



## INFOTAINMENT SYSTEM WITH 9" / 22.9 CM DISPLAY



With the Z-N1000, ZENEC presents an innovative and certified **wireless Apple CarPlay** and **wireless Android Auto™** system solution for the infotainment retrofitting of vehicles. The Z-N1000 consists of two components: a **high-quality 9"/22.9 cm touchscreen monitor** with sensor control buttons and an **external control unit**. Both components can be installed separately in the vehicle cockpit. The Z-N1000 is therefore particularly recommended for vehicles that do not allow conventional retrofitting or upgrading – neither with a 1- or 2-DIN device nor with a vehicle-specific solution.

The touchscreen is OCA bonded with the TFT-LCD display panel to form an amazingly flat and light monitor system unit, rendering impressively detailed high-contrast images. The monitor unit, which weighs just 496 g, can be mounted in the cockpit, using the universal base included in the set. The universal base can either be screwed down at the chosen spot, or else get laminated to the surface. Other options are also thinkable, depending on the target vehicle, for example the use of mini tablet or smartphone holders from vehicle accessories programs.

The snap-in mechanism located between the ball joint mechanism and the display housing provides a welcome advantage during the installation to unhook the monitor for easier access of the mounting location. The monitor snaps back in place once installation is completed. Thanks to the integrated ball joint, the monitor can be aligned vertically and horizontally by  $\pm 15^\circ$ , for best field of vision.

The compact control unit can be mounted in glove compartments, the center console or the footwell. It is fixed using the L-brackets in the set or Velcro tape, for example. Once installed, the monitor is connected to the control unit via a 130 cm data cable.

The Z-N1000 is operated via its touchscreen, the sensor control buttons or by voice commands via Apple Siri or the Google Voice Assistant.

As a certified wireless Apple CarPlay and wireless Android Auto™ infotainer, telephony, navigation and audio playback functions are available right after starting the Z-N1000 device.

The features of the Z-N1000 are state-of-the-art: an integrated **DAB+ twin tuner** with a full set of comfort functions offers best digital radio reception, while the **Bluetooth 5.0 handsfree module** can score with very good speech intelligibility. The Z-N1000 supports **up to three analog camera systems** including ZENEC "Multiview" variants.

The Z-N1000 can also get extended by two separately available microSD card-based **navigation packages** featuring EU coverage. The Z-EMAP76MH-TT3 package expands the infotainer into a motorhome naviceiver. The Z-EMAP76PC-NNG3 package is ideal for use in passenger cars.

# Z-N1000

## FEATURE HIGHLIGHTS



### Universal infotainer

The Z-N1000 is suitable for installation in vehicles that do not feature a standard 1-DIN or 2-DIN radio installation slot which allows upgrading or which have a non-removable old factory navigation system installed. Thanks to the separate control unit, retrofitting with the Z-N1000 is almost always possible. The monitor and control unit are connected via a 130 cm system cable.



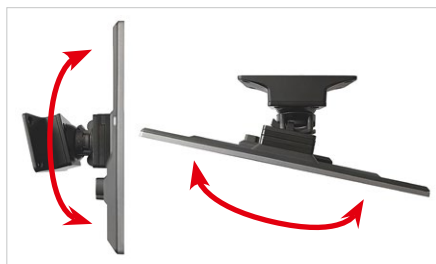
### Connecting the multifunction steering wheel

Multifunction steering wheel buttons of target vehicles can be connected to the Z-N1000 via IR-In port. This port connects to separately available CAN/Stalk interfaces, which integrate the SWC button functions up to full coverage depending on vehicle make and interface. Resistance based analog SWC buttons can also be assigned via programming function.



### Control unit with separate monitor

The separately stowable control unit has a 1-DIN subsize format of 178 x 110 x 40 mm. The unit is screwed into a suitable location using two metal brackets (included in the set). The unit is also compatible with various 1-DIN metal mounting frames, which means that installation in 1-DIN slots is possible with little effort. All inputs and connections are located on the back of the black box.



