



MILITARY ANTENNAS

UxS | C-UxS | MANET, C2 & EW | MOUNTED | DISMOUNTED | FIXED BASE | MARITIME



V 5.2



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www.benelec.au



Dismounted Antennas

Tactical FlexNek™ Antennas

Ultra-Wideband Tactical FlexNek™ Antennas

SKU	DESCRIPTION	FREQUENCY	TERMINATION	↕ mm	Ø mm	ORIGIN	TRL
024350D	UWB FlexNek™ 1.5 - 4.0dBi	0.40 - 1.0 GHz	TNC Plug	470	32	AU	9
029324D	UWB FlexNek™ 2.3 - 5.0dBi	1.0 - 2.7 GHz	TNC Plug	375	14.5	AU	9
024360D	UWB FlexNek™ 2.5dBi	0.6 - 7.2 GHz	TNC Plug	390	20.5	AU	9
024360N	UWB FlexNek™ 2.5dBi		N Plug	390		AU	9
024365D	UWB FlexNek™ 2.5dBi	0.38 - 7.2 GHz	TNC Plug	490	20.5	AU	9
024365N	UWB FlexNek™ 2.5dBi		N Plug	490		AU	9
024366D	UWB FlexNek™ 2.5dBi	0.225 - 2.7 GHz	TNC Plug	520	20.5	AU	6

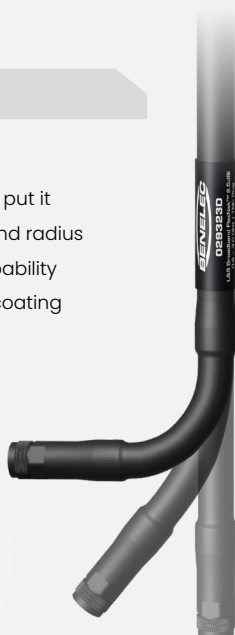
AU = Australian made.

The **FlexNek™** series by Benelec delivers a game-changing innovation in the global tactical antenna market. Engineered for ultimate flexibility, the FlexNek™ features a bend radius of 35mm and can effortlessly bend up to 120 degrees, staying securely in position where it's set.

Designed with durability in mind, its silicone cover offers unparalleled protection against dust and water ingress, achieving a true IP65 rating. This ensures superior performance compared to traditional gooseneck flexible tactical antennas. The FlexNek™ sets a new standard in reliability and adaptability for tactical applications.

FEATURES

- Easy to flex
- Stays where you put it
- 1.38" (35mm) bend radius
- Max 120° flex capability
- Sealed silicone coating
- IP65 Rated
- Matt black finish

