



# TRIAX

connecting the future



## TRIAX Aerials & Mast electronics

– ensuring quality signals from rooftop to outlet



[triax.com/aerials](https://www.triax.com/aerials)

# TRIAX® Aerials and Mast electronics

A complete range of solutions for terrestrial TV reception

## Reliability from rooftop to outlet

Invest in a partner ready to grow your business. When installing aerials and electronics, you can rely on TRIAX solutions to perform exactly as you expect them to. Beware of cheap components that might include surprises and instability.

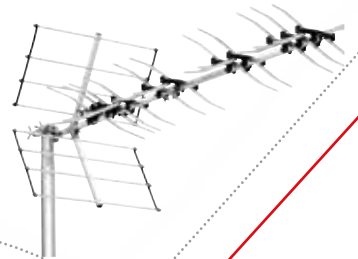
## TRIAX solutions can help protect TV signals from 4G/LTE mobile broadband interference

The 4G/LTE technology operating in the 694-862 MHz frequency range may cause problems for installed DTT and CATV (cable TV) networks.

Worldwide frequency bands traditionally used for DTT (Digital Terrestrial TV) reception are gradually being discontinued for DTT use in favour of emerging high speed mobile broadband services such as LTE (Long Term Evolution) and/or LTE Advanced technology. In Europe, LTE now uses the 800MHz band (790-862MHz - previously TV channels 61-69) and in some markets 700MHz band (694-790MHz - previously TV channels 49-60) in addition to the 1.8GHz and 2.6GHz bands, which were previously the only available LTE frequencies.

**5** Selection of ranges

**AERIALS  
AMPLIFIERS  
FILTERS  
POWER SUPPLIES  
CABLES**



## Ensure the best picture quality

The single most important part of an installation is the quality of the incoming signals. We recommend you use an aerial that ensures the optimum signal levels depending upon the geographical location of the installation. It is not recommended to compromise on the size of the aerial, as the system is dependent on high quality signals from the outset.

The reception systems require the correct size of LTE aerial, such as the TRIAX UNIX or DIGI range, combined with the best low noise mast amplifier and filters.



- **UHF AERIALS for 700MHz & 800MHz LTE**

TRIAX aerials are manufactured to protect you from interference in the entire LTE mobile broadband spectrum. Our range of terrestrial aerials consists of FM, DAB, VHF, UHF, Combi and compact UFO aerials.

- **MAST AMPLIFIERS for 700MHz & 800MHz LTE**

Mast electronics including easy-to-mount high-performance range of mast amplifiers with F-connector. The MFA 611, MFA 621 & MFA 656 mast amplifiers are wideband amplifiers featuring 1-2-3 inputs and 1-2 outputs, and cut off channels E61-69 and E49-59.

- **STOP FILTERS for 700MHz & 800MHz LTE**

TRIAX high performance stop 4G/LTE filters protect you from interference in the entire LTE mobile broadband spectrum on DVB-T signals and also protect against overload from strong LTE signals (base station transmitters) on antenna amplifiers, TV tuners and set-top boxes.

- **POWER SUPPLIES with 700MHz & 800MHz LTE filters**

The TRIAX IFP Power supply with LTE filter are indoor power supplies for masthead amplifiers, providing a 'last defence' filter function protecting against local 4G/LTE interference. Easy installation F-connectors for maximum shielding. LTE filter 6-23 dB, (694-862MHz).

- **COAXIAL CABLES**

The performance of a terrestrial installation relies heavily on the quality of the distribution cable installed to deliver signal levels and immunity to interference. TRIAX supplies a range of high quality coax cables with Class A to A++ shielding.

# TRIAX<sup>®</sup> Aerials and Mast electronics

## The product families

TRIAX has developed a wide range of aerials especially designed with high performance attenuation of the signal above channel 48/60 to address the challenges associated with 4G/LTE.

