

SureAntennas®



**SMARTER ANTENNA SOLUTIONS
READY FOR ESN**



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SureAntennas®

Sure Antennas is located in the North West of England since 1977.

The company occupies a niche position within the mobile antenna design and build marketplace, having developed thousands of RF critical antenna solutions for specialist radio operators including the police and military around the world.

In the past, Sure Antennas has focused on the design, manufacture and modification of OEM discreet antenna applications to vehicles that require total anonymity within the environment that they are deployed.

More recently it has created a portfolio of overt high performance multi-function vehicle antennas including duplexers, multiplexers and combiner units. All to help end users transitioning to 4G and 5G vehicle technology.



SURE ANTENNAS READY FOR ESN

**Providing 4G, 5G, Tetra, GPS & Wi-Fi
to public safety vehicles in the UK**

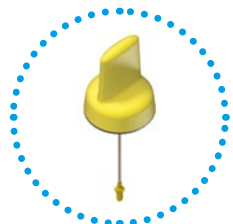
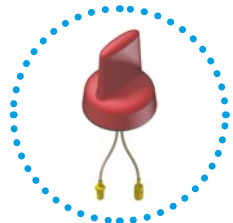
Sure Antennas has been investing time and development in overt antennas for the emergency services next generation communication system Emergency Services Network (ESN).

ESN will operate on EE's 4G network, using LTE technology, it will provide a mobile broadband service while still retaining Tetra usage for the ESMCP incremental approach.

Through utilising the latest mobile technology in 4G and 5G, ESN will ensure the functionality, coverage, security and availability needs of the UK's emergency services are fully met.

The new network will enable high bandwidth functionality, meaning services such as high-resolution streaming will be possible. Such improvements will allow a control room or responding officer to make a better assessment of an incident than was previously possible.

And with the imminent transition to ESN, Sure Antennas has developed a range of antennas to future proof public safety vehicles in the UK.



Multifunction ESN Ready Sandcastle MiMo Antenna System up to 13 Functions



The ‘Sandcastle’ is a multifunction antenna specifically designed to help your ESN transition. With 4x Ultra Wideband antenna outputs covering 700MHz to 6GHz, this antenna could future proof your vehicle installation for years to come. It has a minimum 4dBi gain across the band*, and is a high performance option for all public safety applications.

FEATURES

- > 4x4 Wideband 2G, 3G, 4G, 5G outputs
- > Choose 4-13 functions in 1 antenna
- > Ultra Wide Bandwidth 700MHz - 6000MHz
- > Optional 6x6 MiMo Dual Band Wi-Fi / WiMAX
- > Low Profile
- > Simple single hole installation
- > Up to 4 GPS / GLNSS Ports DC isolated
- > Optional support for Tetra / Wi-Fi / LTE / VHF / UHF whip
- > Choose black or white

With the option of up to 6x6 MiMo Dual Band Wi-Fi, and optional Tetra whip mounting, the need for drilling extra holes in your vehicles roof is long gone. And with a single hole fitting, cost of installation is reduced whilst protecting the resale value of your vehicle. Other variants are available including extension cable options.

[Please contact us for more information.](#)

| | | | |
|------------------------------|--|----------------------|--------------------------|
| Frequency Range (MHz) | 380 - 430 MHz | 700 - 6000 MHz | 2.4 GHz & 5.8 GHz |
| Band | TETRA | 4x4 2G, 3G, 4G, 5G | 4x4 Dual Band Wi-Fi |
| VSWR | <2:1 TYPICALLY 1.5:1 | <2:1 TYPICALLY 1.5:1 | <2.1:1 TYPICALLY 1.5:1 |
| Isolation | — | <-25dB | <-25dB |
| Gain | 2dBi* | Minimum 4dBi* | Minimum 4dBi* |
| Max Power Input (W) | 25W | 10W | 10W |
| Cable Type | RG316 | RG316 | RG316 |
| Termination | TNC (f) | SMA (f) | SMA (m) Reverse Polarity |
| Dimensions (mm) | H 76 x W 225 x L 240 ** | | |
| Weight (g) | 600 | | |
| GPS / GLNSS Data | | | |
| Frequency Range (MHz) | 1562 - 1612 MHz | | |
| VSWR | <2:1 | | |
| Gain | >26dB | | |
| Operating Voltage | 3-5v DC (fed via coax, each port is DC isolated) | | |
| Cable | 4x RG316 Terminated to SMA (m) | | |

Subject to change without prior notice.

