

8029HEPTA
DataCenter

hopf
Elektronik GmbH

Standard

Because every fraction of a second counts ■
network synchronization requiring minimum space

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Up to 7 mutually independent NTP time server for perfect time synchronization!

- ▶ The **completely maintenance-free and highly-precise** network time server 8029HEPTA DataCenter with its up to 7 mutually independent NTP time server is the ideal synchronization solution of networks and industrial applications.
- ▶ The **19" 1RU/84HP** rack **saves space** (Slim Line).
- ▶ **simple, complete and safe operation and parameterisation** (password protection and activatable https protocol) via a **password-protected WebGUI** (optional SSH/Telnet)
- ▶ **current status bar** easily available **via WebGUI**
- ▶ important information for implementing and about operating status available via **LC-display** (2 x 40) and **status-LEDs** at the front panel (if WebGUI-access is not available)
- ▶ improved security ensured by
 - * symmetric keys
 - * autokey
 - * access restriction
 - * deactivation of non-used network protocols
- ▶ **SyncOFF Timer** (reception failure bypassing) for accurate operation even based on difficult reception conditions
- ▶ **synchronization status output** via optical coupler
- ▶ **GPS antenna circuit** with **potential isolation** and **antenna circuit control** (supervision if antenna input is open or short-circuited)
- ▶ By GPS time synchronization and the worldwide used time protocol NTP the time server 8029HEPTA DataCenter turns into a **highly accurate NTP Stratum 1 time server**.
- ▶ synchronization of **IEC 61850** compatible devices via NTP/SNTP
- ▶ **automatic switch-over of summer/winter time**
- ▶ **high freewheel accuracy** provided by GPS supported regulation of the internal quartz basis
- ▶ **redundant multiple validation** of the synchronization signal for an error-free and leap-free signal evaluation
- ▶ maintenance-free, **buffered backup clock** for at least three days
- ▶ **automatic handling of the leap second**
- ▶ **Network management** as well as **customized system modifications** (e.g.: activatable functions) can be implemented on request.

The highly-precise network time server 8029HEPTA DataCenter is the ideal space-saving solution for network synchronization. Companies working in these fields trust our solution with its up to 7 mutually independent NTP time server:

- ▶ Data center
- ▶ Energy supply
- ▶ Industry
- ▶ Transportation and Infrastructure
- ▶ Automation
- ▶ Building technology
- ▶ Public sector

The network time server 8029HEPTA DataCenter allows in each stage

- ▶ the highly-precise synchronization of networks and industrial applications
- ▶ efficient and centralized network monitoring (optional feature)
- ▶ efficient network monitoring of each NTP time server (optional feature)

compact and flexible

The network time server 8029HEPTA DataCenter combines three positive attributes in its space-saving 1RU/84HP rack:

- ▶ extensive options of configuration (see page 4)
- ▶ scores of functions (see page 5)
- ▶ expanding options (see page 6)

Due to these three attributes you can specify the functions of your 8029HEPTA DataCenter time server in your order or later for easy retrofitting on site.

Please let us know your requirements – we would be glad to forward an individual offer to you!



front view 8029HEPTA DataCenter with display and status-LEDs

The modular 8029HEPTA DataCenter will enable you to assemble an individual time server solution based on your specific requirements.

On purchase you decide on

which external time source you want to work with:

- ▶ GPS as time source applicable worldwide (immediately available)
- ▶ IRIG-B as a group of time codes converting time into a continuous binary data stream (on demand)

which power supply should be configured for you:

- ▶ 100 – 240V AC
- ▶ 110 – 250V DC
- ▶ 24V DC
- ▶ 48V DC

which kind of quartz chrystal should be integrated in your system:

- ▶ standard quartz chrystal
- ▶ VCTCXO quartz chrystal

which antenna set you need for using the 8029HEPTA DataCenter as a GPS time server:

- ▶ no antenna set necessary
- ▶ GPS antenna set consisting of
 - * 25 m cable without indirect lightning protection (set 01)
 - * 25 m cable with indirect lightning protection (set 02)
 - * 100 m cable with indirect lightning protection (set 03)
 - * 50 m cable with indirect lightning protection (set 04)
 - * 200 m cable with indirect lightning protection (set 05)

how many mutually independent NTP time server will be integrated in your system - up to 7 mutually independent NTP time server are possible.

The network time server 8029HEPTA DataCenter is ideal for everyone searching space-saving and budget-friendly solutions with scores of functions.

