



SAT

Camping & Caravan 2019

At Home on the Road



KATHREIN

KATHREIN

Who we are and what we stand for

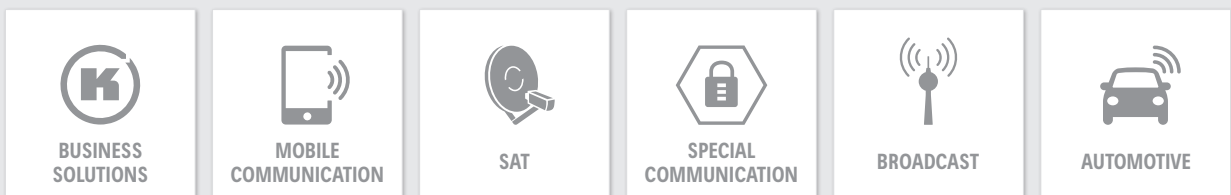
Kathrein is a specialist for reliable, high-quality communication technologies.

The company is driving innovation and technology in today's connected world. Its ability to provide solutions and services enables people all over the world to communicate, access information and use media, whether at home, at the office or on the road.

The business covers a broad spectrum: from mobile communication, RFID and special solutions, to satellite reception and broadcast technology, to transmission and reception systems in vehicles.

As a hidden champion and family-owned enterprise, Kathrein has been working on the technologies of tomorrow since 1919. The company takes pride in its dedicated employees and passion for customers and quality.

Our Solutions



Find out more about us at www.kathrein.com

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At Home on the Road with Kathrein

If you travel a lot, you certainly don't want to miss your usual TV channels or radio programmes. Kathrein has always been striving to fulfil their customers' wishes and has therefore developed mobile satellite reception systems especially for use in motor homes and caravans. These systems have been designed with simplicity and convenience in mind and comply with the highest Kathrein quality standards. We offer not only fully automatic, self-aligning satellite systems, but also lower-priced manual systems.

Satellite jointed masts, tripod mast stands and planar antennas make this type of satellite reception very simple. Kathrein has incorporated a sat finder into the caravan receivers to simplify rapid alignment with any satellite, especially in non-automatic systems. An optical inclinometer also supports rapid alignment with a satellite by displaying the absolute elevation of a planar antenna (including vehicle inclination).

Our Benefits at a Glance

> **There are good reasons for choosing a Kathrein turntable**

1

GPS in all turntables

Due to the integrated GPS system, the search time is reduced to approx. 1 minute.



2

3 years warranty

We optimise our turntables continuously and are so confident in the quality of our products that we give three years warranty on all turntables



3

Quality made in Germany

All Kathrein turntables are developed and made in Germany. The use of high-quality materials ensures a long service life.



4

Aerodynamic design

The aerodynamic design of Kathrein turntables reduces noise emission inside the vehicle to an absolute minimum.

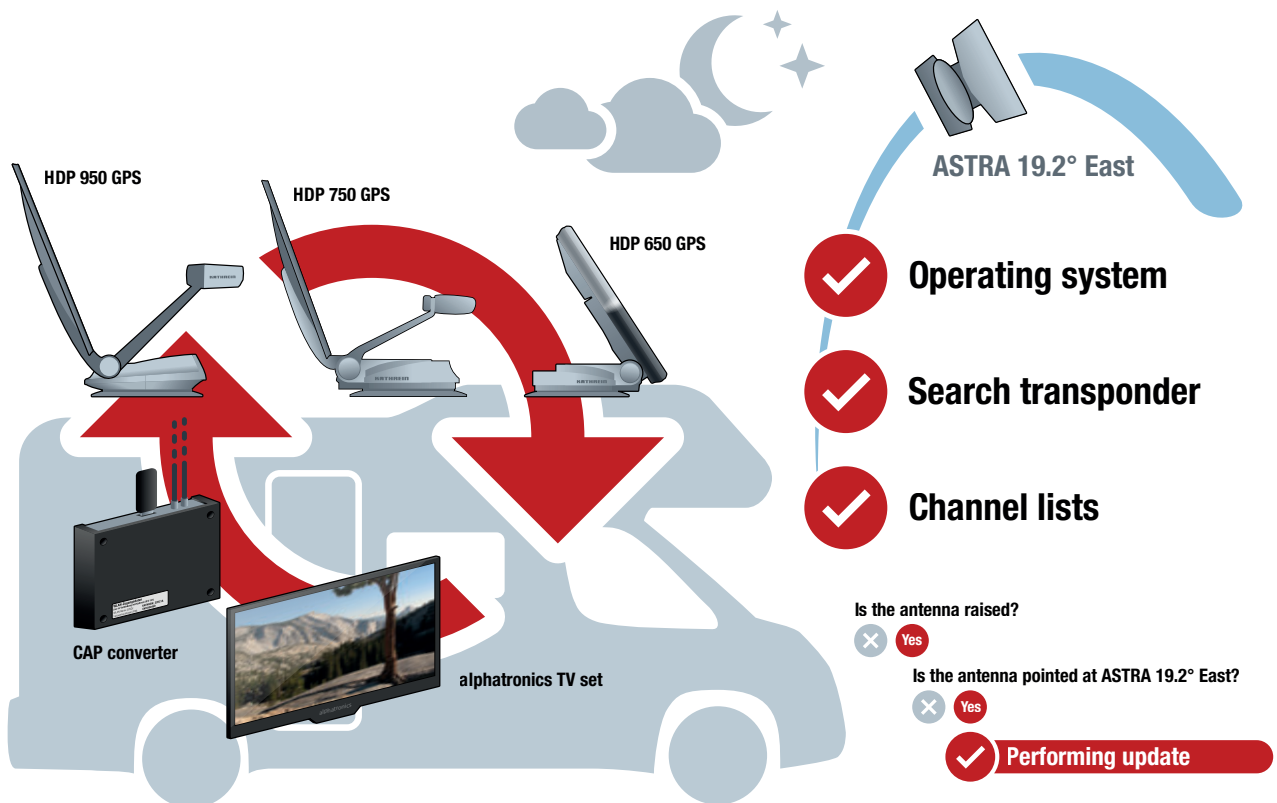


> Software update via satellite

You may know that from your own experience: Looking forward to an interesting film, you turn on your automatic turntable to watch TV, but the system can't find a satellite signal and keeps on searching for minutes. Often enough this is because the search transponder has changed frequency. The only remedy is to get a control unit update from the manufacturer.

We have solved this problem by means of a special download transponder via Astra 19.2° East. Every month, Kathrein engineers check whether the search transponder is still up to date and provide a download via satellite. The Kathrein turntable software checks regularly whether a new update is available and, if this is the case, installs it automatically – it couldn't be simpler.

Good reception, wherever you are and whenever you need it – automatic overnight update



The software update via satellite can also be carried out manually using the optional HDS 50 control unit.

New Products 2019

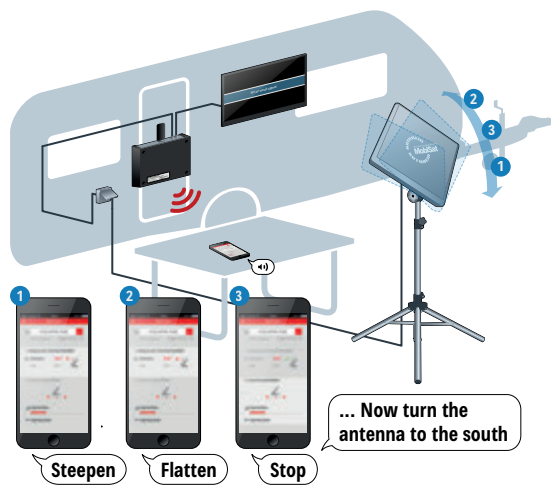
> New antenna set HDS 166 plus

The new antenna set is a smart alternative to the fully-automatic satellite reception system. It is inexpensive and takes up little space. Perfect if you don't have satellite reception directly at the vehicle, e.g. when shaded by trees, and want to set up the system at a distance from the vehicle. The interaction between the supplied components and the revised "CAPcontrol" app (Android

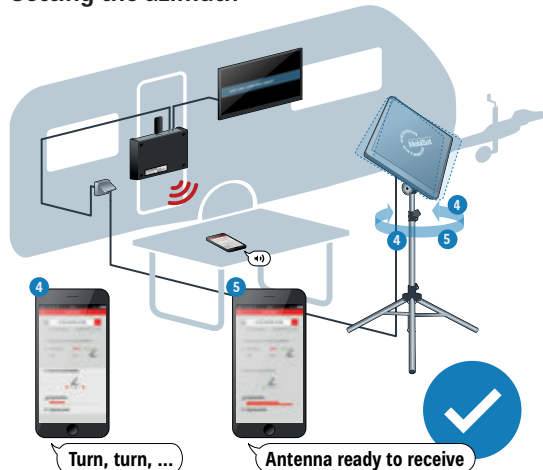
and iOS) is optimally coordinated. Once all components are set up and connected, the antenna is aligned in 60 seconds!