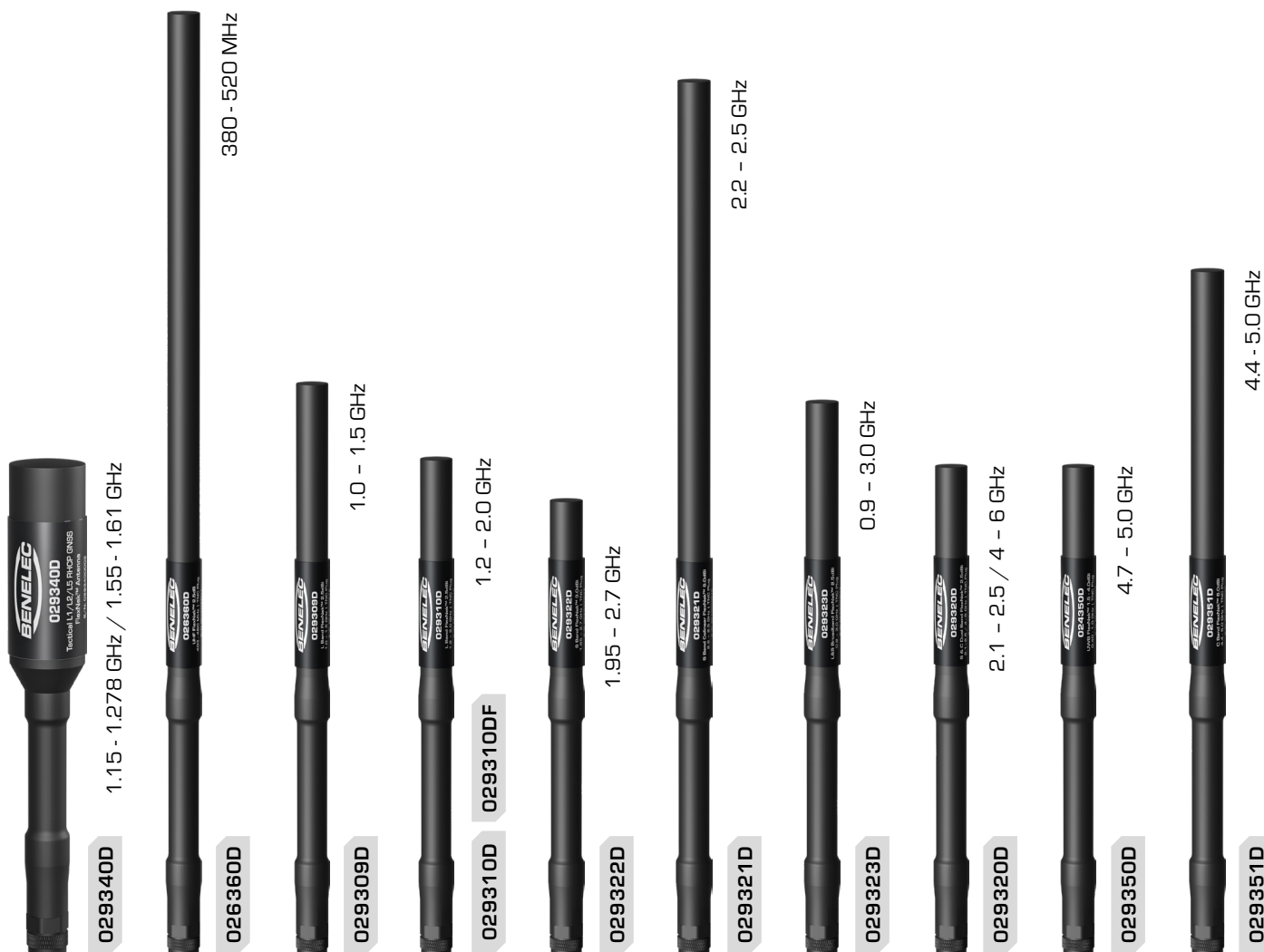


Dismounted Antennas

Tactical FlexNek™ Antennas

SKU	DESCRIPTION	FREQUENCY	TERMINATION	↕ mm	Ø mm	ORIGIN	TRL
029340D	GNSS L1/L2/L5 RHCP FlexNek™ Active 35dB	1.15 - 1.278 GHz / 1.55 - 1.61 GHz	TNC Plug	183	27	AU	8
026360D	UHF FlexNek™ 2.5dB	380 - 520 MHz	TNC Plug	442	14.5	AU	9
029309D	L Band FlexNek™ 2.5dBi	1.0 - 1.5 GHz	TNC Plug	270	14.5	AU	9
029310D	L Band FlexNek™ 2.5dBi	1.2 - 2.0 GHz	TNC Plug	235	14.5	AU	9
029310DF	L Band FlexNek™ 2.5dBi w/ GPS BP Filter		TNC Plug			AU	7
029322D	S Band FlexNek™ 3.0dBi	1.95 - 2.7 GHz	TNC Plug	215	14.5	AU	9
029321D	S Band Colinear FlexNek™ 6.0dBi	2.2 - 2.5 GHz	TNC Plug	410	14.5	AU	9
029323D	L & S Broadband FlexNek™ 2.5dBi	0.9 - 3.0 GHz	TNC Plug	260	14.5	AU	9
029320D	S & C Dual Band FlexNek™ 2.5dBi	2.1 - 2.5 / 4 - 6 GHz	TNC Plug	230	14.5	AU	9
029350D	C Band FlexNek™ 3.0dBi	4.7 - 5.0 GHz	TNC Plug	230	14.5	AU	9
029351D	C Band FlexNek™ 6.0dBi	4.4 - 5.0 GHz	TNC Plug	320	14.5	AU	9

AU = Australian made.



UxS Unmanned System Antennas



Multi Rotor



Ground Rover



VTOL Fixed Wing



Surface Vessel

Tactical UxS Flex-N-Base Antennas

SKU	DESCRIPTION	FREQUENCY	TERMINATION	mm	mm	ORIGIN	TRL
02634N	UHF Dipole 2.5dBi Flex-N-Base	380 - 520 MHz	N Plug	400	20	AU	9
029310N	L Band Colinear 5.0dBi Flex-N-Base	1.2 - 1.5 GHz	N Plug	487	20	AU	9
029321N	S Band Colinear 6.0dBi Flex-N-Base	2.2 - 2.5 GHz	N Plug	350	20	AU	9
029351N	C Band Colinear 6.0dBi Flex-N-Base	4.4 - 5.0 GHz	N Plug	245	20	AU	9
029352N	C Band Colinear 9.0dBi Flex-N-Base	4.9 - 5.0 GHz	N Plug	440	20	AU	9
024368N	UWB Dipole 2.5dBi Flex-N-Base	0.38 - 7.2 GHz	N Plug	445	20	AU	9
029316N	S & C Band 4/6dBi Flex-N-Base	2.1 - 2.5 GHz & 4.0 - 6.0 GHz	N Plug	400	20	AU	7

AU = Australian made.


027425

Tactical Magnetic 8GHz Base,
N Socket to TNC Socket

Optional Cable Assemblies to suit:

- 1012111 2.5m x LL240 cable TNCp to TNCp
- 1012113 3.0m x LL240 cable TNCp to TNCp
- 1012115 2.5m x LL240 cable Np to TNCp
- 1012117 3.0m x LL240 cable Np to TNCp