### Adjustable and removable monitor

The monitor is mounted at a suitable location using the ball joint on the universal base (included in the set). The universal base can be screwed or laminated in directly. Once mounted, the monitor can be removed again in one easy step thanks to the snap-in mechanism. The ball joint allows the monitor to be angled horizontally and vertically by  $\pm 15^\circ$  and thus perfectly adapted to the driver's field of vision.



### Alternative monitor mounting

There are numerous clever vehicle-specific smartphone / mini-tablet holders available on the market, allowing to mount the monitor in the cockpit, retrofitting a vehicle without having to drill holes. The monitor unit complete with universal base and ball joint mechanism weighs less than 496 g. A good number of industry type vehicle mounts for smartphone / tablets may thus offer sufficient stability to hold the Z-N1000.



### 9" monitor with bonded touch panel

The capacitive 22.9 cm/9" LCD TFT IPS monitor with real glass touchscreen is a bonded assembly by direct bonded fit of the touchscreen with the TFT panel. This results in a very thin and light system design with known advantages. The bonding reduces internal reflections to significantly increase luminosity and black level. The image brightness and contrast color gamut are breathtaking.



### ZENEC FAV and CAM buttons

Frequently used functions can be assigned to the FAV button. This can be a source, e.g. DAB+, CarPlay, USB, or a function, e.g. audio settings or display brightness. If the FAV button has been assigned accordingly, you can perform the associated function easily and conveniently. Camera systems can be switched on manually using the CAM button on the front.



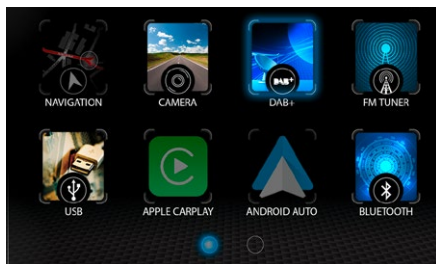
### RGB multicolor sensor key illumination

The large sensor keys enable accurate operation while driving. The lighting color sensor keys can be variably adjusted so that the Z-N1000 integrates perfectly into the cockpit ambience of almost any vehicle.



### Innovative operating concept

A special highlight of the device is the new innovative operating concept with simultaneous display of three sources on the large touchscreen. This gives you an overview of the available internal and external sources, allowing you to quickly select one of the sources and bring it to the foreground to fill the format.



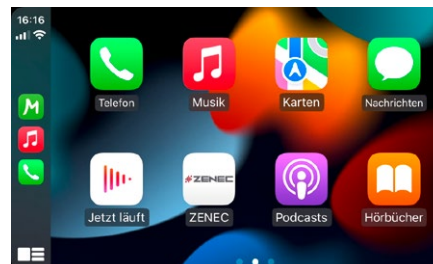
### Clear and well-structured display

All sources and apps are clearly displayed - so all functions can be grasped at a glance and selected directly. It is also shown which app is available and can be selected. The clear and well-structured display plays a decisive role in ensuring that the Z-N1000 can be operated safely while driving.



### Setup Wizard (Setup Assistant)

Set up the most important settings of the unit simply and easily with the new ZENEC Setup Wizard. The Setup Wizard provides a visual guide to setting up the basic system configuration, such as setting the device language, display appearance, audio setting of the X-Over mode or setting up the first Bluetooth connection.

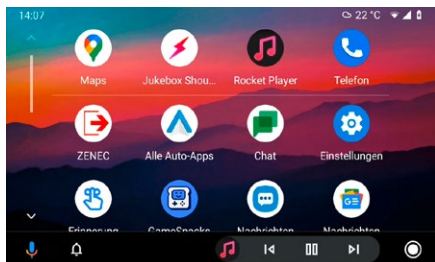


### Wireless Apple CarPlay

Wired or wireless: connect your Apple iPhone via USB or pair it wirelessly via WLAN to use Apple CarPlay. With Apple CarPlay, your favourite smartphone apps are at your fingertips for communication, navigation and entertainment. Almost all CarPlay compatible apps are optimized for Siri voice control and can be operated via it.

