Connectivity Guide

TAOGLAS®

PUBLIC SAFETY AND CRITICAL INFRASTRUCTURE SOLUTIONS PORTFOLIO



Revision 1.0

SPOTLIGHT APPLICATION

Public Safety



Real time, fail-safe location streaming for vehicle communication and tracking



Enable mission critical in-vehicle and on-body communications



High precision cm-level positioning for situational awareness



Advanced antenna designs configured for the world's industry-leading routers



Replace antenna farms on vehicle roofs with enclosures designed to minimize installation time and cost

KEY PRODUCTS FOR PUBLIC SAFETY

Synergy / Synergy X Dome Antenna

MOBILE

The Synergy and Synergy X series of products are next-generation permanent mount antennas designed for exceptional performance when used in conjunction with the next generation of routers. The Synergy is available in 11-in-1 modular combinations of GNSS, 5G/4G LTE Cellular and Wi-Fi to match your router configuration. The Synergy X, with up to 9-in-1 combinations of multi-band GNSS, 5G/4G LTE and Wi-Fi. All available as standard with either 1ft pigtail cables or braided cable assemblies.

FEATURES

- Low-profile permanent mount enclosure
- 5G/4G MIMO covering 600-6000MHz
- Wi-Fi 6 MIMO ranging from 2.4 / 5.8 - 7.125 GHz
- High performance GNSS and Multi-band GNSS
- Robust IP67 rated waterproof enclosures



Synergy MA15xx Series

- One Optional GNSS
- Up to 4 Cellular antennas
- Up to 6 Wi-Fi antennas
- Dimensions: Ø161 mm x 67 mm
- 1ft Pigtail or Braided Cable Assemblies as standard*

Scan or click to learn more



Synergy X MA155x Series

- One High-performance Multi-band GNSS
- Up to 4 5G/4G Cellular antennas
- Up to 4 Wi-Fi antennas
- Dimensions: Ø160 mm x 57.5 mm
- 1ft of Pigtail Cables or 15ft Braided Cable Assemblies as standard*

Scan or click to learn more

*Cable lengths and connectors can be configured upon request.

Patriot Series Black 18-in-1 High-Performance Super Compact Combination Antenna

MOBILE

The Patriot is a cutting-edge multi-combination antenna engineered specifically for the Ford Interceptor police vehicle. With up to 18-in-1 connectivity, including 5G,/4G, GNSS (L1 & L1/L5), Wi-Fi®, SDRAS and LMR/TETRA, it ensures optimal performance for first responders and fleet vehicles. It's compact, low-profile design allows for seamless integration onto vehicle roofs, utilizing existing OEM mounting connections to simplify installation.

FEATURES

- Most antenna combinations in the market, with up to 18-in-1
- 5G/4G MIMO covering 600-6000MHz
- Wi-Fi 6 MIMO ranging from 2.4 / 5.8 - 7.125 GHz
- 2 x Multi-band GNSS
- Robust IP69K rated waterproof enclosures



Patriot Series 18-in-1

- Super Low-profile, IP69K rated Enclosure
- Impact resistant – Rated to IK08
- Up to 18-in-1 combinations of:
- 9x 5G/4G MIMO 617 to 6000MHz
- 5x Wi-Fi® MIMO 2.4/5.8/7.125 GHz
- 2x Multiband GNSS Antenna
- 1x SDARS
- 1x Interchangable Whip for full P25 VHF/UHF/700-900 MHz support
  - FW.38.M6.F (Ø13mm x 164mm) covering 380 – 400MHz
  - FW.79.M6.F (Ø13mm x 65mm) covering 700 – 900M

Scan or click to learn more

*Cable lengths and connectors can be configured upon request.

KEY PRODUCTS FOR PUBLIC SAFETY

Monsoon Series Permanent Mount Antenna

IOT

The Monsoon series of products are permanent mount combination antennas, designed with a robust and rugged enclosure for the most demanding of installations. The Monsoon can be supplied in up to 5 configurations of antennas in one miniature enclosure. The Monsoon, designed with a low-profile enclosure for sleek, covert installations on vehicles, is ideal due to it's IP69k waterproof rating and IK10 Rating. The series can be supplied with custom cables and connectors for specific customer environments.

FEATURES

- Stylish, low profile alternative to sharkfin style antennas
- 5G/4G MIMO covering 600-6000MHz
- Wi-Fi 6 ranging from 2.4 / 5.8 - 7.125 GHz
- High performance GNSS
- Robust IP69K rated waterproof enclosure



Monsoon MA17X Series

- One Optional GNSS
- Up to 2 Cellular antennas
- Up to 2 Wi-Fi Antennas
- Dimensions: 204 mm x 69 mm x 31 mm
- Low Loss 5mm diameter cable as standard to minimize losses

Scan or click to learn more



Monsoon GA17X Series

- 5G/4G covering 600-6000MHz
- Robust IP69K rated waterproof enclosure
- Small Overall footprint
- Dimensions: 204 mm x 69 mm x 31 mm
- Low loss cables as standard

Scan or click to learn more

*Cable lengths and connectors can be configured upon request.

Guardian X/ Guardian Adhesive Antenna

MOBILE FIXED

The Guardian and Guardian X series of products are available with wall or adhesive mounting options depending on customers preferred installation method. The Guardian can be supplied in up to 9 configurations of antennas in one enclosure, while the Guardian X can be supplied with up to 17 configurations of antennas. The Guardian & Guardian X series have been designed with low profile enclosures for sleek, covert installations in buildings, vehicles and various other applications. The series can be supplied with custom cables and connectors for specific customer environments.

FEATURES

- Most antenna combinations in the market, with up to 17-in-1
- 5G/4G MIMO covering 600-6000MHz
- Wi-Fi 6 MIMO ranging from 2.4 / 5.8 - 7.125 GHz
- High performance GNSS or Multi-band GNSS
- Robust IP67 rated waterproof enclosures



GuardianX MA99XX Series

- One Optional GNSS
- Up to 8 Cellular antennas
- Up to 8 Wi-Fi antennas
- Dimensions: 360 mm x 160 mm x 20.5 mm
- Low loss 5mm TGC-200 cable as standard to minimize losses

Scan or click to learn more



Guardian MA9XX Series

- One High-performance Multi-band GNSS
- Up to 8 5G/4G Cellular antennas (MA990 / MA995)
- Up to 4 5G/4G Cellular antennas (MA963/MA952)
- Up to 4 Wi-Fi antennas
- Dimensions: 146 mm x 134 mm x 20 mm
- 1ft of Pigtail Cables or Braided Cable Assemblies as standard*

Scan or click to learn more

*Cable lengths and connectors can be configured upon request.