• Low Loss LL240 Cable • Matt Black Finish

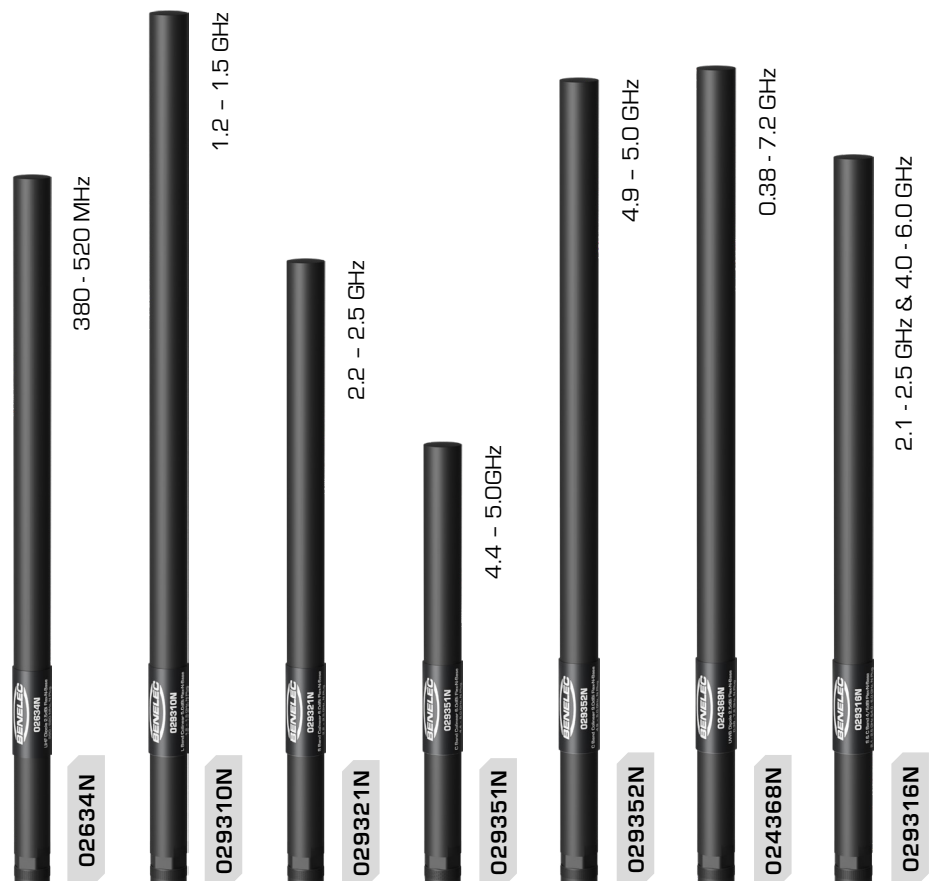

02745

Tactical N Socket 8GHz Base
for LMR240 Cable

Finished cable assemblies to order

The **Flex-N-Base** and **Flex-TNC-Base** series antennas feature an integrated stainless-steel spring that allows the antenna to bend out of harm's way and typically return to its vertical position.

The spring base is enclosed in a flexible silicone tube to prevent dirt and moisture from accumulating. The matte black finish complements the applications these antennas are commonly used in.



Tactical UxS Flex-TNC-Base Antennas

SKU	DESCRIPTION	FREQUENCY	TERMINATION	↑ mm	Ø mm	ORIGIN	TRL
029310DS	L Band Colinear 5.0dBi Flex-TNC-Base	1.2 – 1.5 GHz	TNC Plug	508	20.5	AU	9
029321DS	S Band Colinear 6.0dBi Flex-TNC-Base	2.2 – 2.5 GHz	TNC Plug	377	20.5	AU	9
029349D	C Band Colinear 6.0dBi Flex-TNC-Base	4.4 – 5.0 GHz	TNC Plug	266	20.5	AU	9
029319D	S & C Band 3.0dBi Flex-TNC-Base	2.1 - 2.5 GHz & 4.0 - 6.0 GHz	TNC Plug	215	14.5	AU	8
029316D	S & C Band 4/6dBi Flex-TNC-Base	2.1 - 2.5 GHz & 4.0 - 6.0 GHz	TNC Plug	421	20.5	AU	7

UxS Ground Station Antennas

SKU	DESCRIPTION	FREQUENCY	TERMINATION	↑ mm	Ø mm	ORIGIN	TRL
Omni-directional Antennas							
0293091D	L Band FlexNek™ 5.0dBi TNC-Base	1.2 – 1.5 GHz	TNC Plug	554	20.5	AU	9
029321D	S Band FlexNek™ 6.0dBi TNC-Base	2.2 – 2.5 GHz	TNC Plug	410	14.5	AU	9
029351D	C Band FlexNek™ 6.0dBi TNC-Base	4.4 – 5.0 GHz	TNC Plug	320	14.5	AU	9
Directional Antennas							
029213P	L Band 2x2 Vertical Polarised Directional Panel 8.5dBi	1.35 – 1.44 GHz	TNC Socket	254 L x 204 W x 91 H mm		AU	9
029332	S Band 2x2 Slant Polarised Directional Panel 9dBi	1.7 – 2.5 GHz	TNC Socket	230 L x 160 W x 45 H mm		AU	4

AU = Australian made.