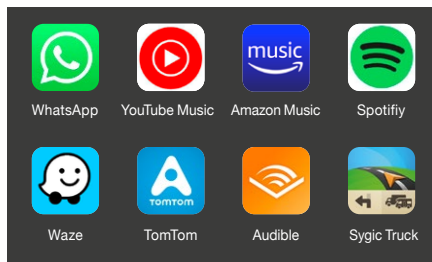
# Z-NI000

## FEATURE HIGHLIGHTS



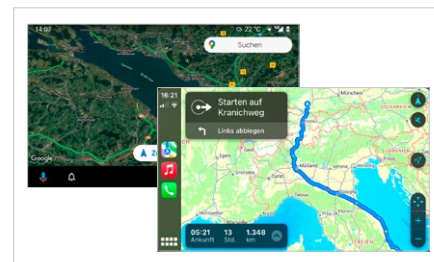
### Wireless Android Auto™

Smartphones with Android operating system can be connected wirelessly or via USB to use Android Auto™. Android Auto™ is optimized for safe operation in road traffic. The intuitive user interface in combination with voice control via the voice assistant ensures that you can focus 100% on the traffic – despite the wide range of functions.



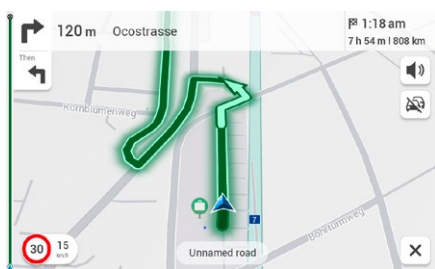
### CarPlay & Android Auto™: app variety

With Apple CarPlay and Android Auto™, you can also use your favourite apps in your vehicle – to listen to music and podcasts or send WhatsApp messages. You also have the option of using additional navigation apps such as Waze or TomTom – with simplified operation, as only the relevant controls are shown on the touchscreen.



### CarPlay & Android Auto™: nav functions

Navigate with Apple and Google Maps certified and optimized for CarPlay and Android Auto™. Both navigations impress with simple destination entry and clear route guidance. Important driving and turn-by-turn directions are displayed with large directional arrows. Searching for P.O.I. such as petrol stations, restaurants, cafés, etc. is also very easy.



### Expandable with car or motorhome navigation

Two optional navigation packages are available for the Z-NI000: Z-EMAP76PC-NNG3, a version for passenger cars, and Z-EMAP76MH-TT3 for motorhomes. Both packages contain 3D map data for 44 countries in Western and Eastern Europe as well as 6.5 million P.O.I. When route guidance is active, additional information is provided, e.g. through the TPEG service, which shows real-time traffic data.



### Powerful DAB+ twin tuner

The integrated DAB+ twin tuner with dynamic station list, MOT slideshow, DLS-text as well as DAB-FM and DAB-DAB service following enables stable digital radio reception. The Background Scan function updates the station list in the background, so that you are always offered the currently receivable DAB stations for selection.



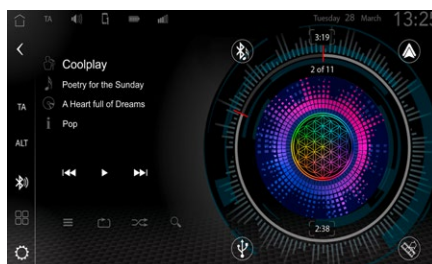
### FM RDS tuner

The FM tuner with integrated DSP ensures optimum radio reception and excellent sound: At once the FM signal is digitally converted and in this way processed up to the amplifier section – FM has rarely been heard so clearly. The change to an alternative frequency (AF) works lightning fast. A database with station logos is integrated on the unit.



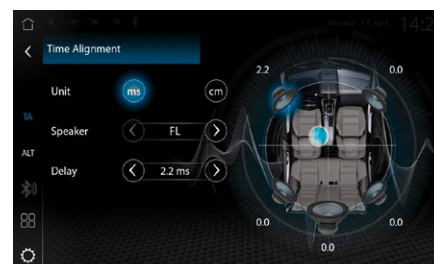
### Bluetooth 5.0 hands-free module

The modern LowEnergy Bluetooth module convinces with excellent hands-free audio quality. The intuitive user interface makes it easy to use the phone book functions and search for contacts – sorted by first or last name. Via A2DP you can stream music wirelessly from your mobile phone.



