



2001/2002

Product Catalogue

SMARTEQ™
WIRELESS TELECOM

Company presentation



Smarteq Wireless AB is a Swedish company founded 1996. Smarteq headquarters are located in Stockholm, Sweden and has sales offices in Germany and USA. The company has 50 employees.

Smarteq products are sold through after-market distributors in 35 countries, directly to the Automotive industry, to Original Equipment Manufacturers of mobile telephones and to Operators of mobile telephone networks.

Business idea

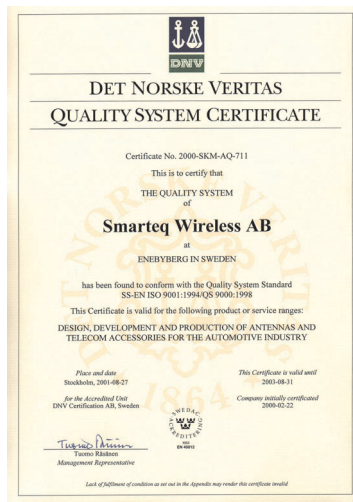
By using the latest technology Smarteq develops and manufactures access products for the wireless telecom market. Products are vehicle antennas, hands free equipment and telematic equipment and solutions. This makes Smarteq a complete provider of telecom products for use in vehicles. Operations are focused on development and sales of the products for after-market and OEM market.

Vision

Smarteq will become the leading partner in development of user- friendly solutions within wireless telecoms.

Mission

Smarteq develops new functions within wireless telecoms which increases people's flexibility, safety and security.



Quality

Our quality system puts the customer in focus. We emphasise on speed, accuracy and reliability in product development and production. Smarteq is certified according to QS-9000:1998/ISO 9001:1994.

Car kits

Smarteq has a wide range of full functional hands free car kits for the professional user. Those products have been developed in-house since 1996 and have been installed in countries all over the world.

Vehicle antennas

The vehicle antennas have its background in antenna development over 50 years. Smarteq has the reputation for high-quality and high performing antennas. The wide range of vehicle antennas – body mounts, magnetic mounts, glass mounts and in-car antennas will satisfy every demand in the market.

Telematics

Smarteq telematic solution – SmarTraq – is now ready. SmarTraq telematic unit can be used in most existing environments in vehicles for all kinds of applications.

Original Equipment Manufacturing

Smarteq develops solutions for Original Equipment Manufacturing for some of the world's best-known brand names. Smarteq delivers vehicle antennas, special antennas, and hands free car kits accordingly to OEM specifications.

Automotive

Smarteq has delivered vehicle antennas to the automotive industry for many years and is continuously in projects together with the automobile manufacturers to provide the most advanced antenna solutions to be installed in new car models.

What is the difference between good and bad antennas?

When you want to mount an antenna on your vehicle, it should meet certain criteria. It should have a lifespan that matches the vehicle's, and therefore it should withstand all types of climate conditions, road salt in the winter and strong sunlight (temperature ranging from -30° to $+40^{\circ}$). At Smarteq, we separate mechanical and electrical characteristics.

The electrical tests are as follows:

- Radiation pattern; This shows how the energy spreads from the antenna. The most important aspect is that the energy reaches the base station and that it radiates in the correct direction (horizontal)
- Voltage Standing Wave Ratio (VSWR); a value certifying how well an antenna performs. If you have a high standing wave ratio it means that certain amounts of energy will bounce back into the telephone and you will experience a signal loss, causing poorer conversation quality
- Antenna amplification (gain). Measured in decibel (dB)

The mechanical tests are as follows:

- Salt/air corrosion
- UV-rays
- Temperature shock
- Hot/cold
- Vibration

TEMS – Test Mobile System

Our antennas are not only tested mechanically and electrically. They are also tested in real situations, systemwise.

By testing the antenna on a test route, we receive a very good picture of how the telephone acts and is interpreted by the system. For instance, due to car models having different design and form, we can use the TEMS to evaluate beneficial antenna position. Strictly speaking, this is the best way to verify a peak performing vehicle antenna. There are also a number of technical advantages with the TEMS equipment.



Test route



Signal from antenna to base station

Contents

2 - 3	Company presentation	Business idea, product areas, quality and testing
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Base 128

- Designed for reliable and fixed hole mounting
- Operates in frequency range 27 - 1000 MHz
- Ball joint for the radiator, allowing positioning of the radiator irrespective to the base
- Designed for radiators with M6 thread
- Mount hole diameter 19 mm

Product No:

128.51.00.00

Base without cable

128.51.01.05

Base with 3.65 m LL58 cable and UHF(m) connector

128.51.00.07

Base with 5 m LL58 cable and FME(f) connector



Base 1123

- Designed for reliable and fixed hole mounting
- Operates in frequency range 27 - 1000 MHz
- Designed for radiators with M6 thread
- Mount hole diameter 19 mm

Product No:

1123.02.00.83

Round base with 5 m LL58 cable and FME(f) connector

1123.01.48.00

Oval base without cable, with FME(m) connection

1123.02.48.00

Round base without cable, with FME(m) connection

Set including round base with 5 m LL58 cable, FME(f) connector and radiator:

8789

Set with 1/4-wave/0 dBd radiator for 824-960 MHz

8790

Set with colinear/3 dBd radiator for 872-960 MHz



Base 1131

- Designed for reliable and fixed hole mounting
- Operates in frequency range 27 - 1000 MHz
- Made to fit an angular surface i.e. on the side of a vehicle
- Designed for radiators with M6 thread
- Mount hole diameter 19 mm

Product No:

1131.01.48.00

Base without cable, with FME(m) connection



Body mounts

Base 2000XL

- Designed for reliable and fixed hole mounting
- Operates in systems NMT450 or GSM 900/1800 or AMPS/PCS 800/1900 MHz or 3G/Bluetooth
- Exposed parts made in plastic material makes it totally corrosion free
- Designed for radiators with M4 thread
- Mount hole diameter 14 mm or 19 mm

Product No:

1143.1 Base with 0.15 m LL58 cable and FME(m) connector

1143.2 Base with 5 m LL58 cable and FME(f) connector

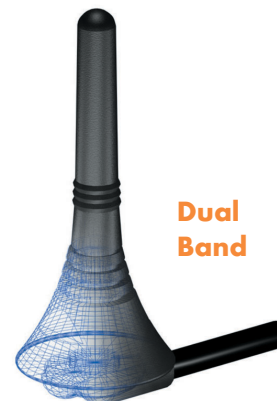
Set includes base with 5 m fixed LL58 cable with FME(f) connector and radiator:

8778 Set with 1/4 wave/0 dBd radiator for 880-960/1710-1880 MHz

8779 Set with 1/4 wave/0 dBd radiator for 824-894/1850-1990 MHz

NOTE! New antenna set:

8780 Set with colinear/3dBd/0dBd radiator for 824-894/1850-1990 MHz



Dual
Band



Dual
Band

GigaTop

- Designed for reliable and fixed hole mounting
- Operates in system GSM 900/1800
- Mini Low Loss cable
- Designed for radiators with M3 thread
- Mount hole diameter 14 mm or 19 mm

Product No:

Set includes base with 0,8 m fixed Mini Low Loss cable with FME(m) connector and radiator:

For 14 mm mounting hole:

EHD1890 1/4-wave/0 dBd radiator for 890-960/1710-1880 MHz

EHD1891 Colinear 3dBd/0dBd radiator for 890-960/1710-1880 MHz

For 19 mm mounting hole:

EHC1890 1/4-wave/0 dBd radiator for 890-960/1710-1880 MHz

EHC1891 Colinear 3dBd/0dBd radiator for 890-960/1710-1880 MHz

Magnet mounts

MaxiMag

- Designed for reliable magnet mounting
- Operates in frequency range 27 - 1000 MHz
- Perfect choice for usage of long radiators
- Ball joint for the radiator, allowing positioning of the radiator irrespective to the base
- Designed for radiators with M6 thread

Product No:
130.05.19.05 Base with 3.65 m LL58 cable and FME(f) connector



















MidiMag

- Designed for reliable magnet mounting
- Operates in frequency range 27 - 1000 MHz
- Possibility to easy detach the cable from base via a FME connection
- Designed for radiators with M6 thread








Product No:
1120.02.19.10 Base with 4.5 m LL58 cable and FME(f) connector

NOTE! Cable length will be changed from 3.65 m into 4.5 m








Radiator guide

	VHF/PMR/FM					450 MHz	
 Base 128							
 Base 1123							
 Base 1131							
 Base 2000XL							
 Ant							
 MaxiMag							
 MidiMag							
Product No:	313.01.00.00	3100.03.00.00	310.06.00.00	3183.03.00.00/ 3183.02.00.00	351.04.00.00	3126.04.00.00	3132.13.00.00
Frequency:	27 MHz	65–1000 MHz cutting chart	68–225 MHz cutting chart	88–108 MHz/ 68–105 MHz with cutting chart	144–225 MHz cutting chart	375–480 MHz cutting chart	380–445 MHz
Type:	1/4-wave	1/4-wave	1/4-wave	1/4-wave, shorten	5/8-wave	1/4+1/2-wave	1/4-wave
Gain:	1 dBd	0 dBd	0 dBd	0 dBd	1 dBd	3 dBd	0 dBd
Material:	Stainless steel	Stainless steel	Stainless steel	Plastic, stainless steel	Stainless steel	Stainless steel	Plastic wire
Thread:	M6	M6	M6	M6	M6	M6	M6
Length:	600 mm	<1120 mm	<1098 mm	379 mm	<1350 mm	<735 mm	145 mm

Radiator guide

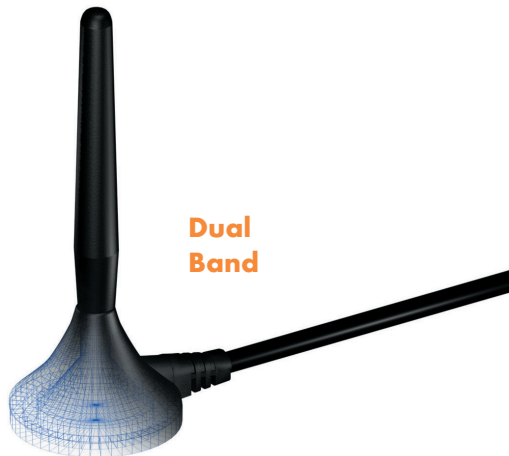
	450 MHz					800/900 MHz	
 Base 128							
 Base 1123							
 Base 1131							
 Base 2000XL							
 Ant							
 MaxiMag							
 MidiMag							
Product No:	3132.01.00.00	3178.1	3126.01.00.00	3122.01.00.00	3206.1	3174.1	3146.01.00.00/ 3146.03.00.00
Frequency:	445-470 MHz	450-466 MHz	450-470 MHz	452-468 MHz	450-470 MHz	824-960 MHz	824-894 MHz/ 872-960 MHz
Type:	1/4-wave	5/8+1/4-wave	1/4+1/2-wave	1/4+1/2-wave	1/4-wave	1/4-wave	1/4+1/2-wave
Gain:	0 dBd	6 dBd	3 dBd	3 dBd	0 dBd	0 dBd	3 dBd
Material:	Plastic wire	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Thread:	M6	M6	M6	M6	M4	M6	M6
Length:	130 mm	910 mm	565 mm	605 mm	143 mm	49 mm	314/275 mm

Radiator guide

	800/900 MHz			1600-2500 MHz		800/1900 & 900/1800 MHz	
 Base 128							
 Base 1123							
 Base 1131							
 Base 2000XL							
 Ant							
 MaxiMag							
 MidiMag							
Product No: Frequency: Type: Gain: Material: Thread: Length:	3157.01.00.00/3157.03.00.00 824-894 MHz/ 872-960 MHz 1/4+1/2-wave 3 dBd Stainless steel/ Plastic M6 277/263 mm	3207 824-960 MHz 1/4-wave 0 dBd Stainless steel/ TPE-plastic M4 65 mm	3193.1 872-960 MHz 1/4+1/2+ 1/2-wave 6 dBd Stainless steel/ Fibreglass M6 635 mm +6 dBd	3205 1600-2500 MHz 1/4-wave 0 dBd Brass M4 17 mm	3212 1710-1880 MHz 1/4+1/2-wave 3 dBd Stainless steel M4 108 mm	3245.1 890-960/ 1710-1880 MHz 1/4-wave 0 dBd Stainless steel/ TPE-plastic M4 56 mm Dual Band	3245.2 824-894/ 1850-1990 MHz 1/4-wave 0 dBd Stainless steel/ TPE-plastic M4 56 mm Dual Band