Flex-TNC-Base Antennas



Ground Station Antennas

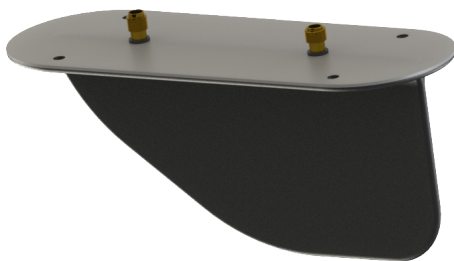


UxS External Antennas

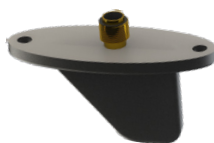
UxS Blade & Dipole Antennas

SKU	DESCRIPTION	FREQUENCY	TERMINATION	↕ mm	↔ mm	ORIGIN	TRL
UxS Blade Antennas							
02471	UxS Blade Two Port LTE / S&C Band, GPI	0.61 - 7.2 GHz / 2.1 - 2.5 GHz & 4.0 - 7.2 GHz	SMA Socket	58 W x 165 L x 71 H mm		AU	7
029312	UxS Blade Single Port S&C Band, GPI	2.1 - 2.5 GHz & 4.0 - 7.2 GHz	SMA Socket	20 W x 50 L x 25 H mm		AU	6
UxS Compact Dipole Antennas							
029423	Compact Dipole L&S Band, 300mm Tail	0.9 - 3.0 GHz	MMCX Plug RA	140	14.5	AU	9
029423A	Compact Dipole L&S Band, 300mm Tail		SMA Plug			AU	9
029423P	Compact Dipole L&S Band, 300mm Tail		SMP Socket RA			AU	9
029423F	Compact Dipole L&S Band, 300mm Tail		UFL			AU	9
029420	Compact Dipole S&C Band, 300mm Tail	2.1 - 2.5 GHz & 4.0 - 6.0 GHz	MMCX Plug RA	84	14.5	AU	9
029420A	Compact Dipole S&C Band, 300mm Tail		SMA Plug			AU	9
029420P	Compact Dipole S&C Band, 300mm Tail		SMP Socket RA			AU	9
029420F	Compact Dipole S&C Band, 300mm Tail		UFL RA			AU	9
UxS Other External Antennas							
029213	Fixed Wing Tip L Band, GPI	1.35 - 1.44 GHz	SMA Plug	2.5 W x 102 L x 112 H mm		AU	9
029340	GNSS L1/L2/L5 Precision Active 35dB Antenna RTK	1.15 - 1.278 GHz / 1.55 - 1.61 GHz	SMA Plug	55	27	AU	9

AU = Australian made.


02471

0.61 - 7.2 GHz / 2.1 - 2.5 GHz & 4.0 - 7.2 GHz


029312

2.1 - 2.5 GHz & 4.0 - 7.2 GHz


029423

0.9 - 3.0 GHz


029420

2.1 - 2.5 GHz & 4.0 - 6.0 GHz


029340

1.15 - 1.278 GHz / 1.55 - 1.61 GHz


029213

1.35 - 1.44 GHz

UxS Internal Antennas

UxS Conformal Antennas

SKU	DESCRIPTION	FREQUENCY	TERMINATION	↕ mm	↔ mm	ORIGIN	TRL
029320U	S & C Band 3.0dBi, 300mm Tail	2.1 - 2.5 GHz & 4.0 - 6.0 GHz	MMCX Plug RA	62.5	11	AU	9
029320UA	S & C Band 3.0dBi, 300mm Tail		SMA Plug			AU	9
029320UP	S & C Band 3.0dBi, 300mm Tail		SMP Socket RA			AU	9
029320UF	S & C Band 3.0dBi, 300mm Tail		UFL RA			AU	9
029320T	S & C Band 3.0dBi, Side Entry, 300mm Tail	2.1 - 2.5 GHz & 4.0 - 6.0 GHz	MMCX Plug RA	50	11	AU	9
029320TA	S & C Band 3.0dBi, Side Entry, 300mm Tail		SMA Plug			AU	9
029320TP	S & C Band 3.0dBi, Side Entry, 300mm Tail		SMP Socket RA			AU	9
029320TF	S & C Band 3.0dBi, Side Entry, 300mm Tail		UFL RA			AU	9
029323U	L & S Band 2.5dBi, 300mm Tail	0.9 - 3.0 GHz	MMCX Plug RA	118	27.5	AU	9
029323UA	L & S Band 2.5dBi, 300mm Tail		SMA Plug			AU	9
029323UP	L & S Band 2.5dBi, 300mm Tail		SMP Socket RA			AU	9
029323UF	L & S Band 2.5dBi, 300mm Tail		UFL RA			AU	9

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MMCX Plug RA



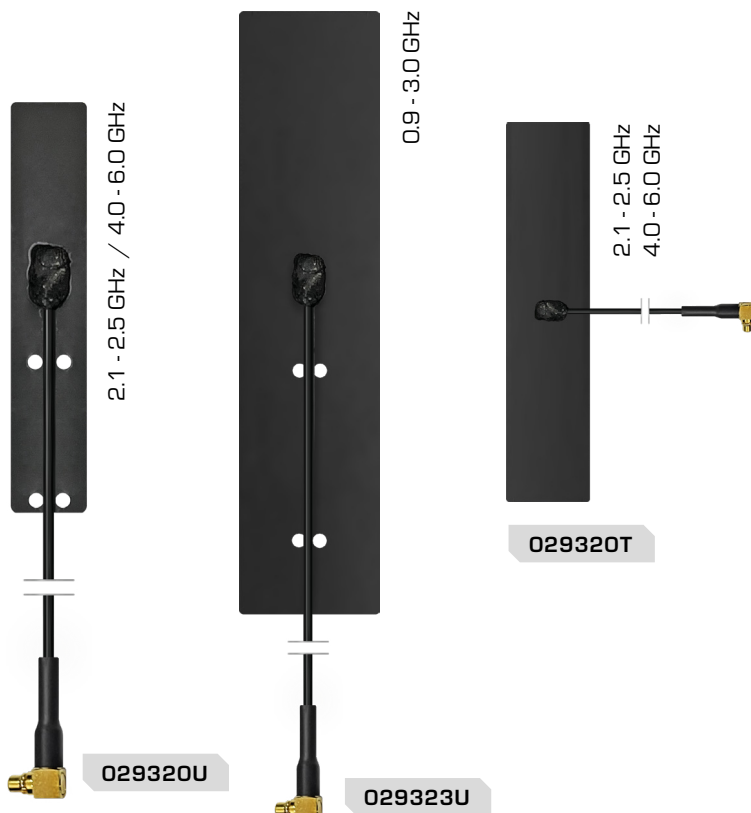
SMA Plug



SMP Socket RA



UFL RA



These conformal antennas feature a flexible design, allowing them to **bend and conform** to various surfaces for seamless integration. Since these antennas are extremely flexible, they are able to be fitted inside fibreglass legs of UAVs e.g. around 14mm diameter.

