATION

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Dimensions (LxØ)	mm (in)	1695 (66.7) x 443 (17.4)
Packing Size (LxWxD)	mm (in)	1900 (74.8) x 500 (19.7) x 500 (19.7)
Net Weight (antenna)	kg (lb)	30-45 (Dependent on Configuration)
Shipping Weight	kg (lb)	35-50 (Dependent on Configuration)
Connector Type (Female)	-	4.3-10
Connector Quantity	-	4-12 (Dependent on Configuration)
Connector Position	-	Bottom
Windload Frontal (at Rated Wind Speed: 150km/h)	N (lbf)	658 (148)
Windload Lateral (at Rated Wind Speed: 150km/h)	N (lbf)	658 (148)
Survival Wind Speed	km/h (mph)	200 (125)
Radome Material	-	ASA capped ABS
Radome Colour	RAL	7035
Product Compliance Environmental	-	RoHS
Lightning Protection	-	DC Grounded
Cold Temperature Survival	°C (°F)	-40 (-40)
Hot Temperature Survival	°C (°F)	70 (158)

Electrical Power Specification

Power Requirement	VAC/Amp	Based on Customer Requirements
Main Breaker	Amp	Based on Customer Requirements
Mini Macro Radio	Amp	Based on Customer Requirements
Access Equipment	Amp	Based on Customer Requirements
Surge Protection	VAC/Amp	Based on Customer Requirements

Array Layout and RET Information

				Configuration	
Tri-Sector/Omni		3300-3800MHz	One RET for Two arrays : P1, P2 x 3 Sectors (Tri-Sector) P1, P2 x 2 Sectors (Back-to-Back/Dual-Sector) P1, P2 (Omni)		
P1 P2	H H		Total Quantity	Three RET Motor Controllers (Tri-Sector) Two RET Motor Controllers (Back-to-Back/Dual-Sector) Three Daisy-chained RET Motor Controllers (Omni)	
	Back-to-Back	C Du	al-Sector	^r Location and Interface	
			RET Controller Location	Inside antenna radome housing	
			RET Interface	Pair of AISG 8 Pin DIN connectors, one male, one female	
		RET Interface Quantity	AISG 8 Pin DIN connectors, one pair per sector Tri-Sector and Omni: Three pairs Back-to-back and Dual-Sector: Two pairs		
	Note: Coloured box	<sizes do<="" td=""><td></td><td>RET Interface Location</td><td>On connector plate located at bottom of antenna</td></sizes>		RET Interface Location	On connector plate located at bottom of antenna
	not represent antei	nna sizes.		Electrical	
Array	Frequency MHz	Ports	ID RET	Input Voltage	10 - 30V
P1	3300 - 3800	1 - 2	1	Power Idle Mode	< 1W
P2	3300 - 3800	3 - 4	1	Power Active Mode	< 10W
				Protocol	3GPP / AISG 2.0



Array	Frequency MHz	Ports	RET ID
P1	3300 - 3800	1 - 2	1
P2	3300 - 3800	3 - 4	1

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TECHNICAL SPECIFICATION

Mechanical Illustration

All measurements are in mm (in)



Radio Cabinet 744 (29,3)		
		i ⊊→443 (17.4)
	Antenna Housing 951 (37,4)	ł

	1695 (66.7)	
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TECHNICAL SPECIFICATION

Mechanical Illustration





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Publish Date: 11.08.2023

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Revision no: 12 (CAN-4C)





Mounting Bracket Kit

CL-V-133 - rCAN Full size SKID (Optional)





Mounting Kit Tilt Range	Mounting Kit Material	Mounting Kit Pole Diameter
0°	Galvanised Steel	50mm-115mm (2" to 4.5")

CL-V-135 - rCAN Standoff Mounting Bracket (Optional)







Mounting Kit Tilt Range	Mounting Kit Material	Mounting Kit Pole Diameter
0°	Galvanised Steel	N/A

CL-V-138 - Reduced size SKID (optional)







Mounting Kit Tilt Range	Mounting Kit Material	Mounting Kit Pole Diameter
0° to 10°	Galvanised Steel	50mm-115mm (2" to 4.5")

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Mounting Bracket Kit

CL-V-196 Universal Mount Kit (included with antenna unless other Mount Kit is ordered)



Mounting Kit Tilt Range	Mounting Kit Material	Mounting Kit Pole Diameter
0°	Galvanised Steel	6" - 12"

Ordering Info

Order Code - Antenna	Description
AW3830-E-F-BB	Back to Back Configuration CAN with eRET and 4.3-10 Connectors
AW3830-E-F-DS	Dual Sector Configuration CAN with eRET and 4.3-10 Connectors
AW3830-E-F-OM	Omni Configuration CAN with eRET and 4.3-10 Connectors
AW3830-E-F-TS	Tri-Sector Configuration CAN with eRET and 4.3-10 Connectors
Order Code - Mount Kits	Description
CL-V-196	Universal Mount Kit (included with antenna unless other Mount Kit is ordered)
CL-V-181	CAN Interface Plate with eight holes for telescopic mount.
Order Code - Radio Brackets	Description
CL-V-182	Internal Cabinet Brackets for fitting Airspan AS1030 Radio
Order Code - Combiners	Description
AW2021	2-Way Power Divider (575-3800MHz)
AW2031	3-Way Power Divider (575-3800MHz)

Enquiries

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