KEY PRODUCTS FOR PUBLIC SAFETY

Watson Series MA2332 Covert Triband Transparent Film Antenna covering 150-900MHz

MOBILE

The Taoglas Watson Series MA2332 is a nextgeneration, high-performance, low-proPle triband Plm antenna, designed for demanding automotive and heavy equipment applications. Housed in a robust ABS+PC enclosure with an internal PCB, the MA2332 delivers reliable performance across the 150 MHz, 450 MHz, and 700 MHz frequency bands. Its compact, covert design ensures seamless integration into modern vehicles without compromising durability or RF performance. Certified to the stringent TS16949 automotive quality standard, the MA2332 is approved for OEM deployment and meets the rigorous requirements of heavy-duty truck and equipment manufacturers. This makes it the ideal solution for:

- OEM automotive platforms
- Heavy-duty trucks and plant machinery
- Recreational vehicles (RVs) Motorcycles
- Specialized and industrial equipment

The antenna includes a 330mm (13") low-loss RG-316 coaxial cable terminating in a SMA male connector as standard. Custom cable lengths and connector conPgurations are available upon request but a cable assembly with SMA(F) to QMA(M) is advised for use. For tailored integration options, please contact your local Taoglas support team.

Scan or click to learn more

SPOTLIGHT APPLICATION

Transportation



Reliable and high-speed passenger Wi-Fi access



Real-time transportation route schedules and updates



GNSS enabled location tracking for optimizing route planning, and navigation systems



Tap on and off public transport systems through NFC-enabled smart cards, smartphones, or wearable devices



Wi-Fi and cellular technology to provide real-time feedback on bike position and battery level

KEY PRODUCTS FOR TRANSPORTATION

Raptor MAX High Performance 12-in-1 Combination Antenna

MOBILE

The Taoglas® Raptor MAX series of combination antennas are designed to enhance the connectivity options available to you for your vehicle. With up to 16-in-1 connections available, in combinations of Multiband GNSS, 5G/4G MIMO, Wi-Fi® MIMO, LMR/VHF/UHF/Tetra, this next generation, super low-profile vehicle roof mount antenna eliminates the need for multiple antenna installations

FEATURES

- Antenna combinations up to 12-in-1
- 8* 5G/4G MIMO covering 600-6000MHz
- 3* Wi-Fi 6 MIMO ranging from 2.4 / 5.8 - 7.125 GHz
- 1* Multiband L1/L5 GNSS
- Robust IP67 rated waterproof enclosure



Raptor MAX – MAX1012

- Low-profile, IP67 rated Enclosure
- Up to 12-in-1 combinations of:
- 8* LTE MIMO 617 to 6000MHz
- 3* Wi-Fi® MIMO 2.4/5.8/7.125 GHz
- 1* Multiband L1/L5 GNSS Antenna
- Dimensions: 330 x 75.5 x 45.2mm
- RoHS & Reach Compliant

Scan or click to learn more

*Cable lengths and connectors can be configured upon request.

Raptor Permanent Mount Series

MOBILE

The Raptor Series of sharkfin style antenna series are designed for mounting on vehicle roofs. Expertly designed with first responder vehicles in mind, the Raptor series combines up to 7 combinations of GNSS, 5G/LTE, Wi-Fi, AM/FM and specialist communications bands such as LMR, VHF and TETRA. The whip antenna supplied with the Raptor III is interchangeable to optimize the specialist communications used. The series can be supplied with custom cables and connectors for specific customer environments.

FEATURES

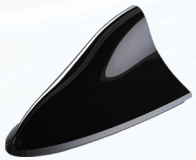
- Antenna combinations up to 7-in-1
- 5G/4G MIMO covering 600-6000MHz
- Sleek designs for aftermarket installs
- High performance GNSS & AM/FM
- Robust IP67 rated waterproof enclosures



Raptor III MA12XX Series

- Interchangeable whip for optimized critical communications
- 5G/4G MIMO antennas for use with next gen routers
- Reliable AM/FM, for standard antenna replacements
- Low Profile to stay below vehicle height restrictions
- Dimensions: 190mm x 95mm x 92mm
- 1ft of Pigtail Cables or Braided Cable Assemblies as standard*

Scan or click to learn more



Raptor I MA10XX Series

- High quality, glossy finish and robust IP67 ABS+PC enclosure
- Reliable AM/FM, for standard antenna replacements
- Low Profile to stay below vehicle height restrictions
- Dimensions: 176mm x 85mm x 72mm
- 1ft of Pigtail Cables or Braided Cable Assemblies as standard*

Scan or click to learn more

*Cable lengths and connectors can be configured upon request.

KEY PRODUCTS FOR TRANSPORTATION

Pantheon Dome Permanent Mount Series

MOBILE

The Taoglas Pantheon series is a robust permanent mount antenna solution for external installations. This unique antenna delivers powerful MIMO antenna technology for cellular and Wi-Fi plus GNSS for next generation multiple wireless technology systems, such as telematics. Five high performance antennas are integrated into a compact, extremely robust IP67 direct/permanent mount antenna package with excellent isolation (20dB+). The series can be supplied with custom cables and connectors for specific customer environments.

FEATURES

- Antenna combinations up to 5-in-1
- 2* 5G/4G MIMO covering 600-6000MHz
- 2* Wi-Fi 6 MIMO ranging from 2.4 / 5.8 - 7.125 GHz
- 1* High performance GNSS
- Robust IP67 rated waterproof enclosures



Pantheon MA7XX Series

Scan or click to learn more

- One high-performance GNSS
- Up to 2 Cellular antennas
- Up to 2 Wi-Fi Antennas
- Low loss cables as standard*
- Large thread, external screw mount antenna for vandal proof installations
- Compact and low profile at Ø145mm x 82mm, staying below vehicle install height restrictions
- Fully IP67 rated, heavy-duty antenna for use in telematics, transportation and remote monitoring applications

*Cable lengths and connectors can be configured upon request.