FEATURES

- Compact, thin and flexible conformal antenna
- Optional adhesive backing (3M tape)
- Suitable for UxS panels that are RF transparent e.g. plastic or fibreglass bodies
- Alternative connector options available on request

Dismounted C2 Antennas

TACTICAL C2 ANTENNAS

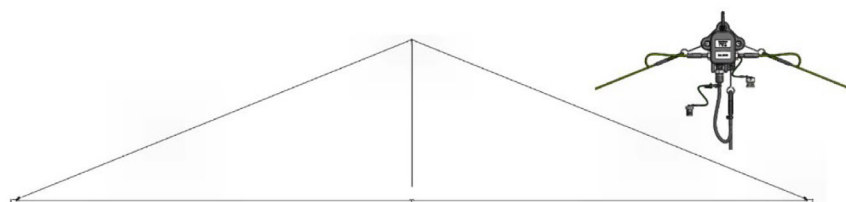
SKU	DESCRIPTION	FREQUENCY	ORIGIN	TRL
0200403	HF Tactical Broadband High Power Dipole, 48m	1.6 - 30 MHz	AU	9
0200405	HF Long Single Wire (SWA)	2.0 - 30 MHz	AU	9
0257101	Broadband Manpack Whip (WLA)	30 - 512 MHz	US	9
0257101G	Broadband Manpack Whip (FlexNek™ Base)	30 - 512 MHz	US	9
025751	Manpack SATCOM RAMHEAD	225 - 500 MHz	US	9

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1.6 - 30 MHz

0200403



2.0 - 30 MHz

0200405



225 - 500 MHz

025751



30 - 512 MHz

0257101G



30 - 512 MHz

0257101

Mounted C2 Antennas

SKU	DESCRIPTION	FREQUENCY	ORIGIN	TRL
020108M	HF 100w 1.7m GP (Requires Tuner)	2.0 – 30 MHz	AU	9
02323	VHF Vehicular 1.2m GP	30 – 88 MHz	AU	9
02322	VHF Vehicular 1.9m GP	30 – 88 MHz	AU	9
02320	VHF Vehicular 3.2m GPI	30 – 88 MHz	AU	9
0292101	Multiband Vehicular	30 MHz – 2 GHz	US	9
0292105	High Power, High Gain BB Vehicular	500 MHz – 2.5 GHz	US	9
0251622	UHF Vehicular	225 – 450 MHz	US	9
02516Z	UHF Vehicular GPI 200w	225 – 450 MHz	AU	7
025705	Broadband Vehicular - 1.6m	26 – 512 MHz	US	9
025706	Broadband Vehicular - 2.8m	30 – 512 MHz	US	9
025708	Tri-Band Antenna	30 - 512 MHz / 750 - 1350 MHz	US	9
025752	SATCOM On-The-Move Vehicular Antenna	243 – 380 MHz	US	9
025171	VHF Half-Wave 4 Hole Flange Base	30 – 88 MHz	US	9
029512M	MANET Antenna Application	2.1 – 2.5 / 4.0 – 6.0 GHz	AU	9
024575M	5G EW / Cellular Application	690 – 960 MHz / 1.7 – 2.7GHz / 3.5 – 3.8GHz	AU	9

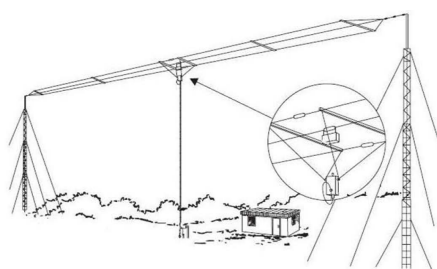
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Base Antennas

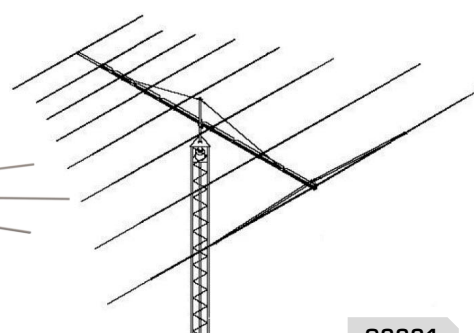
SKU	DESCRIPTION	FREQUENCY	ORIGIN	TRL
0200401	HF Folded Dipole 400w	2.0 - 30 MHz	AU	9
0200410	HF Folded Dipole 1Kw	2.0 - 30 MHz	AU	9
02221	HF Log Periodic Yagi	10 - 30 MHz	AU	9
02212	VHF/UHF Base Antenna	30 - 600 MHz	AU	9
02686	UHF Base Antenna	200 - 520 MHz	AU	9
02674	Broadband Discone Antenna S/S	65 - 1300 MHz	AU	9