### Modern multi-format entertainer

The unit allows playback of many of today's digital audio and video media formats, including 24-bit audio files. A/V playback of the following media files is supported: MP3, FLAC, AAC, M4A, WAV, AVI, MP4, H.264, MKV 1080p, MPEG2/TS, MPG, Xvid



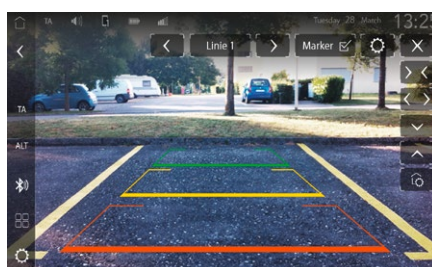
### Time alignment via audio DSP

The Z-NI000 has a DSP-based 5-channel time alignment for individual adjustment of the channels to optimize the spatial image on the driver or passenger seat. The respective delay for each loudspeaker can be entered in centimeters or milliseconds.



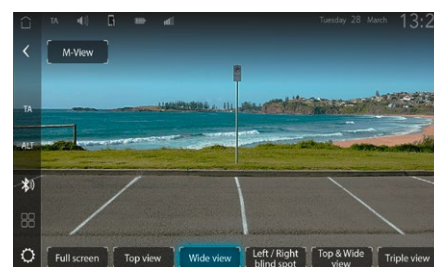
### Graphic 10-band equalizer

With the 10-band graphic equalizer you can manually tune the sound exactly to the characteristics of your vehicle, or to your personal preferences. You can also select one of the seven predefined EQ profiles to optimize the sound reproduction.



### Connection of up to three cameras

The Z-NI000 supports up to three CVBS / AHD signal based cameras, which can be controlled directly via the screen. The camera image switches on automatically when reverse gear is engaged, including microphone. Via the setup menu, you can display distance-helper lines as a camera image overlay. The distance-helper lines improve the distance estimation and can be adjusted to the vehicle size.



### Connection of ZENEC multi-view cameras

The unit supports the new ZENEC multi-view camera models. The multi-view function enables direct control of an MV camera with selection of different picture modes. The desired image section is selected via the unit screen. The advantage: you can see all areas behind the vehicle, which simplifies manoeuvring.

## KEY FEATURES

- High performance infotainment system\*<sup>1</sup> for universal deployment, consisting of a monitor and the control unit which can be installed in a separate location\*<sup>2</sup>
- Display unit attached via snap-on ball joint interface and free adjustability in  $\pm 15^\circ$  angle at  $360^\circ$  rotation, connection of display to control unit via 130 cm system main-cable
- Touch sensitive, capacitive, optically bonded 9"/22.9 cm LCD-TFT IPS display (1024 x 600 pixels) with real glass surface and integrated sensor control keys
- Control unit with 1-DIN subsize format (178\*110\*40 mm) for free mounting with L-brackets
- Novel graphical user-interface for simultaneous presentation and control of internal and external data sources on the device screen
- OSD menu in 15 different EU languages
- DAB+ twin-tuner with dynamic station list, DAB-FM and DAB-DAB Service Following, MOT slideshow and DLS-text
- FM RDS radio with 18 preset stations
- Works with wireless Google Android Auto™
- Works with wireless Apple CarPlay
- Made for iPod / iPhone
- Bluetooth LE 5.0 hands-free module with HFP v1.7, A2DP music streaming and support of external Bluetooth speakers
- Control of up to three CVBS / AHD\*<sup>3</sup> signal camera systems with auto switching and individually adjustable distance-helper lines
- Ready for connection and control of ZENEC "multi-view" reversing camera systems
- CAM sensor key for direct camera function control on device front panel
- SP-REM remote control App (iOS / Android) for smartphone operation of audio playback functions
- Direct connection of CamperNet routers of Antretter & Huber for WLAN access and directly editable router parameters via ZENEC device
- Android operating system for embedded systems that can be updated via software update\*<sup>4</sup>
- Multicolor sensor key illumination
- 2 x IR remote controls
- 4 x 50 W Texas Instruments Class-D Burr-Brown audio amplifier