Genesis Adhesive Mount Series

MOBILE

The Genesis antenna is a combination of 5G/LTE, Wi-Fi and GNSS, IP67 waterproof external M2M antenna for use in telematics, transportation, and remote monitoring applications. The Genesis antenna can be supplied with up to 5, well isolated, antennas in one compact enclosure. The robust PC/ABS enclosure is fully IP65 rated and designed to withstand the high temperatures of up to +85c normally associated with transportation and telematics applications. The series can be supplied with custom cables and connectors for specific customer environments.

FEATURES

- Antenna combinations up to 5-in-1
- 5G/4G MIMO covering 600-6000MHz
- Wi-Fi MIMO ranging from 2.4 - 5.8GHz
- High performance GNSS
- Robust IP67 rated waterproof enclosures



Genesis MA24X & MA27X Series

Scan or click to learn more

- Heavy Duty 3M Tape for vandal proof installations
- Low Loss Cables as standard*
- Powerful MIMO antenna technology for 5G/4G Cellular and Wi-Fi
- Dimensions: 205mm x 68mm x 12.5mm
- Low Profile to be covertly installed on windshields and headliners

*Cable lengths and connectors can be configured upon request.

KEY PRODUCTS FOR TRANSPORTATION

Magnetic Mount Series

MOBILE

Taoglas supply a range of external antennas which use magnetic mounting for non destructive installations where a customer may use leased vehicles or may want to mount on a surface on which they cannot drill a hole for a permanent mount antenna. With combinations of high-precision GNSS, 5G/LTE, Wi-Fi, LoRa and others Taoglas can provide an optimum solution for a customers use case. The series can be supplied with custom cables and connectors for specific customer environments.

FEATURES

- Antenna combinations up to 5-in-1
- 5G/4G MIMO covering 600-6000MHz
- Wi-Fi 6 MIMO ranging from 2.4 - 5.8/7.125 GHz
- High performance GNSS
- IP67 Waterproof Enclosures



Comet MA32X Series

- Low profile, puck style, adhesive/magnetic mount antenna
- 5G/4G high performance antennas for use in MIMO cellular systems
- Covers all worldwide cellular frequencies from 600MHz to 6GHz
- IP67 Waterproof Rated Enclosure
- Dimensions: Ø80mm x 18mm

Scan or click to learn more



Steedan MA35X Series

- IP65 Rated, Ruggedized PC/ABS Enclosure
- Low Loss Cables as standard
- Powerful MIMO antenna technology for 5G/4G Cellular and Wi-Fi
- Dimensions: Ø145mm x 82mm
- Low Profile to stay below vehicle height restrictions

Scan or click to learn more

*Cable lengths and connectors can be configured upon request.

Torus Magnetic Bracket Series

Brackets & Accessories

The Taoglas MMB series are a robust magnetic mount base solution for external Taoglas antennas that would typically require drilling a hole for installation. There are times when drilling a hole for installation is not feasible either due to cost or aesthetics. The Taoglas MMB magnetic mount base removes the need to drill by providing an adapter with the proper hole size for the antenna you are using. The MMB Series supports Taoglas' entire range of external through hole/permanent mount antennas.

FEATURES

- Super strong magnets integrated in the base for reliable installation
- Customizable for different external antenna thread diameters from ø16mm to ø31mm
- Excellent for vehicle proof of concept applications
- Soft foam cushion to protect the mounting surface
- Easy installation of antenna on the bracket



Torus MMB Series

- Antenna Thread Diameters From Ø16mm to Ø31mm
- Non destructive installations - No drilling required
- Compatible with all Taoglas permanent mount antennas
- Dimensions: Ø178 mm x 56 mm

Scan or click to learn more

*Cable lengths and connectors can be configured upon request.

SPOTLIGHT APPLICATION

Infrastructure



Wi-Fi, Bluetooth, and cellular technology to communicate between the EV, road users, and the charging infrastructure



Transform street lights into a connected digital network that can optimize traffic, parking and monitor air quality



Communicating real-time car park occupancy data to smart parking and traffic management systems



Wireless communication between RFID tags on vehicles, allowing for automatic identification and toll payment



Facilitate reliable wireless communication between vehicles and infrastructure for improved road safety

KEY PRODUCTS FOR INFRASTRUCTURE

Guardian X/ Guardian Adhesive Antenna

MOBILE FIXED

The Guardian and Guardian X series of products are available with wall or adhesive mounting options depending on customers preferred installation method. The Guardian can be supplied in up to 9 configurations of antennas in one enclosure, while the Guardian X can be supplied with up to 17 configurations of antennas. The Guardian & Guardian X series have been designed with low profile enclosures for sleek, covert installations in buildings, vehicles and various other applications. The series can be supplied with custom cables and connectors for specific customer environments.

FEATURES

- Most antenna combinations in the market, with up to 17-in-1
- 5G/4G MIMO covering 600-6000MHz
- Wi-Fi 6 MIMO ranging from 2.4 / 5.8 - 7.125 GHz
- High performance GNSS or Multi-band GNSS
- Robust IP67 rated waterproof enclosures



GuardianX MA99XX Series

- One Optional GNSS
- Up to 8 Cellular antennas
- Up to 8 Wi-Fi Antennas
- Dimensions: 360 mm x 160 mm x 20.5 mm
- Low loss 5mm TGC-200 cable as standard to minimize losses

Scan or click to learn more



Guardian MA9XX Series

- One High-performance Multi-band GNSS
- Up to 8 5G/4G Cellular antennas (MA990 / MA995)
- Up to 4 5G/4G Cellular antennas (MA963/MA952)
- Up to 4 Wi-Fi antennas
- Dimensions: 146 mm x 134 mm x 20 mm
- 1ft of Pigtail Cables or Braided Cable Assemblies as standard*

Scan or click to learn more

*Cable lengths and connectors can be configured upon request.

TGX Radial Multi Mount Series

FIXED

The TGX Series of antennas are an omni-directional, cross polarized solutions designed for operation across the full 5G/LTE spectrum. With a wide bandwidth from 400-6000MHz, the TGX series covers all newly established 5G bands and CBRS/C-Band frequencies for 5G and private network applications. It combines up to 8 cross dipole antennas to allow for better coverage and throughput in urban areas, and reduces the requirement for high-cost directional antennas. The series can be supplied with custom cables and connectors.