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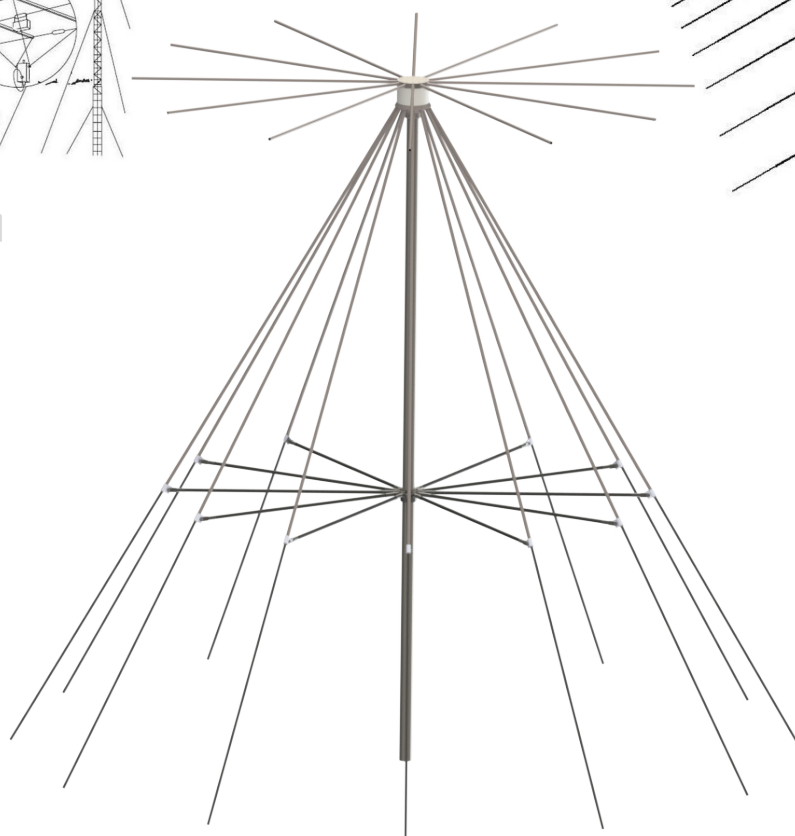
0200401 0200410