Magnet mounts

MiniMag & Sputnik

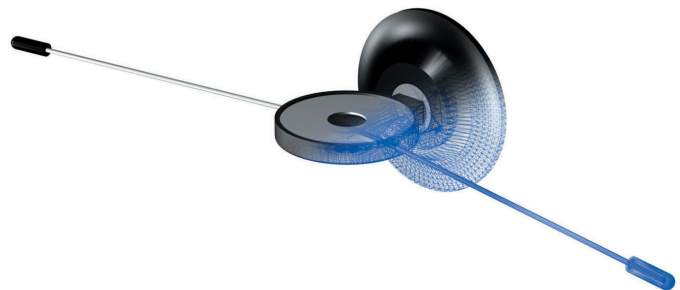


MiniMag

- Designed for reliable magnet mounting
- Operates in frequency range 450–2500 MHz
- Operates in systems NMT450, GSM900/1800, AMPS/PCS 800/1900 and 3G/Bluetooth
- Combine with Smarteq's unique Sputnik pocket size ground plane to maximize reception quality and usage areas

Sputnik

- Designed groundplane with suction cup
- Portable, pocket sized, all-in-one solution
- Combine Sputnik with Smarteq's MiniMag
- Works in all situations e.g. cars, boats, trains, offices, cottages and at home



Following sets includes MiniMag with 2.6 m RG174 cable, FME(f) connector and radiator of choice, with or without Sputnik:

Product No:

- 1140.4** MiniMag, Colinear/3 dBd for 890–960 MHz
- 1140.26** MiniMag, 1/4 wave/0 dBd for 890–960/1710–1880 MHz
- 1140.27** MiniMag, 1/4 wave/0 dBd for 824–894/1890–1990 MHz
- 1140.14** MiniMag, 1/4 wave/0 dBd for 1710–2500 MHz
- 1150.1** Sputnik groundplane (without MiniMag) works with 1140.26, 1140.27 and 1140.14
- 1150.2** Sputnik & MiniMag, 1/4 wave/0 dBd for 890–960/1710–1880 MHz
- 1150.3** Sputnik & MiniMag, 1/4 wave/0 dBd for 824–894/1890–1990 MHz

NOTE! New antenna set:

- 1140.24** MiniMag, Colinear/3dBd/0dBd radiator for 824–894/1850–1990 MHz

GigaMag

- Designed for reliable magnet mounting
- Operates in the system GSM 900/1800 or AMPS 800/1900
- GigaMag is supplied with 2.5 m Low Loss cable and FME(f) connector

Following sets includes GigaMag with 2.5 m Low Loss cable and FME(f) and radiator of choice:

Product No:

- MHD1890** Set with 1/4 wave/0 dBd radiator for 890–960/1710–1880 MHz
- MHD1891** Set with colinear 3dBd/0dBd radiator for 890–960/1710–1880 MHz

NOTE! New antenna set:

- MHD1981** Set with colinear 3dBd/0dBd radiator for 824–894/1890–1990 MHz



Glass mounts

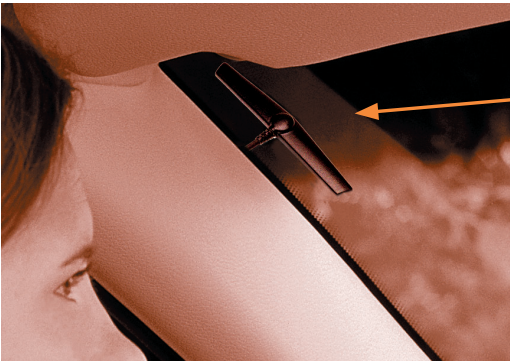
MiniWing

- Designed for discreet mounting on glass inside the vehicle
- Operates in systems GSM900/1800/1900 and AMPS/PCS 800/1900 MHz
- Prevent antenna vandalism, non damage of the chassis, reduce possible car cleaning accidents
- Delivered with a high-performance Mini Low Loss cable

NOTE - New Product No!

Product No:

200497 MiniWing 0 dBd dipole antenna for 824-960/1710-1990 MHz with 2.5 m Mini Low Loss cable and FME(f) connector



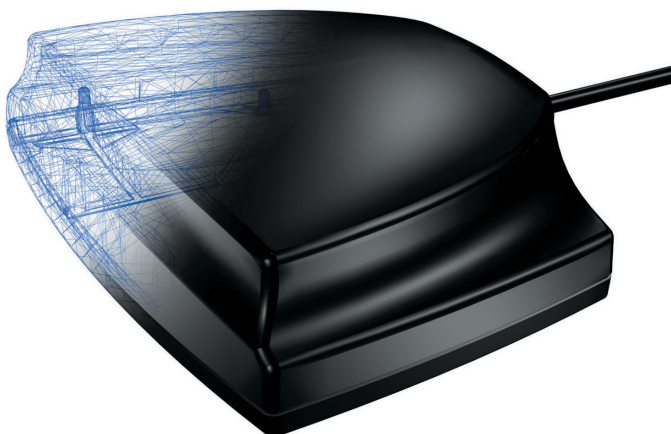
Dual
Band

InCa

- Designed for discreet mounting on glass inside the vehicle
- Operates in system GSM900/1800
- High performing antenna originally designed for the automotive industry
- Designed to harmonise with the interior of your car
- Prevent antenna vandalism, non damage of the chassis, reduce possible car cleaning accidents
- Delivered with a high-performance Mini Low Loss cable

Product No:

9000 InCa 0 dBd antenna for 890-960/1710-1880 MHz with 3.5 m Mini Low Loss cable and FME(f) connector



Dual
Band

Clic

- Designed for mounting on glass
- Operates in systems AMPS 800 or GSM 900
- Probably the most sold glass mount antenna in the world
- Aerodynamically designed to eliminate wind noise
- Easy to install – simply stick onto the vehicle window with the high performance adhesive mount
- Clic's unique snap action allows for easy click on and off radiator removal when using the car wash

Gain: 0 dBd or 3dBd
Frequency: 824-895 MHz or 890-960 MHz
Length: 75 mm or 300 mm
Type: 1/4 wave or colinear
Cable: 5 m LL58 with FME(f) connector

Product No:

1138.1 Clic with 3 dBd radiator for 890-960 MHz
1138.9 Clic with 0 dBd radiator for 890-960 MHz
1138.3 Clic with 3 dBd radiator for 824-865 MHz



**Dual
Band**



Twin

- Designed for mounting on glass
- Operates in systems GSM900/1800 or AMPS/PCS 800/1900
- Available with 0dBd or 3 dBd/0 dBd radiator
- Aerodynamically designed to eliminate wind noise
- Easy to install – simply stick onto the vehicle window with the high performance adhesive mount
- Twin's unique snap action allows for easy click on and off radiator removal when using the car wash

Gain: 0 dBd or 3dBd/0 dBd
Frequency: 824-895/1850-1990 MHz or 890-960/1710-1880 MHz
Length: 55 mm or 300 mm
Type: 1/4 wave or colinear
Cable: 5 m LL58 with FME(f) connector

Product No:

1158.20 Twin with 0 dBd radiator for 880-960/1710-1880 MHz
1158.22 Twin with 0 dBd radiator for 824-894/1850-1990 MHz
1158.24 Twin with 3 dBd/0 dBd radiator for 880-960/1710-1880 MHz
1158.26 Twin with 3 dBd/0 dBd radiator for 824-894/1850-1990 MHz

Glass mounts

GigaGlass

- Designed for mounting on glass
- Operates in system GSM900/1800
- Available with 0dBd or 3 dBd/0 dBd radiator
- Aerodynamically designed to eliminate wind noise
- Fitted with an FME(m) connector in the base to give the user flexibility to choose type and length of the cable

Gain: 0 dBd or 3dBd/0 dBd
Frequency: 890-960/1710-1880 MHz
Length: 100 mm or 355 mm
Type: 1/4 wave or colinear
Connector: FME(m)

Product No:
GDD1818 With 0 dBd radiator for 890-960/1710-1880 MHz
GDD1814 With 3 dBd/0 dBd radiator for 890-960/1710-1880 MHz

Dual
Band



Dual
Band



WindowClip

- Designed to be attached to the side window for quick and easy installation
- Operates in system GSM 900/1800
- Safe and effective solution for roof loaded cars (with ski boxes etc)
- Ground plane independent

Product No:
1132.19 With 1/2 wave/0 dBd radiator for 890-960/1710-1880 MHz and 2 m RG174 cable with FME(f) connector

Telematic/Multi purpose antennas

Antenna solutions for the "wireless car"

Smarteq's telematic/multipurpose antennas are developed using the latest antenna technology, designed to meet the growing demands for reliable communication with the "wireless car".

Used together with telematic units (like SmarTraq) in systems for car sharing, fleet management, safety/security, logistics and other services.



SmartWing

- Designed for discreet mounting on glass inside the vehicle
- Operates in systems GSM 900/1800/1900, AMPS/PCS 800/1900 and GPS
- Prevent antenna vandalism, non damage of the chassis, reduce possible car cleaning accidents
- GPS antenna with high performance LNA (Low Noise Amplifier)
- Filter characteristics specially designed to minimize disturbances from the mobilephone system
- Mini Low Loss cable decreases attenuation

NOTE - New Product No!

Product No:

700007 SmartWing antenna for GPS & 824-960/1710-1990 MHz with 2.5 m RG174 cable and SMA(m) connector for GPS and 2.5 m Mini Low Loss and FME(f) connector for mobile phone

MiniSat

- Designed for discreet magnet mounting on metallic surface on a vehicle or similar or adhesive mounting
- Designed to be used with a GPS receiver
- Tested for operation in vicinity of other communication systems
- High performance LNA (Low Noise Amplifier)
- Filter characteristics specially designed to minimize disturbances from the mobilephone system
- Small in size and light

Product No:

200168 MiniSat GPS antenna with 2.5 m RG174 cable and SMA(m) connector



Telematic/Multi purpose antennas

Ant

- Designed for reliable and fixed hole mounting
- Operates in systems GSM 900/1800 or AMPS/PCS 800/1900 + GPS + option for an external radiator operating on 27-600 MHz
- Designed for optional radiator with M6 thread
- Mount hole diameter 19 mm
- GPS antenna with high performance LNA (Low Noise Amplifier)
- Filter characteristics specially designed to minimize disturbances from the mobilephone system
- Low Loss RG316 cable



Product No:

72488-1 890-960/1710-1880 MHz/GPS/external radiator option (27-600 MHz)

72488-2 824-895/1850-1990 MHz/GPS/external radiator option (27-600 MHz)

Cable and connectors for both versions:

Phone: 0.2 m RG316 with FME(m) connector

GPS: 0.13 m RG316 with SMA(m) connector

Optional radiator: 0.15 m RG316 with FME(f) connector

SportFlex

- Designed for reliable and fixed hole mounting
- Operates in systems AM/FM, GSM 900/1800 and AMPS/PCS 800/1900
- Mount hole diameter 18 mm or 15x15 mm square
- AM/FM with amplifier and filtering
- Tested and approved by Automotive industry
- Low Loss RG316 cable



Product No:

800016 0 dBd antenna 824-960/1710-1990 MHz/AM/FM with active filter

Cable and connections:

Phone: 0.12 m RG316 with FME(m) connector

AM/FM: 0.165 m RG316 with M10x0.75 connector

Power feed: 0.16 m 0.5 mm² RED

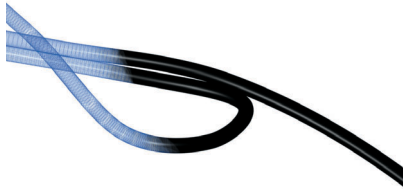
Adapter cables:

8118 Adapter for Audi A3, A4, A6, Avant, Volvo V40

8119 Adapter for VW, Nissan

8120 Adapter for VW Passat from -97 and later

Cables



VGG=HF50 with FME(f)/FME(f)

Product No:	
VGG1500	1.5 m
VGG2500	2.5 m
VGG3500	3.5 m
VGG4000	4 m
VGG5000	5 m
HF50	100 m drum (no connectors)

Low Loss with FME(f)/FME(f)

Product No:	
8186.0003	3 m
8186.0004	4 m
8186.0005	5 m
8186.0010	10 m
50992	100 m drum (no connectors)

LL58 with FME(f)/FME(f)

Product No:	
8147.0001	1.3 m
8147.0003	3 m
8147.0004	4 m
8147.0005	5 m
50991	100 m drum (no connectors)

LL58 for base 128

Product No:	
8105.0001	3.65 m Press128/UHF(m) connector
8113.0003	3.65 m Press128/FME(f) connector
8113.0002	5.0 m Press128/FME(f) connector

Adapter Cable with SMA(f)

Product No:	
800091-1	0.15 m to MCX(m) connector
800091-2	0.15 m to SMB(m) connector
800091-3	0.15 m to FME(f) connector

Connectors



Adapters with FME(m)

Product No:	
46038	N male
46040	BNC male
46041	TNC male
46070	UHF male
46076	Joint for FME male
46123	Mini-UHF Angle male
46223	Mini-UHF male
46228	BNC-Angle male
46229	TNC-Angle male
46346	SMA male

Crimp Connectors

Product No:	
51001-1	BNC/FME(m) for RG/LL58
51060	TNC(m) for RG/LL58
51081	Mini-UHF(m) for RG/LL58
45866+	Press connector for Base128 for RG/LL58
856.0000	FME(f) for RG/LL58
8200.0000	FME(f) for Low Loss
51116+	FME(f) for RG174/316
4285	FME(f) for HF50

Loss/meter cable	@450 MHz	@900 MHz	@1800 MHz
RG58	0.35 dB	0.50 dB	1.10 dB
LL58	0.33 dB	0.49 dB	0.77 dB
HF50	0.33 dB	0.55 dB	0.83 dB
RG174	0.71 dB	1.16 dB	1.86 dB
RG316 (hallogen free)	0.50 dB	0.86 dB	1.20 dB

Handsfree

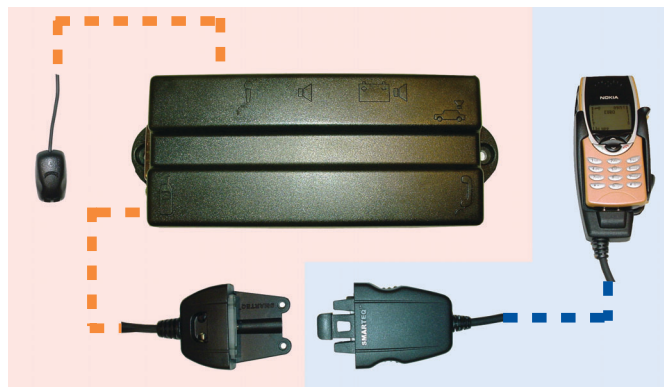
Handsfree Universal

- SDD – Smarteq Dynamic Duplex (full duplex with echo cancellation)
- Microprocessor controlled function
- Clear and distinct speech using the existing car stereo speaker during call
- Multiple switchover function between handsfree and handset operation
- Special Low Loss RF cable
- Integrated radio mute function
- Ignition sensing - time controlled switch off
- Intelligent charging system
- 12/16 Volt power system
- External antenna connection on all models for improved coverage and speech quality
- Antenna couplers on all handsets without external antenna connector
- Compact design
- CE-marked electronics
- e-certified
- Made in Sweden

New product!

Smarteq's unique cradle connection allows a slim, discreet design of the cradle. When changing handset - simply upgrade your hands free system by connecting a new cradle. Quick and easy at a minimum cost!

Basic universal kit



Universal holder kit

Product No:

709000 Basic universal kit including electronic box (universal), microphone, ball clip, power cables, screws and installation guide.

Universal Holder kits*

Product No:	Holder kit for model:	Product No:	Holder kit for model:
709021	Ericsson T28/T29/ T39 DSP	709066	Nokia 8260
709022	Ericsson R320/380 DSP	709063	Nokia 8310
709025	Motorola L7089/P7389	709060	Nokia 8850
709030	Motorola V3688/V3690 /V50	709061	Nokia 3310/3330
709037	Nokia 5110/6110/6150/ 7110/6210/5165	709062	Nokia 3360
709066	Nokia 6310	709064	Nokia 3390
709038	Nokia 3210	709053	Siemens S35/C35/ M35
709039	Nokia 8210	709054	Siemens S45/ME45
709065	Nokia 8290	709055	Siemens SL45/SL42

* Holder kit includes phone cradle and Users guide

Optional Accessories

- VDA and ISO interface cables available for easy installation in VDA/ISO prepared cars
- Radio Mute Box available for connection to the car audio system
- Handset for private calls
- Gooseneck microphone for optimised microphone sound quality in extremely noisy environments
- Loudspeaker incl. mounting bracket and screws

Handsfree Pro

- SDD – Smarteq Dynamic Duplex (full duplex with echo cancellation)
- Microprocessor controlled function
- Clear and distinct speech using the existing car stereo speaker during call
- Multiple switchover function between handsfree and handset operation
- Special Low Loss RF cable
- Integrated radio mute function
- Ignition sensing - time controlled switch off
- Intelligent charging system
- 12/24 Volt power system
- External antenna connection on all models for improved coverage and speech quality
- Antenna couplers on all handsets without external antenna connector
- Compact design
- CE-marked electronics
- e-certified
- Made in Sweden