The HDS 166 plus antenna set is your ideal companion – whether you are travelling in a motor home, caravan or camper van.

Setting the elevation



Setting the azimuth



MAIN FEATURES

The CAP converter is the heart of the new antenna set. It is connected between the planar antenna and the TV set. Together with the UFZ 131 USB/Wi-Fi adapter, these two components activate unprecedented features:

- Streaming of TV and radio programmes to mobile devices
- 11 satellites pre-set
- Easy alignment: Install the new "CAPcontrol" app on your smartphone/tablet and start aligning the antenna
- Voice assistant helps with the alignment

Scope of supply

- BAS 66 planar antenna (with twin LNB)
- Tripod
- Adapter joint
- CAP converter
- UFZ 131 USB/Wi-Fi adapter
- 15 m coaxial cable
- Carry bags for tripod and antenna

Recommended accessories

EV 06 outdoor outlet | Order no. 218464

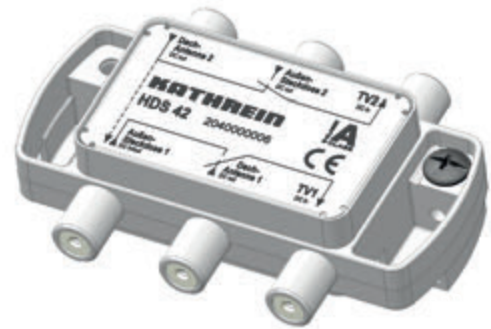
Never before
has manual
alignment been
so easy

> Master/slave switch HDS 42

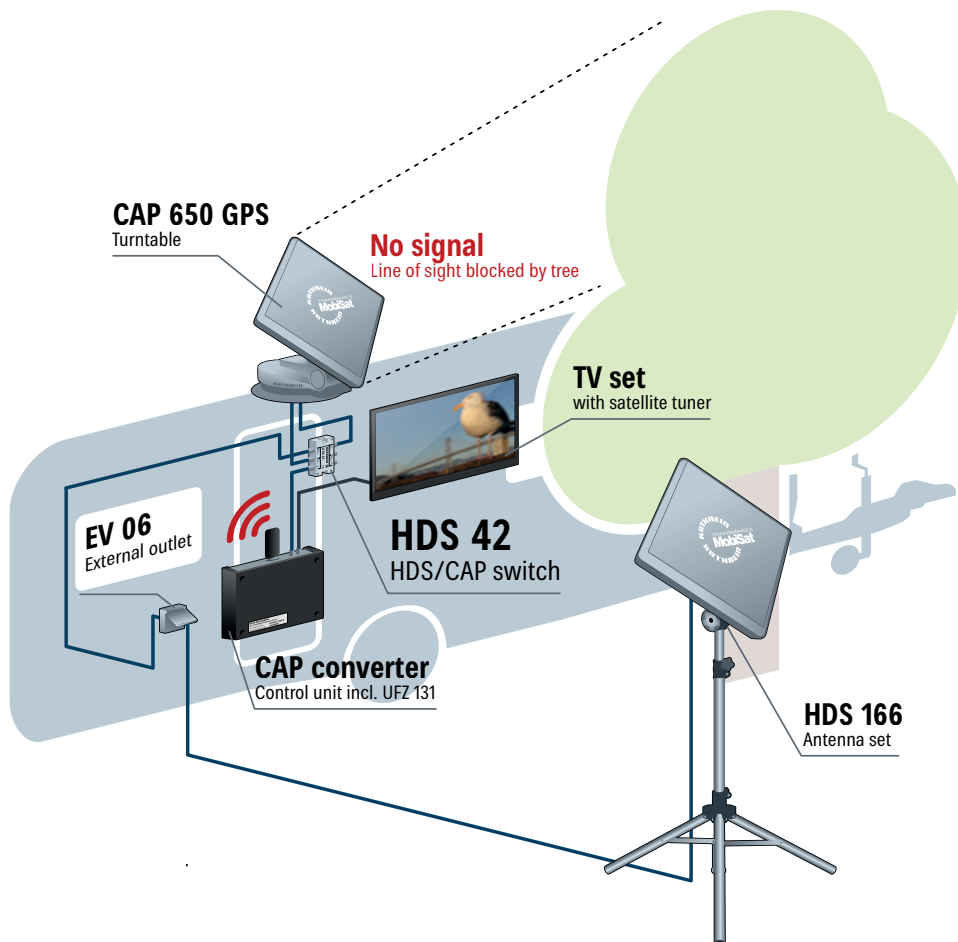
The HDS 42 master/slave switch has been developed for customers who use the HDS 166 manual antenna set in addition to a fully-automatic CAP turntable.

The HDS 42 connects both systems and automatically detects which system is currently receiving a signal. The highlight of this solution: There is no need to reconnect the cables!

Since the CAP converter also serves as the central unit here, the free "CAPcontrol" app can be used via both reception channels. You can also use the app to watch free-to-air stations on your smartphone/tablet.



Expected to be available from Q1 2019



> New levelling assistant HDZ 75

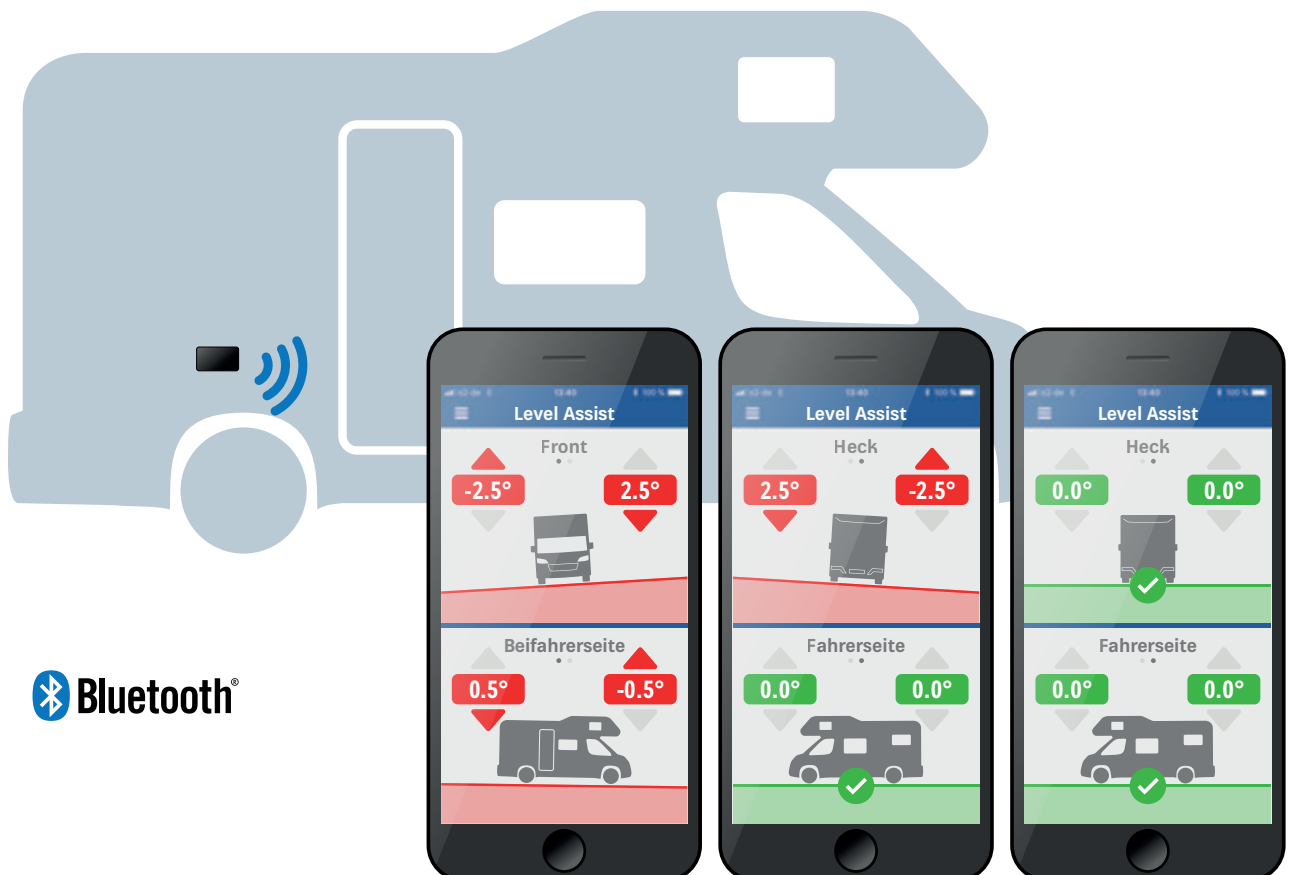
The levelling assistant was developed for levelling your caravan or motor home fast and easily or for setting always the same preferred position/inclination.