2.0 - 30 MHz



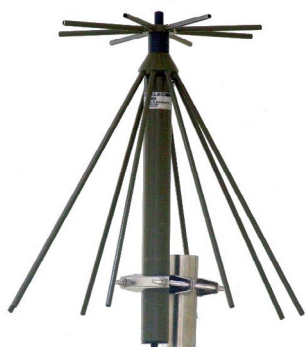
02221

10 - 30 MHz



02212

30 - 600 MHz



02686

200 - 520 MHz



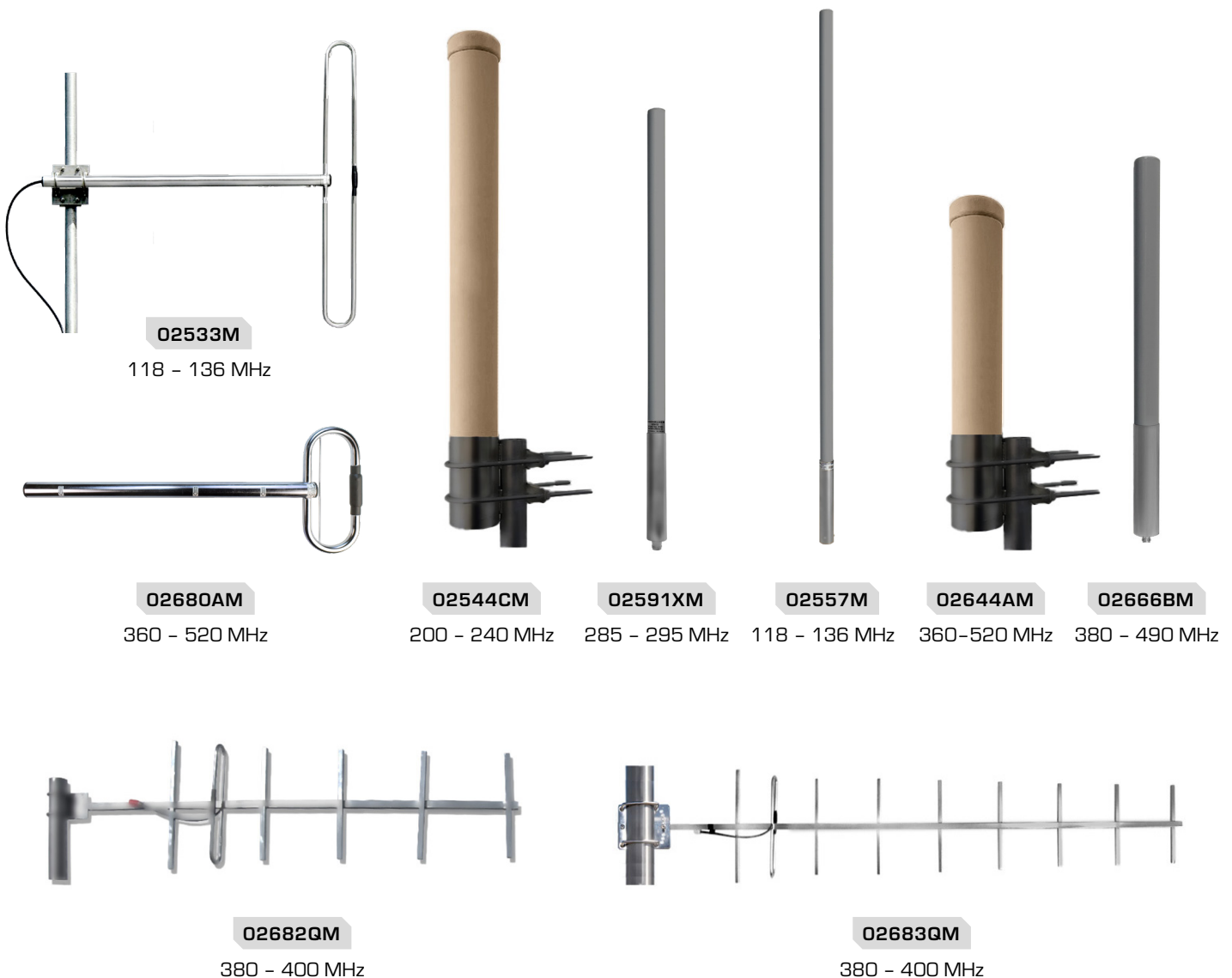
02674

65 - 1300 MHz

Base Antennas

SKU	DESCRIPTION	FREQUENCY	ORIGIN	TRL
02533M	VHF Air Band Base Folded Dipole	118 – 136 MHz	AU	9
02544CM	VHF Colinear Base Antenna	200 – 240 MHz	AU	9
02591XM	VHF Unity Gain Base Station/Marine Antenna	285 – 295 MHz	AU	9
02557M	VHF Air Band Base FULL BAND Unity Collinear	118 – 136 MHz	AU	9
02644AM	UHF Base Unity Enclosed Dipole	360 – 520 MHz	AU	9
02666BM	UHF Base Unity Enclosed Dipole	380 – 490 MHz	AU	9
02680AM	UHF Base Folded Dipole – 1 Wavelength Boom	360 – 520 MHz	AU	9
02682QM	UHF 6 Element Yagi	380 – 400 MHz	AU	9
02683QM	UHF Yagi 9 Element S/S	380 – 400 MHz	AU	9

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EW Antennas

SKU	DESCRIPTION	FREQUENCY	ORIGIN	TRL
02475MK	Low Profile Broadband Down Tilt Vehicular - 0.32m (NSN : 5985-66-158-8191)	0.5 - 2.5 GHz	AU	9
02476M	EW UWB Broadband 0.5m	0.5 - 6.0 GHz	AU	4
020107	Mobile Broadband Antenna - 1.68m	25 - 520 MHz	AU	5
020107C	Mobile Broadband Antenna - 1.68m - COTS Base	25 - 520 MHz	AU	5
024360D	UWB FlexNek™ 2.5dBi TNC Plug	0.6 - 7.2 GHz	AU	9
024365D	UWB FlexNek™ 2.5dBi TNC Plug	0.38 - 7.2 GHz	AU	9

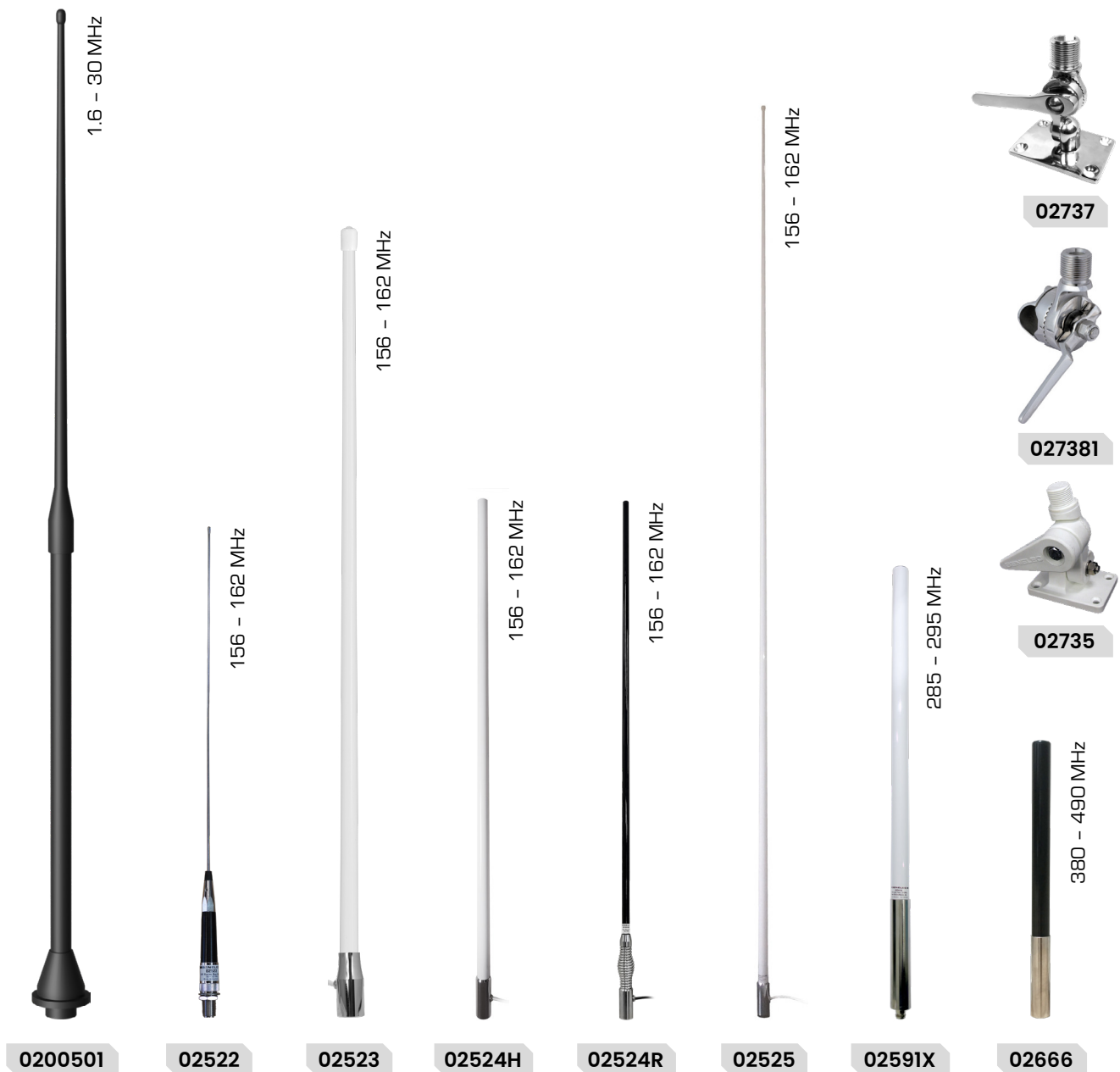
AU = Australian made.