FEATURES

- Antenna combinations with either 2, 4 or 8 cross dipole antennas
- 5G/4G MIMO covering 400-6000MHz
- Multi Function bracket for various installation options
- Cross Polarized Dipole Antennas
- Robust IP67 rated waterproof enclosures



TGX.04 Series

- Multi-function bracket including Wall, Pole and Glass Mount options
- Available in black or white for different use cases
- Stable omni-directional gain patterns
- Dimensions: 165mm x 165mm x 149mm
- Low Loss Cables as standard*

Scan or click to learn more



TGX.08 Series

- Omni-directional Gain Patterns leading to better coverage
- 8 cellular connections
- Multi-function bracket including Wall, Pole and Glass Mount options
- Dimensions: 338mm x 171mm x 60mm
- Low Loss Cables as standard*

Scan or click to learn more

*Cable lengths and connectors can be configured upon request.

KEY PRODUCTS FOR INFRASTRUCTURE

Thunder Series Integrated Antenna & Router Solutions

FIXED

The Thunder Series delivers high-performance connectivity in a rugged, all-in-one design. The antenna series is designed to allow for the integration of many leading routers within the antenna enclosure. Engineered for simplicity and reliability, these integrated solutions minimize installation complexity while maximizing signal strength and uptime, even in the most demanding environments. The Thunder Series are available with active or passive PoE.

Why Choose Thunder Integrated Antennas?

Simplify Installations
All-in-one design combines antennas and router into a single, compact enclosure, reducing setup time, cabling, and potential failure points.

Stay Connected Anywhere
Whether you're operating in urban centers or off-the-grid locations, Thunder ensure consistent, high-speed connectivity for mission-critical applications.

Thunder Directional Antenna: ideal for weak signal areas, the Thunder Directional Antenna optimizes 5G connectivity while integrating Wi-Fi®, Bluetooth®, and GNSS functionality.

Thunder Omnidirectional Antenna: featuring dual 5G, dual Wi-Fi® (including Wi-Fi® 6E), Bluetooth, and GNSS antennas, the Thunder Omnidirectional Antenna is perfect for mobile setups like RVs, boats, and industrial deployments.

All-in-One Reliability: streamline your tech stack. The Thunder series integrate leading routers* and advanced antennas into one weather-resistant unit saving space, reducing maintenance, and ensuring durable performance in any climate.

Typical applications include:

- Smart Cities
- Smart Public Transit
- Infrastructure Management
- Enterprise & IoT Deployments

Scan or click to learn more



KEY PRODUCTS FOR INFRASTRUCTURE

Thunder Series - Directional Antenna

FIXED



THDR19 Thunder Integrated 5G/LTE Directional Antenna for **Ericsson R1900**
All-in-one antenna for Ericsson R1900 routers which is ideal for connections over long distances to base station. It has embedded directional cellular, Wi-Fi®, Bluetooth®, and GNSS antennas.



THDR92 Thunder Integrated 5G/LTE Directional Antenna for **Ericsson R920**
All-in-one antenna for Ericsson R920 routers which is a perfect outdoor device for improving the signal in rural/suburban and locations where the mobile signal is weak. It has embedded directional cellular, Wi-Fi®, Bluetooth®, and GNSS antennas.



THDR98 Thunder Integrated 5G/LTE Directional Antenna for **Ericsson R980**
All-in-one antenna for Ericsson R980 routers which is ideal for connections with long distance to base station. It has embedded directional cellular, Wi-Fi®, and GNSS antennas.



THDR40 Thunder Integrated 5G/LTE Directional Antenna for **Ericsson S400**
An outdoor antenna for Ericsson S400 routers which is a perfect outdoor device for improving the signal in rural/ suburban and locations where the mobile signal is weak. It has embedded directional cellular and Wi-Fi® antennas.



THDR70 Thunder Integrated 5G/LTE Directional Antenna with for **Ericsson S700**
All-in-one antenna for Ericsson S700 routers which is a perfect outdoor device for improving the signal in rural/suburban and locations where the mobile signal is weak. It has embedded directional cellular, Wi-Fi®, and GNSS antenna.

Scan or click to learn more



THDR60 Thunder Integrated 5G/LTE Directional Antenna for **Semtech XR60**
A robust antenna for Semtech XR60 routers which is designed for use in a variety of wireless communication applications. This all-in-one product consists of multi-band cellular, Wi-Fi®, and GNSS antennas integrated in a IP67 enclosure.



THDR50 Thunder Integrated 5G/LTE Directional Antenna for **Digi EX50**
All-in-one antenna for DIGI EX50 routers which is a perfect outdoor device for improving the signal in rural/suburban and locations where the mobile signals are weak. It has embedded directional 5G/LTE antennas.
Thunder

*Cable lengths and connectors can be configured upon request.

Thunder Series - Omnidirectional Antenna

FIXED



THOR19 Thunder Integrated 5G/LTE Omni Antenna with for E**ricsson R1900**
All-in-one antenna for Ericsson R1900 routers which is a perfect outdoor device for mobile and fixed installations like industrial, public, marine, CCTV, hotspots, and RVs. It has embedded omnidirectional cellular, Wi-Fi®, Bluetooth®, and GNSS antennas.



THOR92 Thunder Integrated 5G/LTE Omni Antenna for **Ericsson R920**
All-in-one antenna for Ericsson R920 routers which is a perfect outdoor device for mobile and fixed installations in industrial, transportation, and marine applications. It has embedded omnidirectional cellular, Wi-Fi®, Bluetooth®, and GNSS antennas.



THOR98 Thunder Integrated 5G/LTE Omni Antenna for Ericsson R980
All-in-one antenna for Ericsson R980 routers which is a perfect outdoor device for mobile and fixed installations in public, industrial, and maritime applications. It has embedded omnidirectional cellular, Wi-Fi®, and GNSS antennas.



THOR40 Thunder Integrated 5G/LTE Omni Antenna for **Ericsson S400**
An outdoor antenna for Ericsson S400 routers which is designed to provide reliable wireless connectivity in a variety of environments. An all-in-one solution that integrates a high gain omnidirectional cellular and Wi-Fi® antennas.



THOR70 Thunder Integrated 5G/LTE Omni Antenna for **Ericsson S700**
All-in-one antenna for Ericsson S700 routers which is a perfect outdoor device for mobile and fixed installations like industrial, public, CCTV, hotspots, yachts, boats, campers, and RVs. It has embedded cellular, Wi-Fi®, and GNSS antennas.



THOR60 Thunder Integrated 5G/LTE Omni Antenna for **Semtech XR60**
All-in-one antenna for Semtech XR60 routers is designed for use in a variety of wireless communication applications. This all-inone product consists of multi-band cellular, Wi-Fi®, and GNSS antennas, integrated in IP67 enclosure.