The HDZ 75 uses a 3-axis sensor to determine the exact position of the vehicle and then transmits the data to the smartphone via Bluetooth. A free app with clear graphics simplifies adjustment of the support legs on the caravan/mobile home.

In addition, individually preferred positions can be stored and recalled to aid setting and resetting your position of choice.

There is also a CI-BUS version of the levelling assistant, the HDZ 70*.

*Expected to be available from Q1 2019



> Two ways to perfect satellite reception

Which is the best solution for you?



Solution 1: CTS All-in-one package

Recommended for a complete new installation

Includes: HDP turntable and alphasatronics TV set



CTS (Caravan TV systems) – the One-Cable-Solution from Kathrein and alphasatronics

- Control of the turntable directly via the TV set
- Only one coax cable between the TV set and the turntable
- Minimal installation efforts
- Live streaming of TV channels to mobile devices (smartphones, tablets) with the UFZ 131 (available as an option)
- LED panels are 100% free of defective pixels
- Made in Germany

Solution 2: CAP All-in-one package

Recommended if a TV set with satellite tuner is already available

Includes: HDP turntable and CAP converter



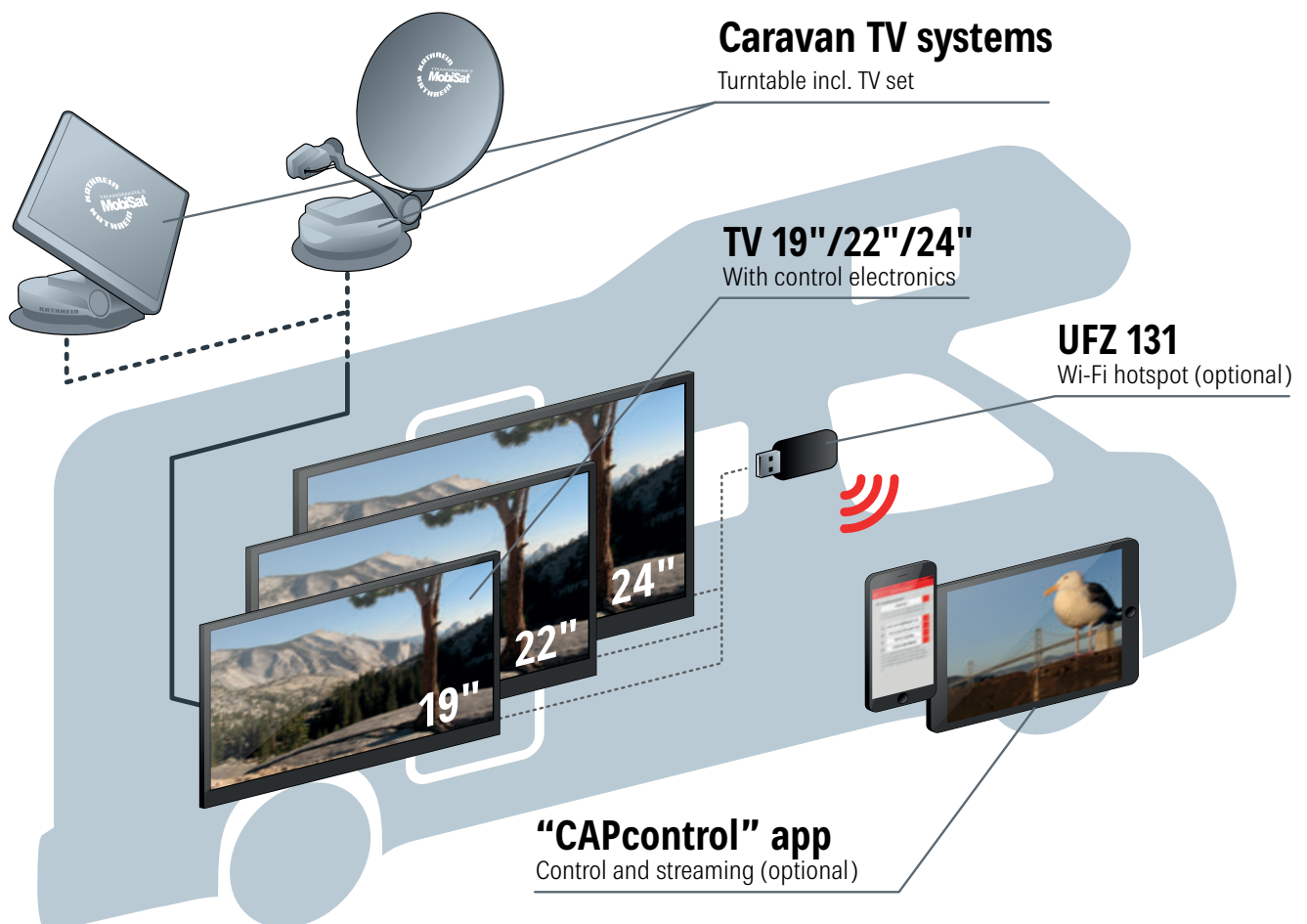
CAP 650 GPS/750 GPS

- Receiver-independent turntable
- Compatible with any TV set or receiver with satellite tuner
- Live streaming of TV channels to mobile devices (smartphones, tablets) with the UFZ 131 (available as an option)

Solutions

> The One-Cable-Solution from Kathrein and alphatronics

CTS All-in-one packages



The caravan TV system consists of a Kathrein CAP turntable and an alphatronics TV set. The system combines the know-how from both companies in one intelligent reception concept.

The fully-automatic CAP turntable is controlled via the alphatronics TV set – no need for extra control units or receivers. This means that only two units are required

for TV and radio reception in a caravan or motor home (turntable and TV set). When developing the system, Kathrein and alphatronics attached particular importance to ensure an easy connection between the turntable and the TV set requiring as little cabling as possible. Control of the turntable and transfer of the satellite signals to the TV set are both carried out over one and the same coaxial cable.