- Quick-install clip-on dipole
- Impedance-matched balun with rear-facing
- F-connector to optimise maximum signal transfer
- Weather proof, pre-assembled housing F-connector.

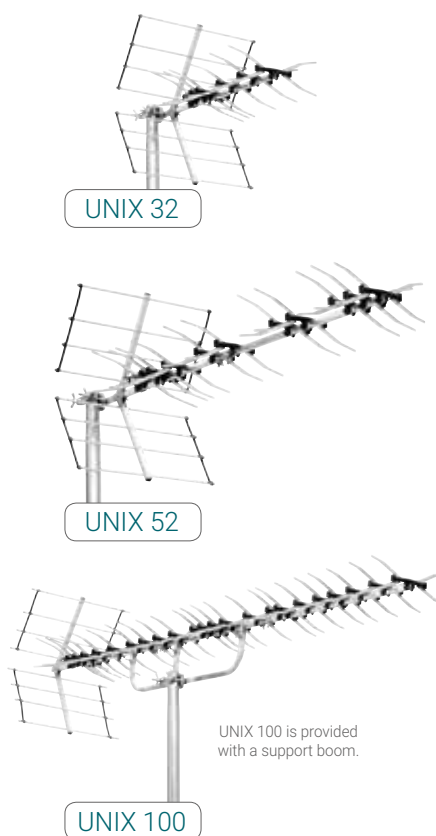


The LTE-protected-by TRIAX logo is displayed on products that complies with 4G/LTE protection requirements.

### DIGI series



### UNIX series



### DIGI Grid & DIGI 343



## Combi Aerials

Combi Aerials for VHF/UHF reception in a wide range of versions, including models with increased gain.



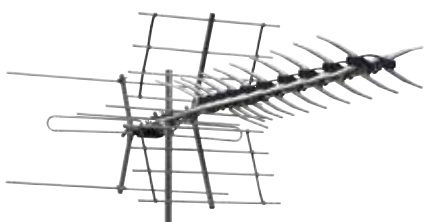
UFO 150 & 170



COMBI 12



COMBI 20



COMBI 57

## Outdoor amplifiers

In most electronics it pays well to invest in quality.

- Durability
- Easy installation
- High quality
- Weather proof
- For 700 & 800 MHz LTE



MFA 611



MFA 621



MFA 656

## Filters

TRIAX high performance LTE stop filters protect from interference on DTT signals and protect against overload from strong LTE signals (base station transmitters) on antenna amplifiers, TV tuners, and set-top boxes.

For both 700 & 800 MHz LTE.



TBSI - filter



TBSO - filter



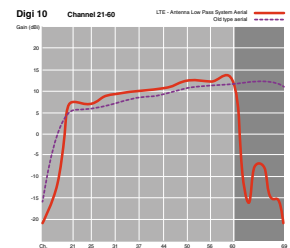
4G/LTE - filter

# DIGI Aerials

## Assortment and characteristics

### Common Features

- 6, 10, 14 and 18 elements UHF antenna with 18 mm boom
- Semi-assembled aerials - saves time during installation
- Unparalleled gain and rejection performance
- Designed to receive DTT (Digital Terrestrial TV) signals in 470-694 and 470-790 MHz range
- Rejects 4G/LTE signals in 694-790 and 790-862 MHz range using TRIAX's "Antenna Low Pass System"
- Improved weather proof dipole house with F-connector for optimal TV-signal performance
- Resistant to extreme weather conditions
- Adjustable rear mast brackets for masts up to 60 mm.