*Ground plane dependent. **Excluding optional whip.

Multifunction ESN Ready Mallard MiMo Sharkfin Antenna up to 9 Functions



FEATURES

- > 2x2 Wideband 2G, 3G, 4G, 5G outputs
- > Ultra Wide Bandwidth 700MHz - 6000Mhz
- > Optional 4x4 MiMo Dual Band Wi-Fi / WiMAX
- > Low Profile OEM styled sharkfin
- > Simple single hole installation
- > Up to 2 GPS / GLNSS Ports DC isolated
- > Optional support for Tetra /Wi-Fi/LTE/VHF/UHF whip
- > Choose 2-9 functions in 1 antenna
- > Available in black, white or colour coded to your vehicle

The ‘Mallard’ is an OEM sleek styled compact sharkfin antenna that can support up to 8 functions. Its robust exterior houses 2x Ultra Wideband antenna elements supporting 700MHz to 6GHz with a minimum 4dBi gain across the whole band*.

Designed as a multi-function antenna you have the additional options of a 4x4 MiMo Dual Band Wi-Fi function, 2x GPS / GLNSS Ports, and support for an optional whip to provide many frequency options

including Tetra, Wi-Fi or LTE for an additional connection to help your ESN transition. With a single hole installation, and so many potential frequency functions on offer, this antenna would help reduce installation costs and protect your vehicles resale value by helping to future proof your vehicles installation. Available in different colours, with a wide range of low loss coax extension cable kits.

[Please contact us for more information.](#)

| | | | |
|------------------------------|--------------------------------|--------------------|--------------------------|
| Frequency Range (MHz) | 380 - 430 MHz | 700 - 6000 MHz | 2.4 GHz & 5.8 GHz |
| Band | TETRA | 2x2 2G, 3G, 4G, 5G | 4x4 Dual Band Wi-Fi |
| VSWR | <2:1 TYPICALLY 1.5:1 | | |
| Gain | 2dBi* | Minimum 4dBi* | Minimum 4dBi* |
| Max Power Input (W) | 25W | 10W | 10W |
| Cable Type | RG316 | RG316 | RG316 |
| Termination | TNC (f) | SMA (f) | SMA (m) Reverse Polarity |
| Dimensions (mm) | H 82 x W 70 x L 220 ** | | |
| Weight (g) | 310 | | |
| GPS / GLNSS Data | | | |
| Frequency Range (MHz) | 1562 - 1612 MHz | | |
| VSWR | <2:1 | | |
| Gain | >26dB | | |
| Operating Voltage | 3-5v DC (fed via coax) | | |
| Cable | 2x RG316 Terminated to SMA (m) | | |

Subject to change without prior notice.

*Ground plane dependent. **Excluding optional whip.

Multifunction 2x2 MiMo Dome Antenna Up to 7 Functions



FEATURES

- > Covering 2x2 2G, 3G, 4G cellular bands
- > Optional 4x4 MiMo Dual Band Wi-Fi
- > Desk and magnetic mount option
- > Choose 2-7 functions in 1 antenna
- > Available in black or white

This multifunction panel mount antenna is an ideal fit to any vehicle as a universal antenna, and supports up to 7 functions. It boasts MiMo LTE/2G/3G/4G elements, dual band Wi-Fi outputs and GPS.

It is supplied in white or black. Purchase options allow you to choose the functions you need. Versatile mounting options allow it to be mounted on a flat service or as a magnetic antenna.