> The caravan TV systems at a glance

Caravan TV systems with a 19" alphasatronics TV set

Item	Contents	Order No.
CTS 650-19 GPS	HDP 650 GPS and SL-19 DSB+K	20310057
CTS 750-19 GPS	HDP 750 GPS and SL-19 DSB+K	20310060

Caravan TV systems with a 22" alphasatronics TV set

Item	Contents	Order No.
CTS 650-22 GPS	HDP 650 GPS and SL-22 DSB+K	20310058
CTS 750-22 GPS	HDP 750 GPS and SL-22 DSB+K	20310061

Caravan TV systems with a 24" alphasatronics TV set

Item	Contents	Order No.
CTS 650-24 GPS	HDP 650 GPS and SL-24 DSB+K	20310059
CTS 750-24 GPS	HDP 750 GPS and SL-24 DSB+K	20310062

Recommended accessories for caravan TV systems:

UFZ 131

- USB/Wi-Fi adapter
- Order no. 20410061

HDZ 100

- Roof gland
- Order no. 20410032



TV sets from alphasatronics are available in the following versions:

- 19" SL-19 DSB+K
- 22" SL-22 DSB+K
- 24" SL-24 DSB+K



Dimensions TV sets

(W × H × D in mm; without stand):

- 19": 438 × 275 × 50
- 22": 503 × 312 × 52
- 24": 552 × 340 × 52

> The compact version

HDP 650 GPS

The HDP 650 GPS turntable is equipped with a planar antenna. This ensures a compact design and minimises the required space. In addition to a twin LNB, it features GPS for quick alignment of the antenna (approx. 1 minute).

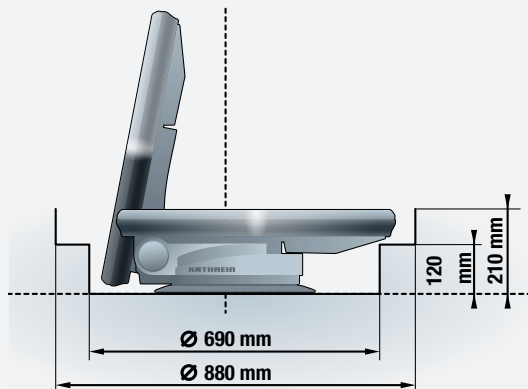
The turntable and the antenna have a compact, aerodynamic design and are only about 21 cm high, permitting vehicle speeds of up to 130 km/h (with the antenna lowered).

Main features

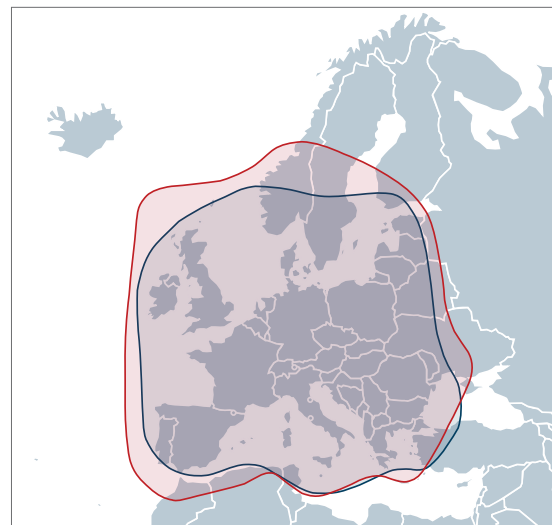
- Compact design
- Easy installation – only one cable for control and transmission of the satellite signals
- Connection of a second receiver or TV set



Space required



Footprint



■ ASTRA 19.2° East ■ Hotbird 13° East

All-in-one packages with the HDP 650 GPS turntable

Solution 1

HDP 650 GPS turntable incl. alphantronics TV set



- Control of the turntable directly via the TV set
- Only one coax cable between TV set and turntable
- Only one remote control
- No additional control unit required
- Live streaming of TV channels to mobile devices (smartphones, tablets) with the UFZ 131 (available as an option)

Item	Contents	Order No.
CTS 650-19 GPS	HDP 650 GPS and SL-19 DSB+K	20310057
CTS 650-22 GPS	HDP 650 GPS and SL-22 DSB+K	20310058
CTS 650-24 GPS	HDP 650 GPS and SL-24 DSB+K	20310059

Solution 2

HDP 650 GPS turntable incl. CAP converter



- Receiver-independent turntable
- Compatible with any TV set or receiver with satellite tuner
- Live streaming of TV channels to mobile devices (smartphones, tablets) with the UFZ 131 (available as an option)

Item	Contents	Order No.
CAP 650 GPS	HDP 650 GPS and CAP converter	20310055

Recommended accessories

▪ HDS 50 (only for solution 2)

External control unit for CAP 650 GPS/750 GPS

Order no. 20410070

More details on page 26

▪ UFZ 131

USB/Wi-Fi adapter

Order no. 20410061

More details on page 18

▪ HDZ 100

Roof gland

Order no. 20410032

More details on page 26

> The light version

HDP 750 GPS

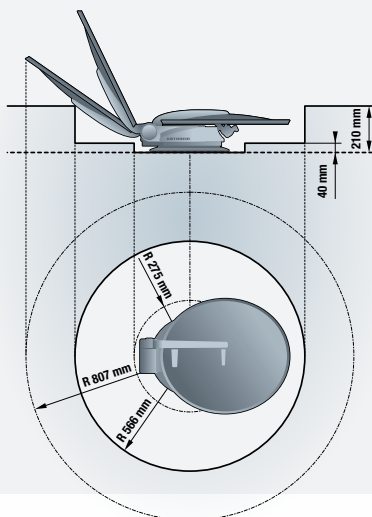
The use of a parabolic antenna increases the reception range compared to a planar antenna. What is more, it reduces the weight of the turntable considerably: A total weight of under 10 kg makes this turntable one of the lightest on the market. The built-in twin LNB allows the connection of two receivers at the same time. The use of GPS permits quick alignment (approx. 1 minute) of the HDP 750 GPS at any new location. The turntable and the antenna have an aerodynamic design and are only about 21 cm high, permitting vehicle speeds of up to 130 km/h (with the antenna lowered).

Main features

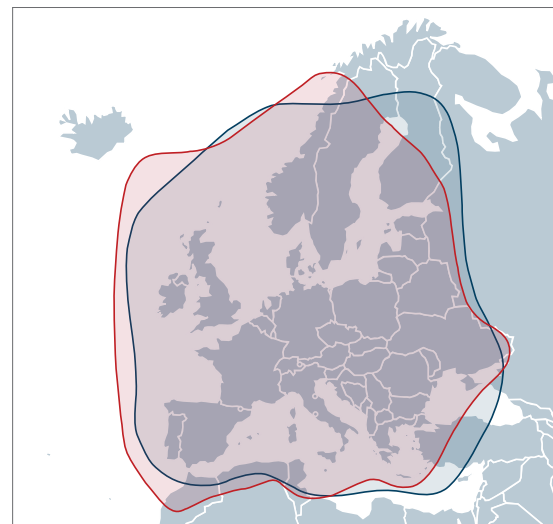
- Optimised weight < 10 kg
- One of the lightest fully automatic turntables
- Optimum aerodynamics:
 - Low wind resistance
 - Low noise emission
- Connection of a second receiver or TV set



Space required



Footprint



■ ASTRA 19.2° East ■ Hotbird 13° East

All-in-one packages with the HDP 750 GPS turntable

Solution 1

HDP 750 GPS turntable incl. alphatronics TV set



- Control of the turntable directly via the TV set
- Only one coax cable between TV set and turntable
- Only one remote control
- No additional control unit required
- Live streaming of TV channels to mobile devices (smartphones, tablets) with the UFZ 131 (available as an option)

Item	Contents	Order No.
CTS 750-19 GPS	HDP 750 GPS and SL-19 DSB+K	20310060
CTS 750-22 GPS	HDP 750 GPS and SL-22 DSB+K	20310061
CTS 750-24 GPS	HDP 750 GPS and SL-24 DSB+K	20310062

Solution 2

HDP 750 GPS turntable incl. CAP converter



- Receiver-independent turntable
- Compatible with any TV set or receiver with satellite tuner
- Live streaming of TV channels to mobile devices (smartphones, tablets) with the UFZ 131 (available as an option)

Item	Contents	Order No.
CAP 750 GPS	HDP 750 GPS and CAP converter	20310056

Recommended accessories

▪ HDS 50 (only for solution 2)

External control unit for CAP 650 GPS/750 GPS/950

Order no. 20410070

More details on page 26

▪ UFZ 131

USB/Wi-Fi adapter

Order no. 20410061

More details on page 18

▪ HDZ 100

Roof gland

Order no. 20410032

More details on page 26

> HDP turntable control and live streaming via smartphone/tablet

By setting up a Wi-Fi hotspot, TV and radio broadcasts can be streamed to mobile devices (smartphones, tablets, etc.) without an additional Internet router.