Maritime Antennas

SKU	DESCRIPTION	FREQUENCY	ORIGIN	TRL
0200501	Ship Board HF 10.67m Deck Mount	1.6 – 30 MHz	US	9
02522	Marine VHF 3.0dBi 1/2 Wave Mast Mount Stainless Whip	156 – 162 MHz	AU	9
02523	Marine VHF 6ft / 1.8m 1/2 Wave Deck Mount	156 – 162 MHz	AU	9
02524H	Marine VHF 1/2 Wave Heavy Duty 1m Deck Mount	156 – 162 MHz	AU	9
02524R	Marine VHF 1/2 Wave Ultra Rugged Spring Deck Mount	156 – 162 MHz	AU	9
02525	Marine VHF 8ft / 2.4m 1/2 Wave Deck Mount	156 – 162 MHz	AU	9
02591X	VHF Unity Gain Base Station/Marine Antenna	285 – 295 MHz	AU	9
02666	UHF Marine Broadband Antenna GPI	380 – 490 MHz	AU	9

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Technology Readiness Level Definition (TRL)

Benelec used the Australian DSTO definition for TRL level, this defines the Technology Rediness Level. Our antennas are designed and made in Australia and we confirm to the TRL standards to define the readiness of an antenna for deplyment. We list our TRL for each product throughout this catalogue so the reader is aware of the antennas availability, please lookout for the TRL number for each item. The TRL level will provide some indication as to the readiness for us to provide the product. TRL 9 products are used and sold for deployment by exisiting clients and are proven in operational use.

FREQUENCY	ORIGIN	TRL
0.5 - 2.5 GHz	AU	9
0.5 - 6.0 GHz	AU	4
25 - 520 MHz	AU	5
25 - 520 MHz	AU	5
1.3 - 7.2 GHz	AU	4

TRL 1	Basic Research: In itial scientific research has been conducted. Principles are qualitatively postulated and observed. Focus is on new discovery rather than applications.
TRL 2	Applied Research: Initi al practical applications are identified. Potential of material or process to solve a problem, satisfy a need or find application is confirmed.
TRL 3	Critical Function or Proof of Concept Established: Applied research advances and early stage developme nt begins. Studies and laboratory measurements validate analytical predictions of separate elements of the technology.
TRL 4	Lab Testing/Validation of Alpha Prototype Component/Process: Design, development and lab testing of components/processes. Resul ts provide evidence that performance targets may be attainable based on projected or modeled systems.
TRL 5	Laboratory Testing of Integrated/Semi Integrated System: System Component and/or process validation is achieved in a relevant environment.
TRL 6	Prototype System Verified: System/process prototype demonstration in an perational environment (beta prototype system level).
TRL 7	Integrated Pilot System Demonstrated: System/process prototype demonstration in an operational environment (integrate d pilot system level).
TRL 8	System Incorporated in Commercial Design: Actual system/process completed and qualified through test and demonstration (pre commercial demonstration).
TRL 9	System Proven and Ready for Full Commercial Deployment: Actual s ystem proven through successful operations in operating environment, and ready for full commercial deployment.

Notes...



BATTLE PROVEN ANTENNA TECHNOLOGY

Benelec specialises in designing, manufacturing, and supporting high-performance quality antenna systems. Benelec provides Dis-mounted, Mounted, un-crewed and Fix Base: RF antennas in the HF-8GHz band. These cater for MANET, EW and C2 Applications in the Land and Maritime domains.

DISCRIMINATORS

- Innovative design and construction
- Australian Manufactured and operated SME
- Tailored bespoke designs
- Manufactured to MIL-810 standards.
- Traceable antenna performance
- Performance backed by 3 year antenna warranty
- Local Ongoing Service and Support
- No ITARS Restrictions

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