Handsfree Pro Models

Product No:	Model:	Product No:	Model:	Product No:	Model:
70417	Ericsson GF768/788/T10s/T18s	70466	Nokia 6310	70961	Nokia 3390
70521 *)	Ericsson T28/T29/T39 DSP	70438	Nokia 3210	70962	Nokia 3360
70522 *)	Ericsson R320/R380 DSP	70439	Nokia 8210	70443	Panasonic GD90
70425	Motorola L7089/P7389	70460	Nokia 8850	70449	Siemens C25
70429	Motorola cd920/cd930	70461	Nokia 3310/3330	70450	Siemens S25
70430	Motorola V3688/V3690/V50	70939	Nokia 8260	70453	Siemens S35/C35/M35
70437	Nokia 5110/6110/6150/7110/6210/5165	70960	Nokia 8290	70454	Siemens S45/ME45
		70463	Nokia 8310	70455	Siemens SL45/SL42

***) NOTE - New Product No!**
Due to updated electronics
70421 & 70422 have changed
Product No into 70521 & 70522!

Handsfree Pro Accessories

- 70001** Mounting clip
- 70307** Microphone (active)
- 70308** Gooseneck microphone
- 70322** Cradle extension cable
- 70401** Headset with earphone and microphone (incl. 1,5m switch cable).
- 70403** VDA/ISO interface cables for easy installation in VDA/ISO prepared cars
- 70402** Radio Mute Box (incl cable kits) for car audio system (ISO standard, Audi, Citroen, Fiat, Opel, Peugeot, Renault, Rover, VW)

Radio Mute Box



Handsfree

Handsfree Lite

- SDD – Smarseq Dynamic Duplex (full duplex with echo cancellation)
- Electronics and speaker function integrated in the base unit
- Power supply via the 12/24V lighter socket in the car
- Easy and rapid installation (less than five minutes)
- Intelligent charging
- Multiple switchover function between handsfree and handset operation
- Special Low Loss RF cable
- High power speaker
- Movable microphone
- No installation cost
- Compact design
- CE-marked electronics
- e-certified
- Made in Sweden



Handsfree Lite models

Product No:	Model:	Product No:	Model:	Product No:	Model:
70217	Ericsson GF768/788, T10s/T18s	70237	Nokia 5110/6110/6150/7110/6210	70249	Siemens C25
70221	Ericsson T28/T29/T39	70238	Nokia 3210	70250	Siemens S25
70222	Ericsson R320/380	70239	Nokia 8210	70253	Siemens C35, M35
70225	Motorola L7089/P7389	70260	Nokia 8850		
70229	Motorola cd920/cd930	70261	Nokia 3310/3330		
70230	Motorola V3688/V3690/V50	70243	Panasonic GD90		

Handsfree LITE Accessories

- 70001 Mounting clip
- 70015 Passive microphone
- 70016 Power cable set

SmarTraq 2.0

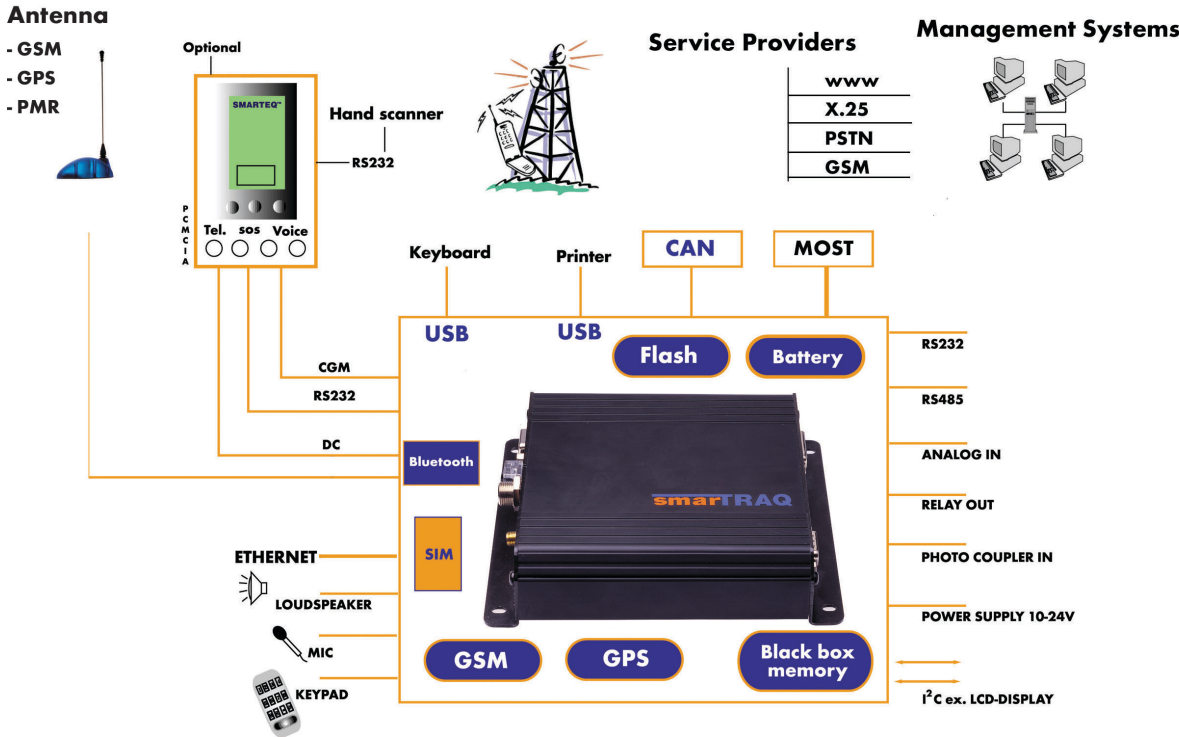
Telematics – the passage of value added data services over a wireless network – is the new growth market at the centre of the increasing convergence of mobile data communications, multimedia content and vehicle tracking systems. Telematics is about the passage both ways of value added services in real-time between an intelligent host and the mobile asset.

Type of Markets

- Transport companies
- Public Transport
- Emergency services
- Car sharing
- Rental cars
- Business professionals

Applications

- Alarms
- Vehicle monitoring
- PDA connections
- Man Machine Interface (MMI) adoptions
- I/O connections are normally customised depending on what type of peripherals and vehicle connections, which are specified by the customer (See picture below)



The SmarTraq Telematic solution is always tailored to your requirements present and future.