> USB/Wi-Fi adapter

UFZ 131

Main features

- Supports the wireless standards IEEE 802.11a/b/g/n with a data rate of up to 300 Mbps
- Connection indicator LED
- Power supply via the receiver's USB port
- Suitable for UFS 946sw/CI+, CAP converter and CAP 650 GPS/750 GPS/950



UFZ 131 Wi-Fi hotspot



“CAPcontrol” app

Control and streaming



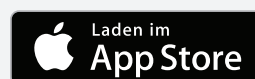
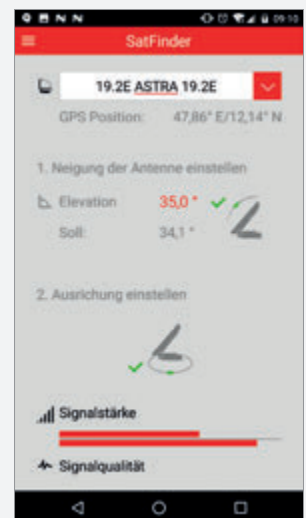
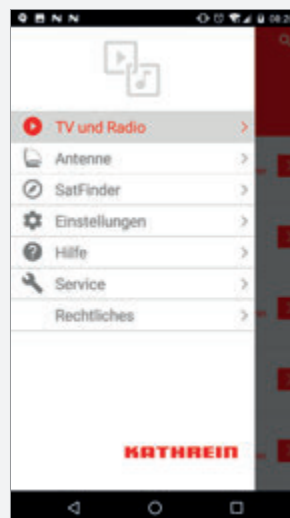
“CAPcontrol” app

Convenience and versatility
as standard

The Kathrein “CAPcontrol” app has been extensively revised and now offers several new features. In addition to the previously known turntable control and live TV (in connection with the optional UFZ 131), a satellite finder has now also been integrated, which was especially designed for the HDS 166 plus antenna set. The voice assistant gives clear instructions for fast and easy alignment of the BAS 66 manual planar antenna. The HDS 166 plus antenna set also enables live TV streaming.

CAPcontrol features

- Control of the HDP turntables
- Live streaming of TV channels to mobile devices (smartphone/tablet)
- Display of software version and CAP turntable update
- Detects the HDZ 60/66 inclinometer
- Integrated sat finder
- Voice assistant for aligning the antenna set HDS 166 plus



CI-BUS

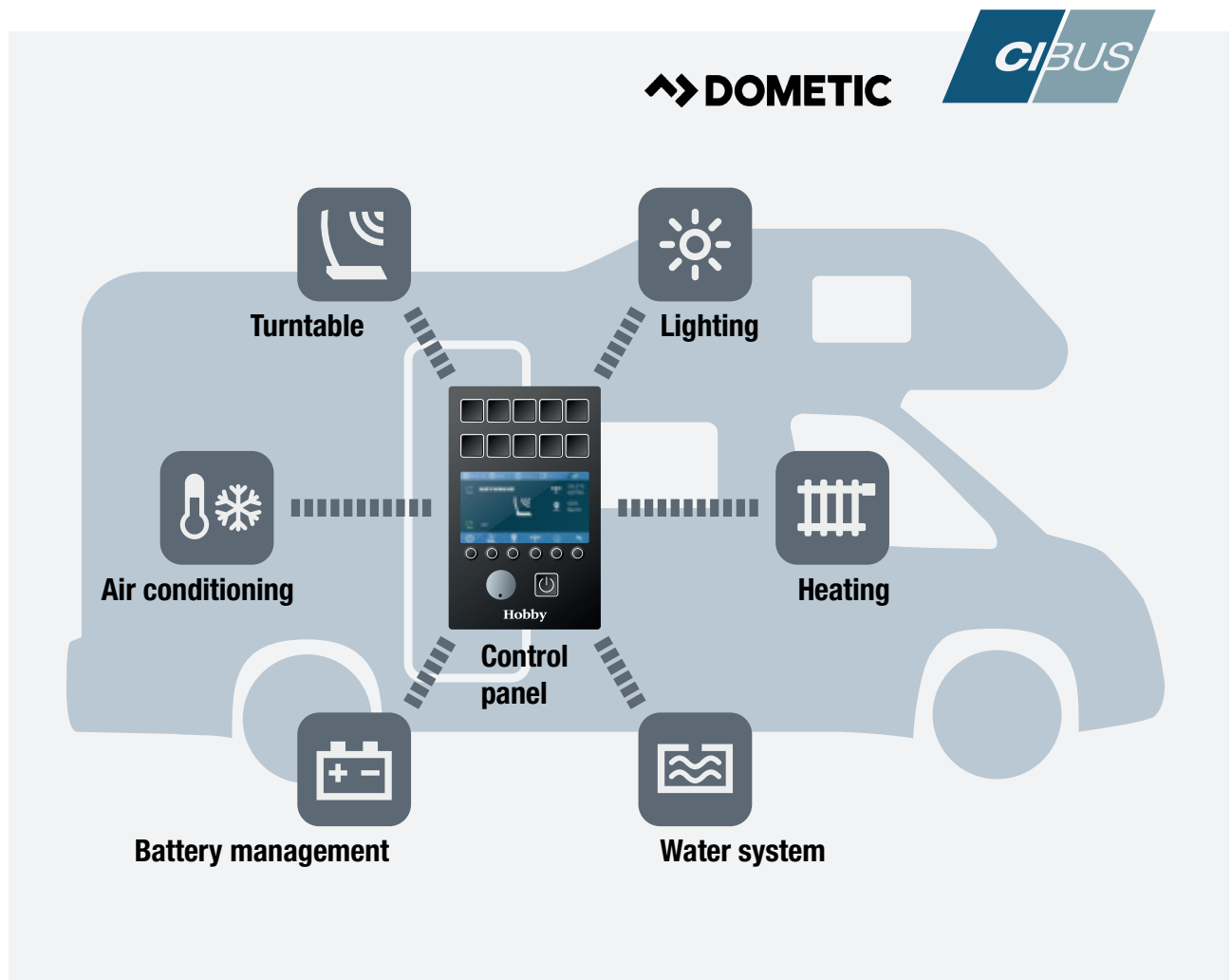
> Central control of the CAP turntables via the CI-BUS

The digital lifestyle has long since found its way into caravans and motor homes. The CI-BUS interface (Caravaning Industry-BUS) enables the convenient operation of all electrical devices that conform with this standard via a central control unit.

Kathrein makes sure that campers will now be able to optimise broadcast reception in their caravan or motor home just as conveniently. With an additional adapter, our receiver-independent turntables CAP 650 GPS and

CAP 750 GPS can be upgraded to be CI-BUS compatible, enabling easy integration into CI-BUS systems. The Hobby company is the first to offer a CI-BUS compatible turntable – the CAP 650 GPS – as an exclusive extra for their motor homes and caravans.

Of course, we strive to connect our products with other central control units via the CI-BUS. Thanks to the collaboration with DOMETIC, our CAP turntables can now be controlled via a central DOMETIC control unit.