THOR50
Thor Integrated 5G/LTE Omni Antenna for **Digi EX50**
All-in-one antenna for DIGI EX50 routers which is a perfect outdoor device for mobile and fixed installations in public, industrial, and maritime applications. It has embedded omnidirectional cellular antennas.

KEY PRODUCTS FOR INFRASTRUCTURE

Colosseum Permanent Mount Series

MOBILE

The Taoglas Colosseum series is our smallest, compact, robust permanent mount antenna solution for external installations. This unique antenna delivers powerful MIMO antenna technology for cellular and Wi-Fi plus GNSS for next generation multiple wireless technology systems, such as telematics. Five high performance antennas are integrated into an IP67 direct/permanent mount antenna package and the series can be supplied with custom cables and connectors for specific customer environments.

FEATURES

- Antenna combinations up to 5-in-1
- 2* 5G/4G MIMO covering 600-6000MHz
- 2* Wi-Fi MIMO ranging from 2.4 and 5.8GHz
- 1* High performance GNSS
- Robust IP67 rated waterproof enclosures



Colosseum MA8XX Series

Scan or click to learn more

- One high-performance GNSS
- Up to 2 Cellular antennas
- Up to 2 Wi-Fi Antennas
- Low loss cables as standard*
- Narrow thread, external screw mount antenna for vandal proof installations
- Compact and low profile at Ø94mm x 57mm, staying below vehicle install height restrictions
- Fully IP67 rated, heavy-duty antenna for use in telematics, transportation and remote monitoring applications

*Cable lengths and connectors can be configured upon request.

RF Cable Assemblies

Brackets & Accessories

Taoglas supply an extensive line of RF (Radio Frequency) coaxial cable assemblies, for use in wireless telecommunication applications for example 5G/LTE networks, test instruments and IoT devices. We have many off the shelf, ready-made assemblies for common applications. Custom cable assemblies are a specialty of ours because we understand that each device or application is different, and tailor a solution that is unique to your needs.

FEATURES

- Accurate and consistent performance
- Industry standard cable types and connectors
- Put through rigorous QC testing procedures
- Competitive price and fast delivery
- Industry first online cable builder at **www.taoglas.com/cable-builder**



CAB Series

Scan or click to learn more

- 100's of standard 'off-the-shelf' options available
- Robust connectors for external cable assemblies
- High-quality internal connectors
- Low Insertion loss with high quality cables
- Fully customizable for specific cable runs

*Cable lengths and connectors can be configured upon request.

SPOTLIGHT APPLICATION

Oil and Gas / Manufacturing



Remote connectivity for critical machinery to monitor predictive maintenance needs



Real-time data transmission over public/private cellular networks



Enhances worker safety by enabling real-time tracking and alerting in case of emergencies



Custom built private cellular networks



Multiband GNSS for high-precision surveying and geo-mapping



KEY PRODUCTS FOR OIL AND GAS/MANUFACTURING

Taoglas Magnetic Mount Series

MOBILE

Taoglas supply a range of external antennas which use magnetic mounting for non destructive installations where a customer may use leased vehicles or may want to mount on a surface on which they cannot drill a hole for a permanent mount antenna. With combinations of high-precision GNSS, 5G/LTE, Wi-Fi, LoRa and others Taoglas can provide an optimum solution for a customers use case. The series can be supplied with custom cables and connectors for specific customer environments.

FEATURES

- Antenna combinations up to 5-in-1
- 5G/4G MIMO covering 600-6000MHz
- Wi-Fi 6 MIMO ranging from 2.4 - 5.8/7.125 GHz
- High performance GNSS
- IP67 Waterproof Enclosures



Comet MA32X Series

- Low profile, puck style, adhesive/magnetic mount antenna
- 5G/4G high performance antennas for use in MIMO cellular systems
- Covers all worldwide cellular frequencies from 600MHz to 6GHz
- IP67 Waterproof Rated Enclosure
- Dimensions: Ø80mm x 18mm

Scan or click to learn more



Steedan MA35X Series

- IP65 Rated, Ruggedized PC/ABS Enclosure
- Low Loss Cables as standard
- Powerful MIMO antenna technology for 5G/4G Cellular and Wi-Fi
- Dimensions: Ø145mm x 82mm
- Low Profile to stay below vehicle height restrictions

Scan or click to learn more

*Cable lengths and connectors can be configured upon request.

Shockwave Direct or Permanent Mount Series

MOBILE

The Shockwave is a series of robust antennas designed for direct or permanent mounting. The Shockwave comes with options for various different frequencies, the most common being Cellular 600-6000MHz. It is also available in 433MHz, 450-470MHz, 868/915MHz and GPS. The antenna is supplied with an N-Type Male or Female connector in the direct mount options, and with a Low-loss TGC-200 cable and connector in the permanent mount variant. The series can be supplied with custom cables and connectors for specific customer environments.

FEATURES

- Mechanically robust for indoor/outdoor applications
- IK10 Rated Enclosure
- Superior performance over wide-bands compared to traditional whip antennas
- Waterproof O-rings on the base prevent water ingress under the antenna
- IP67 rated waterproof enclosure



TLS.01 Series

- 600-6000MHz direct mount antenna
- With N-Type Male or Female direct mount
- Stable Omni-directional gain patterns
- Covert Design for mounting on vehicles
- Robust waterproof connection method

Scan or click to learn more



TLS.20 Series

- 450-470MHz Permanent Mount Antenna
- Supplied with Low Loss Cables
- Works well in free space or on a groundplane

Scan or click to learn more

*Cable lengths and connectors can be configured upon request.

KEY PRODUCTS FOR OIL AND GAS/MANUFACTURING

Barracuda Wall or Pole Mount Series

FIXED

The Barracuda Series is a robust antenna series designed for wall or pole mounting. The Barracuda OMB series are omni-directional high gain antennas designed to be mounted outdoors in harsh environments, they can be provided in various form factors based on communication requirements.