[Please contact us for more information.](#)

| | | | |
|-------------------------------|---|--|--|
| Frequency Range (MHz) | 2.4 GHz & 5.8 GHz | 1575 MHz | 700 - 960, 1750 - 2700 MHz |
| Band | 2x2 Dual Band Wi-Fi | 1x GPS | 2x2 2G, 3G, 4G LTE |
| Gain | Minimum 4dBi* | >25dB | Minimum 4dBi* |
| Max Power Input (W) | 10W | – | 10W |
| Polarisation | Vertical | RHCP | Vertical |
| VSWR | <2.1:1 TYPICALLY 1.5:1 | <1.5:1 | <2.1:1 TYPICALLY 1.5:1 |
| Temp. Range | -40° C to +80° C (-40° F to 176° F) | | |
| Coax & Termination | 4x 300mm RG316 Low Loss Coax Terminated to SMA (m) Reverse Polarity | 1x 300mm RG316 Low Loss Coax terminated to SMA (m) | 2x 300mm RG316 Low Loss Coax Terminated to SMA (f) |
| Impedance | 50Ω | 50Ω | 50Ω |

Subject to change without prior notice.

*Ground plane dependent.

Ultra Wideband LTE Cellular 2G, 3G, 4G, 5G Wi-Fi Antenna 2 Functions

5000-302



FEATURES

- > Ultra Wide Bandwidth 700MHz - 6000Mhz
- > With GPS / GLNSS
- > Simple single hole installation
- > Suitable for blue light fleets
- > Low Profile housing
- > Available in black or white

This overt low profile LTE / Cellular / Wi-Fi Antenna features a wideband element encased in a tough IP66 housing with a single nut fitting.

In addition the unit also includes a GPS / GLNSS receiving element with a gain of >25dB.

This part number is supplied in a black plastic finish but can be supplied in other colour variants.

[Please contact us for more information.](#)

| Part No | 5000-302 | |
|-----------------------|---|---|
| Band | Cellular 2G, 3G, 4G, 5G | GPS / GLNSS |
| Frequency Range (MHz) | 700 - 6000 MHz | 1575.42 MHz, 1602 MHz |
| Gain | Minimum 4dBi* | >25dB Typical |
| Max Power Input (W) | 10W | - |
| Polarisation | Vertical | RHCP |
| VSWR | <2.5:1 (typical 1.5:1) | <1.5:1 |
| Dimensions (mm) | H 75 x W 66 | |
| Temp. Range | -20° C to +60° C | |
| Coax & Termination | 1x 300mm RG316 Low Loss Coax terminated to SMA (f) | 1x 300mm RG316 Low Loss Coax terminated to SMA (m) |
| Impedance | 50Ω | 50Ω |

Subject to change without prior notice.

*Ground plane dependent.

Ultra Wideband LTE Cellular 2G, 3G, 4G, 5G Wi-Fi Antenna

4000-301



FEATURES

- > Ultra Wide Bandwidth 700MHz - 6000Mhz
- > Low Profile housing
- > Simple single hole installation
- > Suitable for blue light fleets

The 4000-301 is a low profile antenna giving reliable performance over an ultra-wide bandwidth.

Covering 700 - 6000 Mhz, this versatile antenna supports public safety LTE, worldwide cellular, and dual band Wi-Fi frequencies with a reliable gain throughout the entire band.

With a convenient adhesive pad and a single nut fitment allowing a simple cost effective solution. Available in different colours, with a wide range of custom low coax extension cables.

Please contact us for more information.

| Part No | 4000-301 |
|-----------------------|-------------------------------------|
| Frequency Range (MHz) | 700 - 6000 MHz |
| Band | Cellular 2G, 3G, 4G, 5G |
| Gain | Minimum 4dBi* |
| Max Power Input (W) | 10W |
| Polarisation | Vertical |
| Pattern | Omni-directional |
| Dimensions (mm) | H 75 x W 66 |
| Weight (g) | 250 |
| Temp. Range | -40° C to +80° C (-40° F to 176° F) |
| Impedance | 50Ω |
| Cable Type | RG316 |
| Termination | SMA (f) |

Subject to change without prior notice.