For more information mail:info@smarTraq.se

General sales conditions

1. Applicability

These general conditions for sale are applicable to sales from Smarteq AB (publ) and its subsidiaries ("Smarteq").

2. Formation of Contract

2.1 Upon receipt of a purchase order, Smarteq will send the Purchaser a written order confirmation. A contract ("Contract") based on Smarteq's order confirmation is deemed to be entered into between Smarteq and the Purchaser at the earlier of

(a) the day Smarteq receives a copy of the order confirmation duly signed by the Purchaser, or

(b) ten (10) days from the date of the order confirmation, provided, however, that the Purchaser has not in the meantime made any objections thereto.

2.2 Unless otherwise agreed in writing, these General Conditions for Sale will constitute an integral part of the Contract.

3. Drawings and Descriptive Documents

3.1 The weights, dimensions, capacities, prices, performance ratings and other data included in catalogues, prospectuses, circulars, advertisements, illustrated matter and price lists as expressed in Smarteq's general product information constitute an approximate guide. These data shall not be binding save to the extent that they are by reference expressly included in the Contract.

3.2 All drawings and technical documents intended for use in the construction and/or manufacture of any product delivered to the Purchaser or a portion thereof shall remain the exclusive property of Smarteq. They may not, without Smarteq's written consent, in any way be utilized by the Purchaser or copied, reproduced, transmitted or communicated to a third party or be used by the Purchaser in competition with Smarteq.

4. Packing

Prices shown in price lists, offers, catalogues or other documents issued by Smarteq shall be deemed to apply to products packed for transportation in accordance with the packing standard from time to time applied by Smarteq. Any specially required packing due to the Purchaser's location and/or special requirement is not included in the above mentioned prices.

5. Acceptance Test

Acceptance tests (if any) shall be carried out upon the Purchaser's reasonable request and at the Purchaser's cost at Smarteq's site during normal working hours after agreement with Smarteq as to date and time.

6. Passing of Risk and Title

6.1 The time at which the risk of loss of or damage to the products shall pass from Smarteq to the Purchaser shall be fixed in accordance with the International Rules for Interpretation of Trade Terms (Incoterms) of the International Chamber of Commerce in force at the date of the Contract. If no specific written agreement is made between Smarteq and the Purchaser, as to which specific trade terms are to be applied, the products shall be deemed to be delivered "Ex Works, manufacturing site".

6.2 Title to the products delivered to the Purchaser remains with Smarteq until the full purchase price has been paid by the Purchaser to Smarteq.

7. Delivery

7.1 Unless otherwise agreed in writing, the delivery time shall run from the latest of the following dates:

(a) the date of Contract as defined in Clause 2.1,

(b) the date on which Smarteq receives note of the issue of a valid import license where such is necessary for the sale from Smarteq to the Purchaser,

(c) the date of receipt by Smarteq of such payment in advance as may be agreed in writing between Smarteq and the Purchaser, or

(d) the date of receipt by Smarteq of technical data and documentation where such is necessary for the execution of the order from the Purchaser.

7.2 If a fixed time for delivery has been agreed between Smarteq and the Purchaser and such date is exceeded by more than four weeks and this is solely attributable to Smarteq, the Purchaser is entitled to a reduction of the purchase price payable for the undelivered products. The price reduction shall be a maximum of zero point five per cent (0,5 %) of the purchaser price for the undelivered products, provided, however, that the Purchaser can show that the Purchaser has suffered a corresponding loss because of the delay. The price reduction is calculated for each full week starting from the fourth week of delay and the price reduction shall in total not exceed five per cent (5 %) of the purchase price for the undelivered products.

7.3 The price reduction determined above shall mean the full and final compensation by Smarteq to the Purchaser in respect of delays in delivery under the Contract. The Purchaser shall not be entitled to deduct the price reduction from any payments to be made to Smarteq under the Contract.

8. Payment

Payment shall be made in the manner and at the time or times stipulated by Smarteq. If the Purchaser does not pay an invoice when it becomes due for payment, Smarteq reserves the right to stop delivery of products to the Purchaser until the invoice has been duly paid. Smarteq agrees that this right shall not be executed without giving the Purchaser prior notice and a reasonable time period to settle the invoice. Without prejudice to any of its other rights, Smarteq may charge the Purchaser all or parts of the costs incurred in collecting amounts due for payment. In addition hereto, Smarteq may from the date on which the Purchaser was in default charge a penalty interest on unpaid amounts at an annual rate of eighteen percent (18 %).

9. Pricing

Prices are in accordance with written offers or contracts from Smarteq. The prices, fees and other charges of Smarteq do not include value added tax, sales tax and similar taxes as well as any city, municipal, state or federal taxes or any withholding taxes, whether currently imposed or imposed in the future, excluding tax on income. If any such tax is found to be applicable, the appropriate amount of tax shall be invoiced to and paid by the Purchaser to Smarteq at the same time and on the same terms as applied to the payment due.

10. Cancellation

The Purchaser is not allowed to cancel any purchase order.

11. Warranty

11.1 Smarteq manufactures products, which are inspected and submitted to final test before shipment. If, within the warranty period, any defect is discovered in whole or part of the products with respect to material or workmanship and which should reasonably have been expected to be within Smarteq's control, Smarteq will at its own option make good the defect in either of the two following ways:

(a) Smarteq will, without charge, carry out such repair at its own facilities provided that notice has been given by the Purchaser promptly after the defect is discovered and that the products in whole or part have been forwarded, without delay, CIF (Incoterms) to Smarteq's manufacturing site. Labour costs for disassembly and reassembly in the Purchaser's site in whole or in part, will be borne by the Purchaser. After repair the products will, in whole or in part, be returned CIF (Incoterms) to the Purchaser's headquarter or manned regional office. Smarteq accepts no responsibility for any defects caused in connection with the assembly work at the Purchaser's site.

(b) Smarteq will send free replacement for the defective part CIF (Incoterms) to the Purchaser's headquarter or manned regional office.