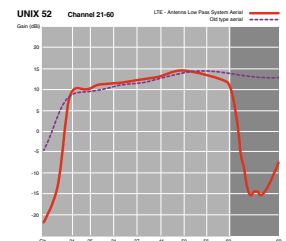
Type	Description	Packing	Art. No.	Gain	Front to back ratio	Windload N	Dimension L x W mm
<b>DIGI 6</b>							
800 MHz	6 element Digi, UHF - 4G/LTE	Colour box	105400	10.0 dB	17.0 dB	14N	718 x 260
	6 element Digi, UHF - 4G/LTE	Polybag	105401				
700 MHz	6 element Digi, UHF - 4G/LTE	Colour box	105450	10.0 dB	14.0 dB	14N	655 x 330
	6 element Digi, UHF - 4G/LTE	Polybag	105451				
<b>DIGI 10</b>							
800 MHz	10 element Digi, UHF - 4G/LTE	Colour box	105410	13.0 dB	21.0 dB	22N	1015 x 350
	10 element Digi, UHF - 4G/LTE	Polybag	105411				
700 MHz	10 element Digi, UHF - 4G/LTE	Colour box	105460	13.0 dB	15.0 dB	22N	1085 x 480
	10 element Digi, UHF - 4G/LTE	Polybag	105461				
<b>DIGI 14</b>							
800 MHz	14 element Digi, UHF - 4G/LTE	Colour box	105420	13.5 dB	21.0 dB	54N	1015 x 420
	14 element Digi, UHF - 4G/LTE	Polybag	105421				
700 MHz	14 element Digi, UHF - 4G/LTE	Colour box	105470	13.5 dB	23.0 dB	54N	1085 x 480
	14 element Digi, UHF - 4G/LTE	Polybag	105471				
<b>DIGI 18</b>							
800 MHz	18 element Digi, UHF - 4G/LTE	Colour box	105430	14.5 dB	25.0 dB	59N	1446 x 420
	18 element Digi, UHF - 4G/LTE	Polybag	105431				
700 MHz	18 element Digi, UHF - 4G/LTE	Colour box	105480	14.0 dB	25.0 dB	59N	1414 x 480
	18 element Digi, UHF - 4G/LTE	Polybag	105481				

## UNIX Aerials

### Assortment and characteristics

#### Common Features

- 32, 52 and 100 elements UHF antenna with 18mm boom
- Semi-assembled aerials - saves time during installation
- Unparalleled gain and rejection performance
- Designed to receive DTT (Digital Terrestrial TV) signals in 470-694 and 470-790 MHz range
- Rejects 4G/LTE signals in 694-790 and 790-862 MHz range using TRIAX's "Antenna Low Pass System"
- Improved weather proof dipole house with F-connector for optimal TV-signal performance
- Resistant to extreme weather conditions
- Adjustable rear mast brackets for masts up to 60 mm.



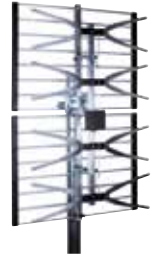
Type	Description	Packing	Art. No.	Gain	Front to back ratio	Windload N	Dimension L x W mm
<b>UNIX 32</b>							
800 MHz	32 element UNIX, UHF - 4G/LTE	Colour box	105500	12.5 dB	24.0 dB	58N	791 x 500
	32 element UNIX, UHF - 4G/LTE	Polybag	105501				
700 MHz	32 element UNIX, UHF - 4G/LTE	Colour box	105550	12.5 dB	22.0 dB	58N	777 x 580
	32 element UNIX, UHF - 4G/LTE	Polybag	105551				
<b>UNIX 52</b>							
800 MHz	52 element UNIX, UHF - 4G/LTE	Colour box	105510	14.5 dB	25.0 dB	96N	1512x 500
	52 element UNIX, UHF - 4G/LTE	Polybag	105511				
700 MHz	52 element UNIX, UHF - 4G/LTE	Colour box	105560	14.5 dB	20.0 dB	96N	1394 x 580
	52 element UNIX, UHF - 4G/LTE	Polybag	105561				
<b>UNIX 100</b>							
800 MHz	100 element UNIX, UHF - 4G/LTE	Colour box	105520	17.0 dB	27.0 dB	162N	2257 x 500
	100 element UNIX, UHF - 4G/LTE	Polybag	105521				
700 MHz	100 element UNIX, UHF - 4G/LTE	Colour box	105570	17.0 dB	20.0 dB	162N	2343 x 580
	100 element UNIX, UHF - 4G/LTE	Polybag	105571				

# DIGI Grid, DIGI 343, VIP, FM-DAB, VHF

## Assortment and characteristics

### DIGI Grid Aerial

- High gain, large beam width and an excellent front to back ratio
- Very compact, easy to install with an almost even gain curve.