Satellite Reception in Camper Vans

Camper vans – small, compact and nippy – are becoming more and more popular among camping enthusiasts. To enable satellite reception in these confined spaces, you need compact

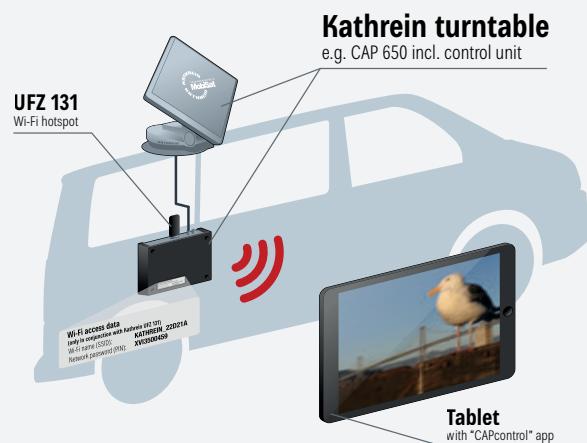
solutions. Our fully automatic CAP 650 GPS turntable and the HDS 166/HDS 166 plus antenna set fulfil these specific demands.

> Option 1

TV reception with the CAP 650 GPS

The compact CAP 650 GPS requires very little space on the vehicle and can also be operated without a TV set.

In this case, the system is controlled via a mobile device (tablet, smartphone). Live streaming enables the reception and display of TV programmes directly on the mobile device.



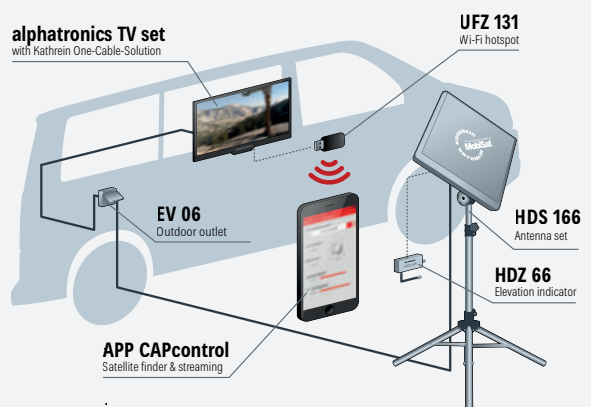
> Option 2

TV reception with the HDS 166 or HDS 166 plus

The HDS 166 antenna set is the ideal solution for campers who don't want to mount a turntable on their vehicle. The special features of this set are its very small packing size and its quick alignment via smartphone.

The perfect addition: alphanetronics TV set, SL line (with Kathrein control)

The alignment via smartphone is even quicker when using the alphanetronics TV set in conjunction with the UFZ 131. The revised "CAPcontrol" app now detects the inclinometer (included with the HDS 166). Due to the integrated satellite finder, the antenna can be aligned optimally even without direct view of the TV set.



Manual Antennas

> Planar antenna

NEW

BAS 66 Skew

Despite its small size, planar antenna BAS 66 Skew offers optimal satellite reception. This is due to the specific honeycombed dipole structure of the reception surface

- For use on stationary motor homes, caravans or HGVs
- For mounting on HDM 14x satellite jointed masts (details on page 27)
- With integrated twin LNB (two outputs)
- With skew adapter plate for optimised reception at the fringe area of the satellite footprint

Recommended accessories

- **HDM satellite jointed masts**
(details on page 27)
- **HDZ 66 inclinometer**

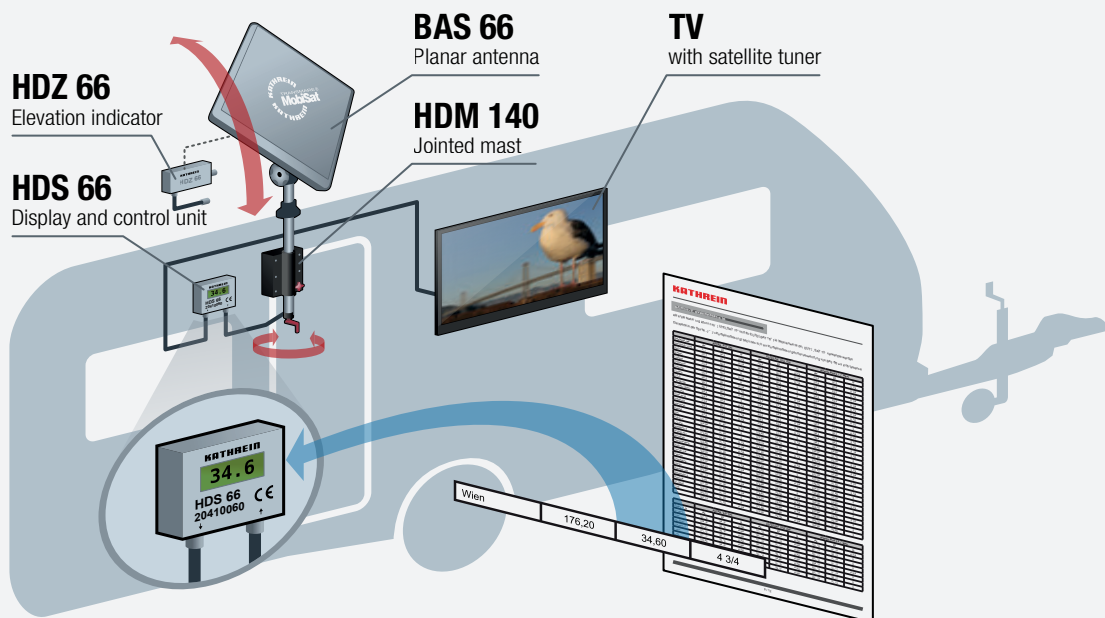


> Display and control unit HDS 66

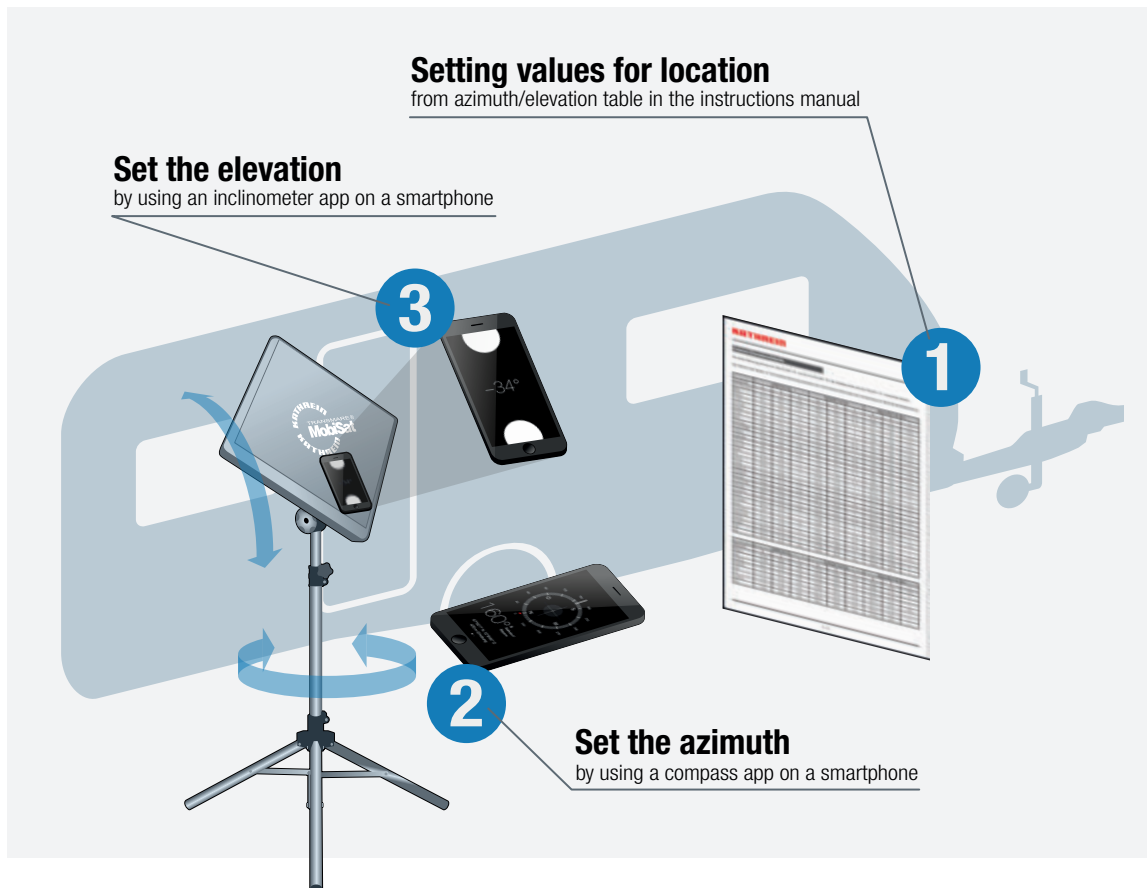
- Shows the actual elevation of the inclinometer HDZ 60 or HDZ 66
- The display backlight switches off automatically if the elevation remains unchanged (energy saving mode)
- The display backlight switches on automatically if the elevation changes
- Easy to mount on a wall