FEATURES

- Mechanically robust for indoor/outdoor applications
- IP65/67 Rated Enclosures
- The omni-directional radiation pattern is uniform providing long distance coverage
- N-Type Female Connector
- More robust, vandal resistant and safer than traditional whip antennas
- Dimensions: 79mm x 42mm



OMB.6960.B07F21 Antenna

- 600-8000MHz Wideband Antenna
- High Gain up to 7dBi
- Stable Omni-directional gain patterns for long distance coverage
- Dimensions: 79mm x 42mm
- IP67 Rated Enclosure

Scan or click to learn more

Monsoon Series Permanent Mount Antenna

IOT

The Monsoon series of products are permanent mount combination antennas, designed with a robust and rugged enclosure for the most demanding of installations. The Monsoon can be supplied in up to 5 configurations of antennas in one miniature enclosure. The Monsoon, designed with a low-profile enclosure for sleek, covert installations on vehicles, is ideal due to it's IP69k waterproof rating and IK10 Rating. The series can be supplied with custom cables and connectors for specific customer environments.

FEATURES

- Stylish, low profile alternative to sharkfin style antennas
- 5G/4G MIMO covering 600-6000MHz
- Wi-Fi 6 ranging from 2.4 / 5.8 - 7.125 GHz
- High performance GNSS
- Robust IP69K rated waterproof enclosure



Monsoon MA17X Series

- One Optional GNSS
- Up to 2 Cellular antennas
- Up to 2 Wi-Fi Antennas
- Dimensions: 204 mm x 69 mm x 31 mm
- Low Loss 5mm diameter cable as standard to minimize losses

Scan or click to learn more



Monsoon GA17X Series

- 5G/4G covering 600-6000MHz
- Robust IP69K rated waterproof enclosure
- Small Overall footprint
- Dimensions: 204 mm x 69 mm x 31 mm
- Low loss cables as standard

Scan or click to learn more

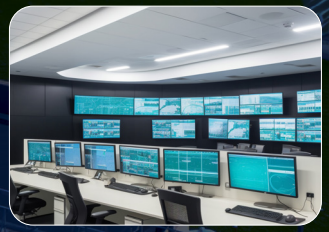
*Cable lengths and connectors can be configured upon request.

SPOTLIGHT APPLICATION

Utilities



Monitor water levels and other critical parameters in real-time



Surveillance of critical infrastructure to enhance security



Facilitate wireless communication with RTUs to transmit this data to the central SCADA system



Enable communication with surveillance sensors deployed at critical grid infrastructure points



Enable real-time tracking of truck locations and optimization routes

KEY PRODUCTS FOR UTILITIES

Genesis Adhesive Mount Series

MOBILE

The Genesis antenna is a combination of 5G/LTE, Wi-Fi and GNSS, IP67 waterproof external M2M antenna for use in telematics, transportation, and remote monitoring applications. The Genesis antenna can be supplied with up to 5, well isolated, antennas in one compact enclosure. The robust PC/ABS enclosure is fully IP65 rated and designed to withstand the high temperatures of up to +85c normally associated with transportation and telematics applications. The series can be supplied with custom cables and connectors for specific customer environments.

FEATURES

- Antenna combinations up to 5-in-1
- 5G/4G MIMO covering 600-6000MHz
- Wi-Fi MIMO ranging from 2.4 - 5.8GHz
- High performance GNSS
- Robust IP67 rated waterproof enclosures



Genesis MA24X & MA27X Series

- Heavy Duty 3M Tape for vandal proof installations
- Low Loss Cables as standard*
- Powerful MIMO antenna technology for 5G/4G Cellular and Wi-Fi
- Dimensions: 205mm x 68mm x 12.5mm
- Low Profile to be covertly installed on windshields and headliners

Scan or click to learn more

*Cable lengths and connectors can be configured upon request.

Shockwave Direct or Permanent Mount Series

MOBILE

The Shockwave is a series of robust antennas designed for direct or permanent mounting. The Shockwave comes with options for various different frequencies, the most common being Cellular 600-6000MHz. It is also available in 433MHz, 450-470MHz, 868/915MHz and GPS. The antenna is supplied with an N-Type Male or Female connector in the direct mount options, and with a Low-loss TGC-200 cable and connector in the permanent mount variant. The series can be supplied with custom cables and connectors for specific customer environments.

FEATURES

- Mechanically robust for indoor/outdoor applications
- IK10 Rated Enclosure
- Superior performance over wide-bands compared to traditional whip antennas
- Waterproof O-rings on the base prevent water ingress under the antenna
- IP67 rated waterproof enclosure



TLS.01 Series

- 600-6000MHz direct mount antenna
- With N-Type Male or Female direct mount
- Stable Omni-directional gain patterns
- Covert Design for mounting on vehicles
- Robust waterproof connection method

Scan or click to learn more



TLS.20 Series

- 450-470MHz Permanent Mount Antenna
- Supplied with Low Loss Cables
- Works well in free space or on a groundplane

Scan or click to learn more

*Cable lengths and connectors can be configured upon request.

KEY PRODUCTS FOR UTILITIES

Barracuda Wall or Pole Mount Series

FIXED

The Barracuda Series is a robust antenna series designed for wall or pole mounting. The Barracuda OMB series are omni-directional high gain antennas designed to be mounted outdoors in harsh environments, they can be provided in various form factors based on communication requirements.

FEATURES

- Mechanically robust for indoor/outdoor applications
- IP65/67 rated enclosures available
- The omni-directional radiation pattern is uniform providing long distance coverage
- N-Type Female connector
- More robust, vandal resistant and safer than traditional whip antennas
- Dimensions: 79mm x 42mm



OMB.6960.B07F21 Antenna

- 600-8000MHz Wideband Antenna
- High Gain up to 7dBi
- Stable Omni-directional gain patterns for long distance coverage
- Dimensions: 340mm x 70mm
- IP67 Rated Enclosure

Scan or click to learn more

Olympian II/MA114 Permanent Mount Series

IOT

The Olympian and MA114 antennas are compact antenna designs for use in external applications such as generator monitoring, smart metering or on heavy machinery. These 2 products have been designed to cover GNSS, 5G/LTE and Wi-Fi in compact enclosures. The series can be supplied with custom cables and connectors for specific customer environments. .

FEATURES

- Up to 3 connections in 1 enclosure
- 600-6000MHz 5G/LTE coverage
- High-performing GNSS antenna
- IK10 rated enclosures
- IP67 rated waterproof enclosures



MA114.B Series

- Impressive 5G/LTE Single Antenna
- High Performance GNSS Antenna
- Stable Omni-directional gain patterns
- Covert Design for mounting inconspicuously
- Dimensions: 35mm x Ø57mm

Scan or click to learn more



Olympian II Series

- Up to 3-in-1 GNSS, 5G/LTE & Wi-Fi Antenna
- Robust Permanent Mount Antenna
- Works well in free space or groundplane
- Covert Design for mounting inconspicuously
- Dimensions: 49mm x Ø50mm

Scan or click to learn more

*Cable lengths and connectors can be configured upon request.