### TRIAX DIGI 343 and VIP Aerials

- Eliminate reflections and combines low weight with high gain and an excellent front to back ratio
- Rejects 4G/LTE signals in 791-862 MHz range using TRIAX's "Antenna Low Pass System".



### TRIAX FM and DAB Aerials

- Eliminate reflections and combines low weight with high gain and an excellent front to back ratio
- Rejects 4G/LTE signals in 791-862 MHz range using TRIAX's "Antenna Low Pass System".



Type	Description	Packing	Art. No.	Gain	Front to back ratio	Windload N	Dimension L x W mm
<b>DIGI GRID</b>							
800 MHz	16 elem. Digi Grid, UHF	Colour box	108016	12.5 dB	22.0 dB	78N	805 x 545
<b>DIGI 343</b>							
800 MHz	343 elem. Split boom - 4G/LTE	Colour box	108961	15.5 dB	20.0 dB	150N	1056x 540
<b>DAB 1</b>							
187-230 MHz	1 element DAB+/VHF BIII	Colour box	105130	2.2 dB	-	20N	400 x 625
	1 element DAB+/VHF BIII	Polybag	105131				
<b>FM</b>							
87.5-108MHz	1 x Z element FM/BII	Colour box	105100	0.0 dB	0.0 dB	16N	550 x 1140
	1 x Z element FM/BII	Polybag	105101				
	3 element FM/BII	Colour box	105110	6.0 dB	16.0 dB	56N	1188 x 1577
	3 element FM/BII	Polybag	105111				
<b>VHF</b>							
174-230 MHz	6 element BIII	Polybag	103862	7.5 dB	16.0 dB	48N	1410 x 800
	10 element BIII	Polybag	104579	9.5 dB	22.0 dB	78N	1735 x 880
	9 element BIII - short boom	Colour box	105200	8.0 dB	20.0 dB	58N	870 x 880
	9 element BIII - short boom	Polybag	105201				
	13 element BIII	Polybag	104211	12.8 dB	20.0 dB	58N	2080 x 920

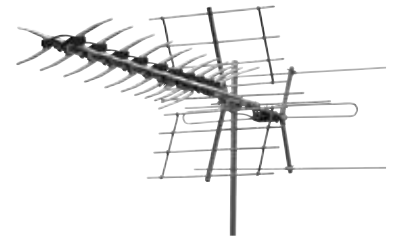


# VHF/UHF Combi Aerials

Assortment and characteristics

## Common Features

- 1 element Omni + 12, 20 and 57 elements VHF/UHF antenna with 18mm boom
- Semi-assembled aerials – saves time during installation
- Unparalleled gain and rejection performance
- Designed to receive DTT (Digital Terrestrial TV) signals in 470-694 and 470-790 MHz range
- Rejects 4G/LTE signals in 694-790 and 790-862 MHz range using TRIAX's "Antenna Low Pass System"
- Improved weather proof dipole house with F-connector for optimal TV-signal performance
- Resistant to extreme weather conditions
- Adjustable rear mast brackets for masts up to 60 mm.