Aligning the planar antenna using the HDS 66



> Antenna set
HDS 166



The antenna set HDS 166, consisting of a planar antenna, satellite tripod, adapter joint, 15 m coax cable and carry bag for manually adjustable satellite reception, is the perfect alternative to a fully automatic, permanently mounted turntable.

The planar antenna BAS 66 can easily be adjusted and aligned with a satellite using a smartphone and a compass app (depending on the smartphone and the operating system, the app might be pre-installed).

It only takes three easy steps to align the antenna:

- 1 Look up the setting values in the enclosed azimuth/elevation table
- 2 Start the compass app, place the smartphone on the planar antenna and set the elevation of the antenna
- 3 Determine the satellite position (e.g. Astra 19.2° E in the Munich area = 169.80°) using a spirit level app and turn the antenna to that direction



> Planar antenna for stationary use

BAS 65

- For mounting on walls, masts, brackets and on flat surfaces
- Including mounting support for easy antenna alignment
- For the reception of digital satellite TV and radio programmes
- Frequency range: 10.70–12.75 GHz
- Power supply via the coaxial drop leads
- With integrated twin LNB (two outputs)



Installation examples



> Offset parabolic antenna

KEA 650

- Foldable LNB arm made of aluminium
- Aluminium reflector, powder-coated
- Rear support, mast and closing brackets of galvanised sheet steel (fully assembled)
- Nuts and bolts in stainless steel
- Reflector colours: white, graphite



> Universal LNBs

KEL 411, KEL 422

The Kathrein EuroLine universal feed systems are suitable for satellite reception systems with a 40 mm LNB fixing plate. They are intended for the reception of satellites in the Ku band, e.g. ASTRA, EUTELSAT, Türksat, Hispasat etc. All LNBs are HDTV/DVB-S2 compatible.



KEL 411
(Single LNB)



KEL 422
(Twin LNB)

Accessories

> **External control unit for CAP 650 GPS/750 GPS/950** HDS 50

With the external control unit HDS 50, you can operate the CAP 650 GPS, 750 GPS and 950 easily and conveniently without having to switch on a receiver or TV set. Choice of satellites, lowering to park position and other functions are available in an intuitively structured menu. An LC display provides the necessary overview.

- Compatible with CAP 650 GPS, 750 GPS and 950
- No external power supply required
- Easy wall mounting
- Including 3 m connection cable
- Dimensions (in mm): 125 × 25 × 68 (L × W × H)



> **Control unit** CAP converter

The CAP converter is included with the fully automatic CAP turntables and the new HDS 166 plus antenna set and serves as the central control unit. It is also available individually and is recommended if you want to convert a receiver-based CAP turntable into a receiver-independent solution. In connection with the UFZ 131 USB/Wi-Fi adapter, the CAP converter extends the features of the HDS 166 antenna set to include live TV on smartphones/tablets and alignment via voice assistant.



> **Roof gland** HDZ 100

- Protective housing for cable interfaces
- Suitable for cable extension on the roof
- For a maximum of two RF cables and one DC cable
- Optimised for CAP systems
- Easy installation
- Unused inserts can be closed off with integrated blind caps
- Cable interface size: up to 29 × 17 mm



> **Outdoor outlet**
EV 06

Outdoor outlet with 5-metre long coax cable, F-type connector



> **Satellite jointed masts and tripod stand**
HDM 140, HDM 141, HDM 143, HDS 100

The satellite jointed masts allow optimal mounting and rapid alignment of the BAS 66 planar antenna from inside the vehicle. The jointed masts are made of rust-proof and seawater-resistant Duralium. The swivel heads are made of die-cast aluminium. In conjunction with the BAS 66, this is the manual alternative to the automatic system. The maximum permissible vehicle speed is 130 km/h.



Mast HDM 140

For mounting the BAS 66 planar antenna on caravans or motor homes, length 103 cm



Mast HDM 141

Shorter version of HDM 140, length 76.5 cm



Mast HDM 143

For upgrading a terrestrial to a satellite reception system with the BAS 66 planar antenna



Duralium mast HDM 135

Length 2 m, diameter 35 mm, incl. mounting brackets and roof seal



Sat tripod mast stand HDS 100

Ideal for flexibly setting up the BAS 65 or KEA 650 satellite antenna. The telescopic, rotatable extension allows easy alignment of a mounted antenna. Alu tripod mast stand with 2 mm wall thickness (light and very stable), securing pegs for stabilisation on the ground, incl. carry bag



Spare parts for many products from our "Camping and Caravan" range are available from the Kathrein factory repair centre CSS Caravan-Sat-Service GmbH (see address on page 32).

DVB-T2 Products

> DVB-T2 HD Receiver

UFT 930sw

With the UFT 930sw, TV channels can be received in HD via digital terrestrial transmission. The integrated IRDETO encryption system allows the reception of both free (public service) and private channels in HD quality. The receiver can also use additional content via the Internet (HbbTV).



- Reception of free and encrypted DVB-T2 channels in HD
- PVR-Ready
- HbbTV (additional information and services from the Internet)
- Remote feeding of an active DVB-T2 antenna (e.g. BZD 30, 32, 40) via RF input possible

Scope of supply

- IR remote control
- Batteries
- HDMI cable
- 12 V power supply
- Operating instructions



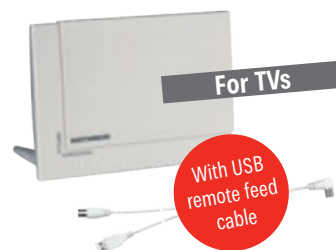
> Active DVB-T2 antennas

BZD 30/32/40



Active DVB-T/T2 indoor antenna BZD 30

- Remote feeding (5 V/30 mA) via the coax cable through the connected DVB-T2 receiver
- 2 m connection cable included
- Integrated trap filter for GSM and LTE interference



Active DVB-T/T2 indoor antenna BZD 32

- Remote feeding (5 V/30 mA) via the USB remote feed cable, e.g. from the TV set
- Integrated trap filter for GSM and LTE interference



Active DVB-T/T2 outdoor antenna BZD 40

- Remote feeding (5 V/30 mA) via the coax cable through the connected DVB-T2 receiver
- Included accessories: fixing material for wall/mast mounting, 10 m connection cable, F-plug and IEC plug

Technical Data

Type	UFZ 131
Order no.	20410061
Standard	IEEE 802.11a, 802.11b, 802.11g, 802.11n
Connection	USB 2.0 type A
Data rates [Mbps]	11b: 1/2/5.5/11
	11g: 6/9/12/24/36/48/54
	11n : up to 300
Operating temperature [°C]	0 to +50
Dimensions [mm]	19 × 40