KEY PRODUCTS FOR UTILITIES

Comet Series - Permanent Mount Puck Antenna

FIXED MOBILE

The Taoglas Comet MA58x is a low profile, puck style, screw mount antenna. The MA58x is available in 3-in-1 combinations of 5G/4G MIMMO with optional GNSS or Wi-Fi antennas. Through innovative antenna engineering techniques, it covers all worldwide cellular frequencies from 600MHz to 6GHz and GNSS Bands, BeiDou, GPS and GLONASS with stable gain and high efficiency, usually difficult to achieve in smaller style antennas.

A key differentiator of the Comet MA58x series is its ability to maintain strong performance when mounted directly on metallic enclosures. Competing antennas typically experience severe efficiency losses in the lower 5G/4G bands (617–960 MHz), but the Comet was designed specifically to overcome this challenge. Leveraging Taoglas' proprietary all-metal PIFA design and advanced bandwidth optimization techniques, the MA58x Series delivers consistently higher efficiency and more reliable radiation even when installed on metal housings with feed cables routed inside.

This robust design ensures dependable connectivity where other low-profile antennas fail, making the Comet series particularly well-suited for fleet and transport telematics, public safety, gateways, and other mission critical app Typical Applications Include:

- Telematics, Transport and Fleet Management
- Gateways and Routers
- Digital Signage, Smart Kiosks and Point of Sale Terminals
- First Responders, Public Safety and Critical Communications
- Construction, Mining, and Heavy Equipment

The Comet has been designed to be permanent mount/screw mount. This allows it to be utilized and installed in applications where a strong and secure mechanical attachment is required, ensuring reliable performance even in high-vibration or harsh environments. The GNSS and cellular MIMO connections utilize 2m of TGC1.5DS coaxial cable with SMA(M) connectors as standard.

Scan or click to learn more



SPOTLIGHT APPLICATION

Healthcare



Cellular connectivity to support telehealth consultations



Allows healthcare professionals to monitor medical conditions remotely



Provide firmware updates and customizations to hearing aid wearers remotely



Bluetooth antennas enable data transmission between devices for data analysis and health tracking



Enable long-range wireless connectivity for medical adherence technology

NEXT-GEN ANTENNAS FOR HEALTHCARE

Gemini Multi Mount Series

FIXED

The Gemini Series are a MIMO 5G antenna designed for use with 5G/LTE routers and is a stylish option for indoor use. The Gemini covers from 600-6000MHz in a compact enclosure. The Gemini series can be mounted in 3 ways; desk, magnet or wall. The series can be supplied with custom cables and connectors for specific customer environments.

FEATURES

- High isolation and low ECC
- 5G/4G MIMO covering 600-6000MHz
- Multi Function bracket for various installation options
- 2* 5G/4G MIMO Antenna for use with all 5G/4G cellular routers worldwide
- IP67 rated waterproof enclosure



LMA101 Gemini Series

- Stable omni-directional gain patterns
- Dimensions: 164mm x 164mm x 37mm
- Low Loss Cables as standard*
- Multi-function bracket including Desk, Wall and Magnetic Mount options
- Fully IP67 rated enclosure makes it suitable for indoors and outdoor use

Scan or click to learn more

*Cable lengths and connectors can be configured upon request.

Terminal Mount Antennas

IOT

Taoglas provide a range of terminal antennas designed for direct mounting onto routers, gateways and other devices used in the IoT ecosystem. This range includes antennas for all major bands and frequencies from VHF to UWB and everything in between with a key focus on Cellular and Wi-Fi. Provided with almost 100 variants of monopole or dipole configurations, performance and size can vary between antennas.

FEATURES

- Unique ID designs
- Highly Efficient with stable gain patterns
- Available in various colors and sizes, the smallest 5G antenna on the market in our portfolio
- Available in Hinged, Straight or Right Angle variants
- Waterproof Variants available



TG.66 Series:

- Available with SMA or FAKRA for various router configurations
- Smallest 5G terminal mount antenna on the market
- Dimensions: 70.3mm x Ø10 mm
- Fantastic efficiency across all global cellular bands from 600-6000MHz
- Monopole antenna design makes it suitable for small ground planes

Scan or click to learn more



GW.51.5153 Series

- Dipole antenna design suitable for free space
- High Gain across full Wi-Fi Spectrum 2.4/5.8/7.1GHz
- Ideal for future-proof Wi-Fi 7 requirements
- Hinged design for optimizing mounting for performance
- Dimensions: 198mm x Ø13mm

Scan or click to learn more



PANTHEON ANTENNAS KEEP SPARKS POLICE DEPARTMENT RELIABLY CONNECTED

Police officers rely heavily on information while on duty in their vehicles. Access to efficient GPS and cellular communications is vital for the in-vehicle computers that officers frequently use. These tools are essential for any police department as they provide access to databases that assist officers in effectively ensuring community safety. Unfortunately, the police department in Sparks, Nevada, a city with a population of over 90,000 on the western side of the state, faced persistent connectivity issues. In some instances, police vehicles could not access the necessary databases, impeding their ability to fulfil their duties.

The Solution

In response to their challenges, Dryden's department embraced a new technological solution: the Taoglas Pantheon is an innovative five-in-one antenna is specifically designed for telematics, transportation, and remote monitoring applications where uncompromised performance is paramount. It boasts high performance, robustness, and durability, making it an ideal choice for their needs.

The Result

"When we changed to trunk-mounted modems with the Pantheon, it was a night and day difference," explains Dryden. After running tests comparing visual maps and other elements between the old and Pantheon-enabled communications, "Within the city now, we have probably 99.9% coverage," he says. Installed in 50 Sparks police vehicles — either on top of or in the trunk — the Pantheon has proven to be highly rugged, says Dryden. "I was kind of worried about how it would handle weather extremes because we get pretty varied temperatures. We were just over a hundred degrees last week, and we can get down to negative 10 with snow, ice and everything in between," he relates.