UFO 150



UFO 170

Type	Description	Packing	Art. No.	Gain	Front to back ratio	Windload N	Dimension L x W mm
<b>COMBI 12</b>							
800 MHz LTE	12 elem. Combi, VHF/UHF -Mast	Colour box	108936	4.0/9.0	12/15 dB	34	866 x 855
	12 elem. Combi, VHF/UHF - Window	Colour box	108937				
<b>COMBI 20</b>							
800 MHz LTE	20 elem. Combi, VHF/UHF		108694	6.0/11.5	12/17 dB	56	815 x 760
<b>COMBI 57</b>							
800 MHz LTE	57 elem. Combi, VHF/UHF		108696	8.0/14.5	17/25 dB	146	1725 x 880
<b>UFO 150</b>							
800 MHz LTE	1 elem. VHF/DAB/UHF	Colour box	109150	28.0	-	5.5	325 x 255
<b>UFO 170</b>							
700 MHz LTE	1 elem. VHF/DAB/UHF	Colour box	109170	28.0	-	5.5	325 x 255

# Mast electronics and Power supplies

Assortment and characteristics

## TRIAX outdoor Masthead amplifiers

In mast electronics it pays well to invest in quality. When choosing TRIAX products you can expect many years of operation without difficulties. TRIAX range of masthead amplifiers are designed to cut off channel 49-69 where 4G/LTE mobile broadband services are transmitted:

- Input/output: BIII (DAB/UHF up to 694-790 MHz) (E48 - E60)
- High-quality weather proof mast housing
- Low noise figures
- Simple and easy mounting on mast.



## Mastamplifier series for 700MHz & 800 MHz LTE

Type	Description	Packing	Art. No.	Frequency	Gain	Noise figure VHF/UHF	Max. out @60dB IMA	Power VDC
<b>MFA 611</b>								
800 MHz	1 Input, VHF/UHF - 4G/LTE Amp.	Colour box	340611	174-230/ 470-790	15-30/ 10-25	< 3.5/ < 3.5	103.0	12-24
700 MHz	1 Input, VHF/UHF - 4G/LTE Amp.	Colour box	340911	174-230/ 470-694	15-30/ 10-25	< 3.5/ < 3.5	103.0	12-24
<b>MFA 621</b>								
800 MHz	2 Input, VHF/DAB/UHF - 4G/LTE	Colour box	340621	174-230/ 470-790	5-15/ 20-35	< 2.5/ < 2.5	103.0	12-24
700 MHz	2 Input, VHF/DAB/UHF - 4G/LTE	Colour box	340921	174-230/ 470-694				
<b>MFA 656</b>								
800 MHz	3 Input, VHF/UHF - 4G/LTE Amp.	Colour box	340656	87-108/ 174-230/ 470-790	15-30/ 10-25	< 3.5/ < 3.5	103.0	12-24
700 MHz	3 Input, VHF/UHF - 4G/LTE Amp.	Colour box	340956	87-108/ 174-230/ 470-694	15-30/ 10-25	< 3.5/ < 3.5	103.0	12-24



The LTE-protected-by TRIAX logo is displayed on products that complies with 4G/LTE protection requirements.



MFA 621



MFA 656

## Power Supply range for 700MHz & 800 MHz LTE

Type	Description	Packing	Art. No.	Frequency	Loss	Rejection @ 821 MHz	Max current	DC Voltage
<b>IFP 101 LTE</b>								
800 MHz	1 output Power Supply - 4G/LTE	Colour box	370102	5-790	< 2.0	> 18.0	100 mA	12V
700 MHz	1 output Power Supply - 4G/LTE	Colour box	370113	5-702				
<b>IFP 102 LTE</b>								
800 MHz	2 output Power Supply - 4G/LTE	Colour box	370109	5-790	< 6.0	> 23.0	100 mA	12V
700 MHz	2 output Power Supply - 4G/LTE	Colour box	370114	5-702				



IFP 101



IFP 102

# TRIAX Stop filters

## Assortment and characteristics

TRIAX high performance 4G/LTE stop filters protect from interference on DTT signals and protect overload from strong 4G/LTE signals (base station transmitters) on antenna amplifiers, TV tuners and set-top boxes. TRIAX high performance filters protect from the entire 4G/LTE mobile broadband spectrum Ch. 48-60/61-69 (694-790/790-862MHz).