Type	BAS 66 Skew	BAS 65
Order no.	2000000001	20010032
Application	Mobile use	Stationary use
To be mounted onto	HDM 140, 141, 143	Wall, mast, boom, flat surface
Reception range [GHz]	Switchable: 10.70–11.70 (0 kHz) 11.70–12.75 (22 kHz)	
Polarisation	Switchable: vertical (14 V) horizontal (18 V)	
Gain [dB]	> 55	
Half width range [°] ¹⁾	Typically < 3	
LNB	2 switchable outputs	
Output frequency [MHz]	950–1950/1100–2150	
Oscillator frequency (L.O.) [GHz]	9.75/10.6	
Supply voltage LNB [V]	Vertical: 11.5–14.0/horizontal: 16.0–19.0	
Max. power consumption [mA]	220	
Wind load [N] ²⁾	240	
Mast clamp range [mm]	–	38–50
Setting range elevation [°]	0–90 (HDM 14x)	0–50
Setting range azimuth [°]	360	± 65 (wall mounting), 360 (mast mounting)
Dimensions [mm]	500 × 500 × 109 (without support)	500 × 500 × 121 (without support)
Packing unit/weight [pc./kg]	1/6.5	1/8.2

¹⁾ At mid-band

²⁾ At a dynamic pressure of 800 N/m² acc. to EN 60728-11

Type	CAP 750 GPS	CAP 650 GPS
Order no.	20310054/20310056	20310053/20310055
Diameter parabolic reflector approx. [cm]	60	–
LNB	2 switchable outputs: V/H (14/18 V) Low/high (0/22 kHz)	
Supply voltage LNB [V]	Vertical: 11.5–14 / horizontal: 16–19	
Input frequency [GHz]	10.70–12.75	
Output frequency [MHz]	950–1950/1100–2150	
Oscillator frequency (L.O.) [GHz]	9.75/10.60	
Figure of merit (G/T) at 11.3/12.5 GHz [dB/K]	13.4/13.7	13.3/13.7
Supply voltage (vehicle battery) [V]	11.5–13.8	
Current drain from the 12 V supply [A]:	Typically 3	
Current drain from the receiver [mA]	Typically 160	
Setting range: Elevation/azimuth/skew [°]	0–75/370/±45	0–80/370/±15
Weight of the turntable with parabolic reflector/planar antenna [kg]	9.7/–	–/14.5
Packing unit/weight [pc./kg]	1/19.5	1/23.4

Included with the CAP All-in-one packages:

Pre-mounted turntable, mounting plate and mounting material with roof gland, complete set of cables, installation and operating instructions, including CAP converter

Type	BZD 32
Order no.	20710013
Reception range [MHz]	174–230/470–790
Figure of merit [dB/K] ¹⁾	Typically -28.4
Gain [dB]	B III: 18, B IV/V: 15
Max. output level [dBμV] ²⁾	Typically 95
Permissible remote feed voltage [V]	5
Dimensions [mm]	140 × 195
Packing unit/weight [pc./kg]	1(10)/0.5
Single pack dimensions [mm]	250 × 160 × 70

¹⁾ Bandwidth 8 MHz, Tu 290 K, connection cable a = 3.5 dB, receiver NF = 7 dB @ 560 MHz

²⁾ Measured at the antenna output, in compliance with EN 60728-5 for 60 dB intermodulation distance (2 transmitters – 3rd order)

Type	UFT 930sw
Order no.	20210241
Colour	Black
RF characteristics	
Input frequency range [MHz]	470–862
Channel bandwidth [MHz]	7/8, automatic switching
Modulation type	COFDM 2k, 8k
Mapping	QPSK, 16 QAM, 64 QAM
Guard interval	1/4, 1/8, 1/16, 1/32
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Input level range [dBμV]	28–86 (at 16 QAM)
TV system, video	
Modulation, FEC, demultiplexer	DVB-T2 standard (HEVC/H.265)
Video resolution	CCIR 601 (720 × 576 lines), 576p, 720p, 1080i, 1080p
Input data rate [MSymbols/s]	5–32
Video decoding	MPEG-1/2/4 and H.265 compatible
Bit rate [Mbps]	1.5–15
Frequency range [MHz]	0.02–5
Output voltage [Vss]	1
S/N [dB]	> 53
TV system, audio	
Audio decoding	MPEG-1 and -2, layer 1 and 2
Sampling rate [kHz]	32/44.1/48
Frequency range [kHz]	0.04–20
Output voltage [mVss]	Typically 770 (TV-Scart)
S/N [dB]	> 65
Power supply	
Mains voltage [V/Hz]	230/50 ±10%
Power consumption (max./typical operation/stand-by) [W]	< 10/7/0.5
Remote feeding [V/mA]	5/50
Connections	
RF input	IEC socket
Video/audio output (analogue)	3.5 mm jack
Video/audio output (digital)	1 × HDMI
Audio digital output (electrical)	SPDIF
Data interface	USB 2.0
General information	
Permissible ambient temperature [°C]	+5 to +40
Dimensions [mm]	155 × 36 × 110
Weight [kg]	1.0

Advice and Service

> Caravan service centres

Germany

- | | | |
|--|---|--|
| <p>1 CSS Caravan-Sat-Service-GmbH
Werksreparaturstelle
Bahnhofstr. 110
83224 Grassau
Phone: +49 8641 69984-27</p> | <p>5 Knocks Motors GmbH & Co.KG
Schulland 1
34474 Diemelstadt-Ammenhausen
Phone: +49 5694 990990</p> | <p>9 Reisemobil- u. Caravanservice
Breitenloher Weg 11
91166 Georgensgmünd
Phone: +49 9172 7002260</p> |
| <p>2 RAPP GmbH Fachhandel
Auer Straße 7
89287 Bellenberg
Phone: +49 7306 92752-11</p> | <p>6 Williges Elektronik Service GmbH
Solinger Strasse 13
28199 Bremen
Phone: +49 421 504021</p> | <p>10 M. Michalk GmbH & Co
Automobile KG
Am Juliusturm 21
13599 Berlin
Phone: +49 30 33 89 02 0</p> |
| <p>3 Wohnwagen Vogt GmbH
Koblenzer Str. 53
66115 Saarbrücken
Phone: +49 681 99288-0</p> | <p>7 Holm GmbH
Hermann-Wüsthof-Ring 12
21035 Hamburg
Phone: +49 40 23909780</p> | |
| <p>4 GÜMA Caravan Motorcaravaning KG
Steinzeugstr. 21
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Phone: +49 621 48254970</p> | <p>8 Wohnmobile & Caravans Linke
Grevenberg 1
23970 Kritzow/Wismar-Ost
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Austria

- | | | |
|--|---|--|
| <p>1 Auto Heiss
Schießstand 3a
6401 Inzing
Phone: +43 5238 54055</p> | <p>4 Sulzbacher GmbH - Hymer Reisemobile
Goldenberg 1
4070 Eferding
Phone: +43 7272 2542</p> | <p>7 Falle GmbH
Maria Galler Straße 59
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Phone: +43 4242 32540</p> |
| <p>2 Kathrein Vertriebsges. m.b.H
Gnigler Straße 56
5020 Salzburg
Phone: +43 662 87 553 132</p> | <p>5 MOBOS e.U. - Herbert Schmid
Sarobagasse 25
2103 Langenzersdorf
Phone: +43 664 5 245 262</p> | |
| <p>3 Wohnwagen Pusch GmbH
Linzerstraße 138
4810 Gmunden
Phone: +43 7612 67600</p> | <p>6 Kleido Reisemobile
Gradnerstraße 66
5055 Graz
Phone: +43 316 272 715</p> | |

Switzerland

- | | | |
|---|---|---|
| <p>1 KHC Service GmbH
Grenzstrasse 20,
5525 Fischbach-Göslikon
Phone: +41 76 589 57 79</p> | <p>2 Farelec Fischer
Mirchelgässli 6,
3532 Zäziwil
Phone: +41 31 711 48 38</p> | <p>3 Vulku Valentin Caravan Service
A Ramél 23
6593 Cadenazzo
Phone: +41 798983033</p> |
|---|---|---|



> **Advice and information**

Germany

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 89081 Ulm
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For an overview of our camping service centres and further information, go to www.kathrein.de/service/caravan-service/caravan-kundendienst/



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