*Ground plane dependent.

Tetra Combiner / Divider Unit

SM3400



FEATURES

- > Connect 2x Tetra Transceivers through one antenna
- > Input power up to 50w
- > Custom frequencies available within 70 - 2400 MHz
- > Other connectors available on request
- > Combine 2x antennas to one transceiver

The SM3400 'combiner / divider unit' was specifically designed to enable two transmitters to transmit simultaneously, without the use of switching circuitry.

This passive unit can operate 380 - 400MHz with an insertion loss of less than -0.4 dB* and isolation port to

port of less than -30 dB across 20MHz bandwidth and offers a great performance against active switch units. The SM3400 can be built to support other frequencies within 70 - 2400 MHz.

[Please contact us for more information.](#)

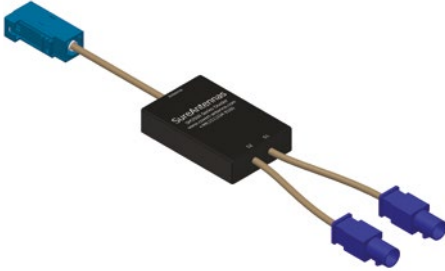
| Part No | SM3400W50S0-4 | SM3400W25S0-4 | SM3400W10S0-4 |
|-----------------------|------------------|---------------|---------------|
| Frequency Range (MHz) | 380 - 400 MHz | | |
| Band | Tetra x 2 | | |
| Max Power Input (W) | 50W | 25W | 10W |
| Insertion loss | < 0.4dB* | | |
| VSWR | <1.2:1 | | |
| Port Isolation | >30dB | | |
| Temp. Range | -20° C to +60° C | | |
| Connection | SMA (f)** | | |
| Impedance | 50Ω | | |

Subject to change without prior notice.

*Excluding combining losses. **Custom Connection Configurations available.

SM3500 GPS / GLNSS Wilkinson Power Divider

SM3500-0C1C1C



FEATURES

- > Combine 2x GPS receivers to one antenna
- > Both GPS tails DC isolated
- > Custom connection options available

The SM3500 'divider unit' was specifically designed to enable two GPS devices to connect to a single antenna without blocking DC input.

When used with one of our full covert antenna systems this unit can be attached to retain OEM functionality of a factory fitted satellite navigation system, and to operate a GPS enabled mobile radio simultaneously

through a single GPS element helping eliminate unwanted error messages on your vehicles dashboard.

The passive unit can operate at 1575MHz and 1620MHz and supplied with custom terminations on request.

[Please contact us for more information.](#)

| Part No | SM3500-0C1C1C |
|-----------------------|---|
| Frequency Range (MHz) | 1575 - 1620 MHz |
| Max Power Input (W) | 0.5W |
| Insertion Loss | < 0.5dB* |
| Port Isolation | > 20dB |
| VSWR | < 1.2:1 |
| Impedance | 50Ω |
| DC Input | DC Fed From independently fed from both ports |
| Output Connection | FAKRA C Male Blue** |
| Input Connection | FAKRA Z Female Water blue** |
| Temperature Range | -20° C to +60° C |

Subject to change without prior notice.

*Excluding combining losses. **Custom Connection Configurations available.

Important Waiver Information

All information and data in this brochure is providing an indication of typical performance of our products under a common installation type, it does not guarantee performance or suitability for all installation requirements.

It is therefore encouraged all customers should conduct their own tests on a product to establish it is correct for their installation.

Products should only be installed by a qualified installer, familiar with appropriate laws and regulations. We advise customers to consult and comply with the appropriate Sure Antennas installation instructions.

All specifications and product information in this catalogue are subject to change without notice.





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