TRIAX high performance 4G/LTE band stop filters are customised to provide the highest protection in the LTE mobile broadband "downlink" frequency spectrum 791-821 MHz, where 4G/LTE transmission levels will be highest. The weatherproof filters are suitable for in- or outdoor use, whatever the weather.

### Outdoor stop filter series for 700MHz & 800 MHz LTE

Type	Description	Packing	Art. No.	Frequency	Trough Loss	Rejection @ LTE	Shielding efficiency	DC - pass
<b>TBSO filter</b>	<b>Outdoor</b>							
800 MHz	Outdoor, Ch. 57 - 4G/LTE	Colour box	314075	47-766	1.5-2.3	25.5-		
	Outdoor, Ch. 59 - 4G/LTE	Colour box	314071	47-782	0.9-3.0	8.0-	> 75.0	Yes
	Outdoor, Ch. 60 - 4G/LTE	Colour box	314073	47-790	0.8-3.0	3.0		
<b>4G/LTE Filter</b>	<b>Outdoor/Indoor</b>							
700 MHz	F-Barrel type, Ch. 46 - 4G/LTE	Bulk	314178	5-678	0.8-3.0	> 50.0	> 75.0	Yes
	F-Barrel type, Ch. 48 - 4G/LTE	Bulk	314176	5-694	1.0	> 50.0		



TBSO  
outdoorfilter



4G/LTE  
out-/indoorfilter



The LTE-protected-by TRIAX logo is displayed on products that complies with 4G/LTE protection requirements.



TBSI - filer



4G/LTE



4G/LTE

## Indoor Stop filter series for 800 MHz LTE

Type	Description	Packing	Art. No.	Frequency	Trough Loss	Rejection @ LTE	Shielding efficiency	DC - pass
<b>TBSI filter</b>	<b>Indoor</b>							
800 MHz	Indoor, Ch. 57 - 4G/LTE	Colour box	314074	47-766	1.5-2.3	25.5		
	Indoor, Ch. 59 - 4G/LTE	Colour box	314070	47-782	0.9-3.0	8.0	> 75.0	Yes
	Indoor, Ch. 60 - 4G/LTE	Colour box	314072	47-790	0.8-3.0	3.0		
<b>4G/LTE Filter</b>	<b>Indoor</b>							
800 MHz	F-Barrel type, Ch. 58 - 4G/LTE	Bulk	360112	5-774	< 6.5	> 50.0		
	F-Barrel type, Ch. 59 - 4G/LTE	Bulk	360113	5-782	< 6.5	> 50.0	> 75.0	Yes
	IEC-type, Ch. 59 - 4G/LTE	Colour box	314080	47-782	< 4.0	> 25.0		

# TRIAX Aerials & Mast electronics

- ensures quality signals from rooftop to outlet





The LTE-protected-by TRIAX logo is displayed on products that complies with 4G/LTE protection requirements.

The 4G/LTE technology operating in the 694-862MHz frequency range may cause problems for installed DTT and CATV (cable TV) networks that historically have been developed to operate within these frequencies.

TRIAX provides you with a full range of products, designed to protect your network from 4G/LTE mobile broadband interference and disturbance.

Look for the “LTE Protected – by TRIAX” logo, to ensure that your future product meets the TRIAX requirements so you experience the perfect TV picture experience.





# TRIAX

*connecting the future*

## Contact

[triax.com/contact](http://triax.com/contact)

Headquartered in Denmark, TRIAX is an international supplier of innovative, high-tech solutions for the reception and distribution of video, audio and data signals. The company's products and solutions are used by broadcasters, cable operators, local closed networks and domestic dwelling.

TRIAX has 9 sales subsidiaries generating a turnover of approx. €90M and operates in more than 60 distributor countries. The TRIAX team consists of 350 employees and is owned Polaris Private Equity.

See [TRIAX.com](http://TRIAX.com) for further info.

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