Labour costs for disassembly and reassembly at site shall be borne by the Purchaser. Smarteq takes no responsibility for defects in connection with the replacement work at the Purchaser's site.

11.2 A new warranty period shall apply, under the same terms and conditions as those applicable to the original parts, for those parts supplied or repaired in accordance with these warranty conditions, although no longer than three (3) months after the end of the original warranty period. Defective parts replaced in accordance with these warranty conditions shall be placed at Smarteq's disposal at site and shall upon request be returned CIF Smarteq's manufacturing site.

11.3 This warranty does not apply to defects caused by normal wear and tear, abnormal conditions of working, accidental damage, improper handling, or neglect of instructions, given by Smarteq. It does not cover defects caused by faulty maintenance or from alterations or repair carried out without Smarteq's authorization. The warranty does not include consumable parts in the products.

11.4 The warranty period is twelve (12) months from the date of delivery from Smarteq. The warranty period for repaired parts, repaired after the original warranty period has expired, is three (3) months.

12. Limitation of Remedies

12.1 In all situations involving performance or non-performance of products delivered to the Purchaser, the Purchaser's sole remedy is set forth in Clause 11. For any other claim concerning performance or non-performance by Smarteq pursuant to, or in any way related to the subject matter of the Contract, the Purchaser shall be entitled to recover actual, proven damages to the limits set forth herein.

12.2 In no event will Smarteq be liable for any damage caused by the Purchaser's failure to perform its responsibilities or for any indirect consequential damages including, but not limited to, loss (whether direct or indirect) of profits or business or for anticipated savings or for any incidental damages or for any claims made against the Purchaser.

12.3 Smarteq's liability for damages to the Purchaser for any cause whatsoever shall be limited to the purchase price paid to Smarteq of the products delivered to the Purchaser. The limitation of liability set forth in the preceding sentence will not apply to claims for personal injury or damage to real property or tangible property in cases of intentional misconduct or gross negligence.

13. Intellectual Property Rights

13.1 There may be patents, utility models, trademarks, trade names, design patterns, copyrights and other intellectual property rights relating to the products delivered to the Purchaser that belong to Smarteq. The Purchaser agrees to respect any such intellectual property rights and understands that the use of Smarteq's intellectual property rights pursuant to the Contract does not include or cause the transfer of ownership thereof or give any proprietary rights in any of them to the Purchaser. The Purchaser agrees to inform Smarteq as soon as it receives any knowledge of any intellectual property right belonging to or used by Smarteq being infringed or allegedly infringed.

13.2 To Smarteq's knowledge, no intellectual property rights of third parties are infringed by manufacture, sale or use of the products delivered to the Purchaser or by any portion thereof. Smarteq shall indemnify the Purchaser against any infringement claim if a product or any portion thereof infringes any intellectual property rights in a country where Smarteq markets the same or a similar product as provided to the Purchaser (unless the infringement is caused by Smarteq's adherence to technical specifications, drawings, etc provided by the Purchaser) and Smarteq will pay resulting costs, damages and attorney's fees finally awarded by a court for such claim provided that the Purchaser shall

- (a) notify Smarteq promptly in writing of any allegation of infringement,
- (b) make no admission relating to the alleged infringement,
- (c) allow Smarteq to conduct all negotiations and proceedings, and
- (d) give Smarteq, at Smarteq's expense, all reasonable assistance.

13.3 If a product delivered to the Purchaser or a portion thereof becomes, or Smarteq believes it is likely to become, the subject of an allegation referred to in Clause 13.2, Smarteq may, at its option and expense, either secure for the Purchaser a right of continued use or replace or modify the product so that it becomes non-infringing, provided that any such replacement or modification does not in a negative way affect the performance of the product. If neither of these alternatives is available on terms which Smarteq judges to be reasonable, the Purchaser shall upon written notice from Smarteq return such items of the product to Smarteq. Smarteq agrees to grant the Purchaser a credit equal to the depreciated price paid to Smarteq by the Purchaser for the returned products (calculated on a straight line basis over a five-year life).

13.4 This Clause 13 states Smarteq's entire obligation to the Purchaser regarding infringement of intellectual property rights. Smarteq will have no obligation with respect to any claim based upon the Purchaser's modification of a product or its combination, operation or use with products not delivered by Smarteq. The Purchaser shall indemnify and hold Smarteq harmless from and against all claims, proceedings and expenses arising from such modification, combination, operation or use.

14. Force Majeure

14.1 Neither Smarteq nor the Purchaser shall be liable to the other for any delay or non-performance of its obligations under the Contract in the event and to the extent that such delay or non-performance is due to an event of Force Majeure (as defined hereinafter).

14.2 Events of Force Majeure are events beyond the control of a party or any of its sub-contractors which occur after the date of Smarteq's order confirmation referred to in Clause 2.1 and which were not reasonably foreseeable at the time and whose effects are not capable of being overcome without unreasonable expense and/or loss of time to the party concerned. Events of Force Majeure shall include (without being limited to) war, civil unrest, strikes, lockouts and other general labour disputes, acts of government, natural disasters, exceptional weather conditions, breakdown or general unavailability of transport facilities, accidents, fire explosions and general shortages of energy and materials.

14.3 A party directly affected by an event of Force Majeure shall lose the right to rely on the same, unless, reasonably soon after the time when the party became or ought to have become aware of the occurrence of the event, that party gives the other party written notice thereof. When the event of Force Majeure has come to an end, the said other party shall be notified and also, if possible, be informed when any measure postponed by the event will be effected.

15. Sub-Contractors

Smarteq has the right to sub-contract any part of its obligations under the Contract to independent contractors selected by Smarteq.

16. Governing Law

The Contract shall be governed by, and construed and enforced in accordance with the substantive laws of Sweden without regard to its principles of conflicts of laws or the United Nations Convention on the International Sale of Goods.

17. Disputes

Any and all disputes, controversies and claims arising out of or in connection with the Contract, or the breach, termination or invalidity thereof, shall be settled in arbitration in accordance with the rules of the Arbitration Institute of the Stockholm Chamber of Commerce. Unless the parties agree otherwise, the arbitration proceedings shall be conducted in Stockholm, Sweden.

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