## BLUETOOTH

- Bluetooth LE 5.0 module with hands-free function (HFP v1.7 profile)
- Import of 1,000 phone book entries with 3 phone numbers each
- Memory-resident phonebook with direct access to sync'd contacts
- Fast dial function for contact favorites
- Phonebook contact search function via keypad for first and last name
- SRC mode for wireless music streaming to external Bluetooth loudspeakers
- A2DP 1.3 music streaming via smartphone with AVRCP 1.6 and iD3-Tag display (artist, title, album)
- Internal hands-free microphone, input for external microphone\*<sup>5</sup>

## MULTIMEDIA + AUDIO

- DAB+ twin-tuner receiver with 18 station presets and dynamic radio station list
- FM RDS radio with 18 station presets and DSP noise masking
- Connection for external monitor with fixed level A/V outputs
- 1 x USB-A(1) 2.0 port for Google Android Auto™, Apple CarPlay, Apple MFi, USB media playback\*<sup>6</sup>, and software updates
- 1 x USB-A(2) 3.0 port for USB media playback\*<sup>6</sup> and software updates
- 5-CH time alignment via audio DSP (up to 10 mS delay for each channel)
- 10-band graphic equalizer with 7 predefined and 3 user adjustable EQ-presets
- High-pass and low-pass x-over for front/rear/sub with 12 dB/oct. slope steepness
- Active x-over mode for 2-way front doors system with selectable crossover frequencies (with 12 dB/oct.)
- 4 x 50 W Texas Instruments Class-D Burr-Brown audio amplifier
- HDMI input for compatible accessories and mobile devices
- 24 Bit D/A converter

## CONNECTIONS (CONTROL UNIT)

- 4.2 RCA line pre-out 4.0 Vrms (@ input-R  $\geq 2 \text{ k}\Omega$ ,  $\leq 0.02\%$  THD)
- 3 x RCA input for camera video signal (CVBS+AHD, PAL/NTSC) with switched power supply and microphone input (Cam1)
- 1 x RCA input for multi-view camera video signal (CVBS, PAL/NTSC) with switched power supply
- 1 x DIN FM antenna input
- 1 x SMB DAB antenna input with switchable 12 V power supply
- 1 x USB-A (lower) 2.0 port with 1,500 mA smartphone charging current
- 1 x USB-A (upper) 2.0 port with 1,500 mA smartphone charging current
- 1 x RCA A/V input for 2-CH audio and video (CVBS, PAL/NTSC) signal
- 1 x RCA A/V output for 2-CH audio and video (CVBS, PAL/NTSC) signal
- 1 x Input for external hands-free microphone\*<sup>5</sup>
- 1 x Fakra GPS antenna input socket\*<sup>7</sup>
- 1 x IR-in for external CAN/SWC interface
- 1 x Input socket for the system main-cable to connect the monitor
- 1 x Input for the connection of a programmable analogue SWC interface (Key1, Key2, GND)
- 1 x HDMI port

\*<sup>1</sup> The optionally available, compatible GPS navigation software packages are not part of the set content

\*<sup>2</sup> Suitable for mounting in vehicles without 1-DIN or 2-DIN radio mounting slot

\*<sup>3</sup> Compatible with 720p and 1080p AHD camera systems

\*<sup>4</sup> Software updates are hosted on <https://www.zenec.com/en/support/software-updates/>

\*<sup>5</sup> External microphone contained in the set

\*<sup>6</sup> Supported A/V file formats: MP3, FLAC, AAC, M4A, WAV, AVI, MP4, H.264, MKV 1080p, MPEG2/TS, MPG, Xvid

\*<sup>7</sup> GPS antenna contained in the set

## INDICATIONS

The vehicle must feature a suitable active antenna system (FM/DAB+) to provide sufficiently high antenna signal level for correct tuner function.