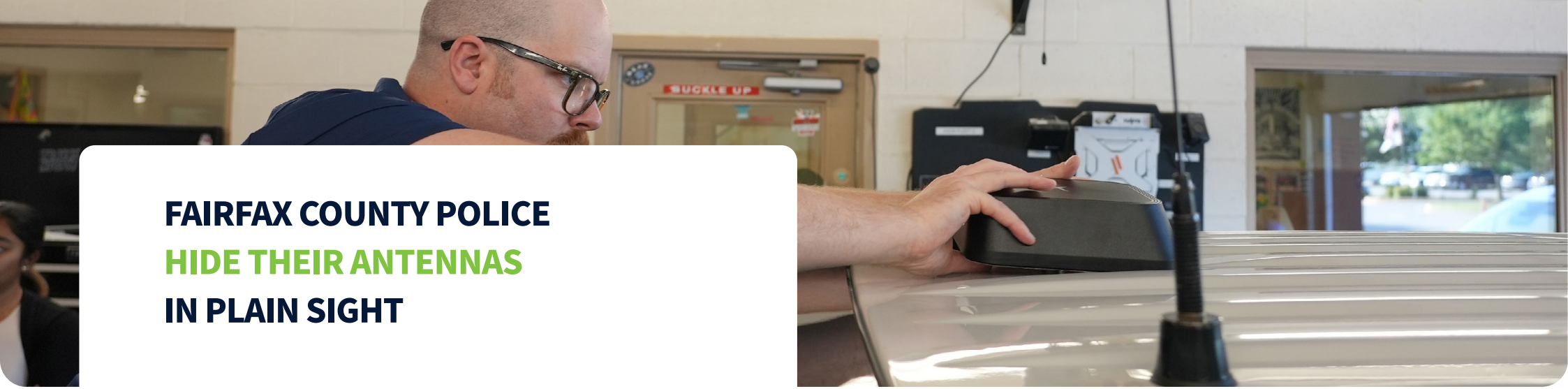
As for the Pantheon, "It's proven to hold up to all that very well," Dryden reports. It's also unobtrusive, he explains. "It's not one of those whip or fin antennas, where they stick up and can be vandalized. It's a smooth, dome-shaped antenna that can't break off or be damaged."

The antenna is compact "we are able to put it close to the light bar when it's on top of the vehicle, and you hardly even notice it there."

"When we changed to trunk-mounted modems with the Pantheon, it was a night and day difference" explains Dryden.



Scan or click to learn more



FAIRFAX COUNTY POLICE HIDE THEIR ANTENNAS IN PLAIN SIGHT

As the selection of police wireless technologies grows, so does the need for an antenna system that can accommodate them all in a svelte housing.

A visible police presence can be a good thing, like when it deters crime in areas with a recent rash of burglaries or discourages speeding near schools. Case in point: The Fairfax County Police Department, whose **2025 Summer Crime Prevention Initiative** includes increasing foot and vehicular patrols throughout the diverse and densely populated region in Virgina that includes urban centers, suburban neighborhoods, and rural areas.

The Solution

To address this need for a faster, cleaner, and more capable antenna system, the Taoglas Patriot Series was developed— a compact, multi-function roof-mount antenna designed specifically for first responder fleets. Measuring just 205 mm by 180 mm, the Patriot consolidates up to 18 antenna elements into a single enclosure, supporting:

- 4G/5G cellular (including FirstNet, 600–6000 MHz)
- Dual-band GNSS (L1 and L1/L5) plus secondary GNSS (L1)
- Wi-Fi (2.4, 5.8, and 7.1 GHz)
- SDARS (2.3 GHz)
- LMR/TETRA (380–400 MHz and 700–900 MHz)

The Result

"Taoglas' expertise went far beyond simply providing an antenna. They understood the unique demands of law enforcement vehicles and delivered a solution that seamlessly fit into our fleet. Their team was highly responsive to our needs. The Patriot antenna has streamlined our upfitting process, reduced vehicle downtime, and provided us with the reliable, always-on connectivity we need." – Kevin Hopkins, Field Operations Support Manager, Fairfax County Police Department.

Taoglas' expertise went far beyond simply providing an antenna. They understood the unique demands of law enforcement vehicles and delivered a solution that seamlessly fit into our fleet.

Kevin Hopkins
Fairfax County Police Department



Scan or click to learn more



TAOGLAS ANTENNA TAKES FLIGHT WITH FOTOKITE'S TETHERED DRONE TO PROVIDE SITUATIONAL AWARENESS

Unmanned Aerial Vehicles (UAVs) have revolutionized how first responders and public safety teams operate in emergencies, significantly enhancing their efficiency, safety, coordination, and overall effectiveness. Fotokite's Sigma tethered drones are designed with first responders in mind, allowing them to have a bird's eye view at the press of a single button.

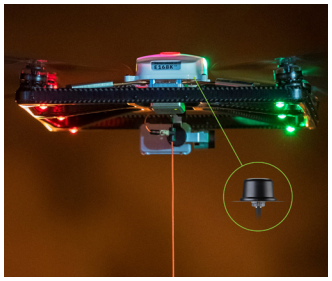
The Solution

With the stakes high and no time to lose, Fotokite turned to Taoglas for a trusted and rapid solution to the problem. To address the substantial coverage issue, Taoglas Engineers swapped out the numerous antennas for a single, compact antenna solution - a customized Colosseum MA850 5-in-1 Permanent Mount Antenna. Not only did this solution decrease the overall number of antennas needed on the platform from four to one, allowing for more space, but it also significantly decreased the number of failure points. Additionally, the Colosseum MA850 is a robust, heavy-duty, fully IP69K waterproof external antenna that is an ideal solution for hazardous weather conditions.

The Result

Not only did Taoglas resolve Fotokite's initial coverage issues, a single point of contact with the Taoglas team, short lead times and the ability to quickly provide a customized antenna led to Fotokite's revised configuration being released within two months of their first contact with the Taoglas team. Additionally, the decrease in the overall number of antennas used in the model led to cost savings for Fotokite. As an additional benefit of choosing Taoglas, the assembly of the Fotokite's Sigma also improved with the availability of Taoglas' customizable lengths, styles, and types of cables and connectors.







"Working with Taoglas was a great experience! We had one point of contact, and the support we received was exceptional. Sam was always extremely helpful, and communication was open and efficient. Not only did Taoglas resolve Fotokite's initial coverage issues, but the decrease in the overall number of antennas used in the model also resulted in cost savings for Fotokite."

Alexander Tschesno
Embedded Systems Lead, Fotokite AG



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