The functions of your time server 8029HEPTA DataCenter:

permanent interfaces:

- ▶ 1 x Ethernet 10/100 Mbit autosensing via RJ45
- ▶ 1x USB-Port for update and recovery function
- ▶ 1 x optical coupler for synchronization status output
- ▶ **optional:** up to 6 additional mutually independent NTP time server can be integrated

time protocols:

- ▶ RFC5905 NTP / SNTP server version 4
 - * Broadcast / Multimode
 - * client for additional NTP server (redundancy)
 - * symmetric key / autokey
 - * access restrictions
- ▶ RFC-868 TIME server
- ▶ RFC-867 DAYTIME server
- ▶ SINEC H1 time datagram
(activatable function - see page 6)

configuration channels:

- ▶ http / https WebGUI (Browser Based)
- ▶ Telnet
- ▶ SSH
- ▶ **hmc (hopf** Management Console / network configuration)

network protocols:

- ▶ http / https
- ▶ DHCP
- ▶ Telnet
- ▶ SSH
- ▶ NTP / SNTP
- ▶ activatable functions (see page 6)



rear view 8029HEPTA DataCenter with 1 Ethernet-interface, 1 USB-port and status-LEDs

additional features:

- ▶ http / https with easy-to-handle web-interface and configurable security banner
- ▶ update function via TCP/IP
- ▶ Fail-safe
- ▶ Watchdog function
- ▶ management of the system

Expand your system

with activatable functions in arrears:

- ▶ Alarming for supervising the system
 - * SNMP (MIB II, Private Enterprise MIB)
 - * e-mail-Notification
 - * syslog
- ▶ Routing for entering static routes based on special network requirements
- ▶ SINEC H1 time datagram for output via the LAN-interface



rear view 8029HEPTA DataCenter with a total of 7 mutually independent NTP time server

We would be glad to forward an individual offer to you!
Please fill in the inquiry form on the last page and send it to info@hopf.com.

We are looking forward to receiving your inquiry!

MORE FLEXIBILITY REQUIRED?!

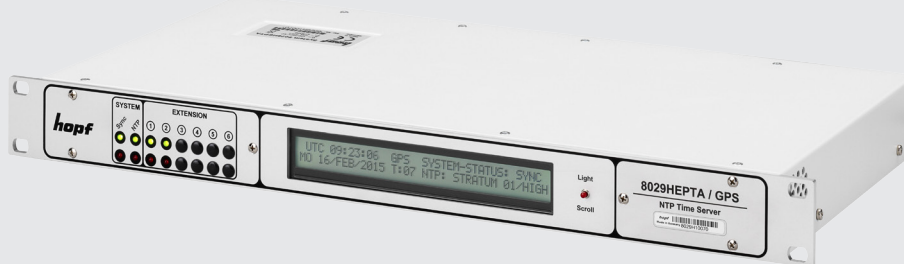
You need a more **flexible** solution regarding **time synchronization**?!

The 8029HEPTA DataCenter can not only be equipped with up to 7 mutually independent NTP time server - at time of purchase you can also decide if you want individual slots of your system to be equipped with different signal output modules.

example 1: 8029HEPTA Industry:

You require only 3 mutually independent LAN-interfaces and additional selectable signal output modules like

- ▶ IRIG-B (analogue / digital)
- ▶ DCF77
- ▶ Cyclic Pulses



front view 8029HEPTA Industry with 3 mutually independent NTP time server, display and status-LEDs

Have a look @ our 8029HEPTA Industry - the perfect solution for companies working in these fields:

- ▶ Industry
- ▶ Energy supply
- ▶ Automation



rear view 8029HEPTA Industry with 3 mutually independent NTP time server, 2 x IRIG-B analogue (BNC connector), 2 x IRIG-B digital (connector block) as well as 2 x DCF77 pulse and 2 x cyclic pulses (fiber optic in each case)

example 2: 8029HEPTA in its most flexible way:

Based on your specific requirements you want to combine different signal outputs

in ONE application?!

If yes, **hopf** is the perfect partner for you - we are looking forward to answering all your questions!

Please let us know your requirements - our sales team will be glad to send you an individual offer!

INQUIRY FORM

We will gladly provide you with an individual offer according to your framework conditions.
Please let us know your requirements for your **8029HEPTA DataCenter**:

Tip: 1 piece consists of <ul style="list-style-type: none"> • required external time source • required power supply • required kind of quartz crystal • required antenna set (if necessary) • required number of NTP time server 	required external time source	required power supply				required kind of quartz crystal	required antenna set (cable with / without indirect lightning protection)						Total amount of NTP time server required Note: Up to 6 additional mutually independent NTP time server per piece & per configuration possible			
		GPS (immediately available)	IRIG-B (on demand)	100 – 240V AC	110 – 250V DC		24V DC	48V DC	standard quartz crystal	VCTCXO quartz crystal	no set necessary	set 1 (25m without indirect lightning protection)		set 2 (25m with indirect lightning protection)	set 3 (100m with indirect lightning protection)	set 4 (50m with indirect lightning protection)
Configuration A	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	x 1 0 0 0 0 0 0 2 3 4 5 6 7
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Configuration B	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	x 1 0 0 0 0 0 0 2 3 4 5 6 7
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Please send your inquiry form to: info@hopf.com

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