BLACK BOX®
NETWORK SERVICES

GPS NTP TIME SERVER

DIN rail Version
(LEG9092AE)

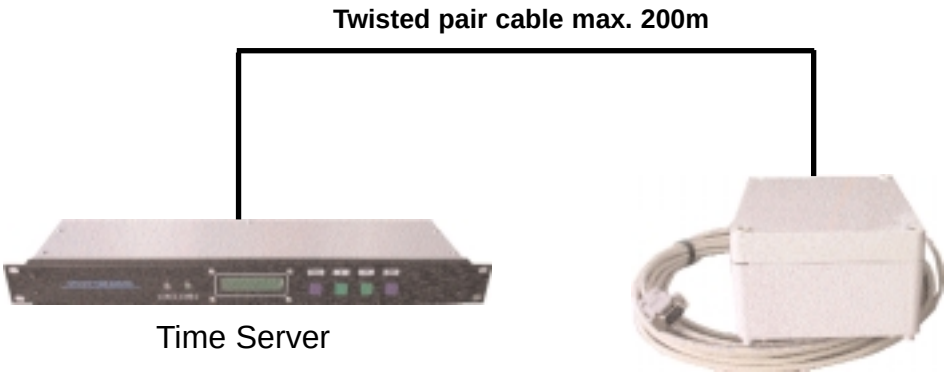
Rackmount version
(LEG9095AE)

Highlights

- Server is dedicated to synchronize network devices local time/date to Universal Time (UTC).
- Devices synchronizing own local time through the NTP protocol (Network Time Protocol) or Devices being synchronized through NTP Broadcast protocol (suitable for most industrial network devices and Cisco Routers).
- Time Server is joined to atomic cesium etalon nist.datum.com over the GPS satellite system.
- The main electronics are placed in to the Rack 19" case / 1U, suitable to mount in server room.
- GPS receiver and antenna are placed outdoor in waterproof case IP-65.
- Connection between GPS receiver and server is realized through the twisted pair cable up to 200m.

System Topology: Time server is delivered as two components:

Time server rack case and IP65 external receiver.



Time Server

External Receiver

Technical Data

Ethernet — 10 Base T, RJ 45 connector
10 MBit
RX polarity: automatic
ICMP: implemented
Gateway: implemented, user configurable
DHCP: not allowed
MAC address: configurable
Ethernet mask: configurable

GPS — External receiver with active antenna, powered from server
Output protocol: ZODIAC Connexant
Baudrate: 9600Bps
PPS pulse: 1sec
Cable:
- 1 twisted pair for zodiac data
- 1 twisted pair for PPS pulse
- 2 wire for power
Power: 9..12V DC
Current consumption: 300mA
max cable length: 200m

NTP protocols — NTP3, SNTP and NTP Broadcast with Firmware V2.10
security: not implemented in standard version
Time stamp resolution: 13usec

Time Accuracy — UTC max error: 300 nsec
- due to NTP time stamp resolution 13usec
device completed accuracy = 13usec

SNMP protocol — Built in only SNMP traps,
server produce and send SNMP traps to dedicated device IP,
- on every changes the number of satellites,
- UTC fix changes
- GPS receiver failures

Main processor — RISC UBICOM IP2022
120 MHz / for Ethernet connectivity 10BaseT

GPS processor — Microchip RISC processor 20 Mhz for GPS mesagges, PPS pulses, LCD, buttons serving

RTC — Real Time Clock
PHILIPS I2C,
powered from lithium CELL CR2430, User Replaceable
Max Error: 10 ppm

Reliability — Two processors watchdoging state every 1sec
- BOR Brown Out Reset
- POR power on reset
- two internal watchdog independent watchdog timers

Security — User password to setup IP address, SNMP strings- community name...

WEB interface — Built in WEB server for dynamic CGI WEB pages
- monitoring server status
- setup time server
- 4MBit dataflash

Temperature ranges — -25 .. 55 'C

Power — LEG9095/LEG9090AE:
100-250 V AC / 50Hz
LEG9092: 9-24 V DC

Display — LCD 2x 16 chars
Green BackLight

Buttons — 4x buttons on front panel
- SET,ESC,UP,DN
for setup IP addresses

Server Case —
LEG9095AE: 19" rack / 1U Depth: 110mm
LEG9090AE:
LEG9092AE:

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oder
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Bestellinformation

Artikel	Artikelnummer
GPS Time Server	LEG9095AE
GPS Time Server ECO Desktop	LEG9090AE
GPS Timeserver for DIN Rail mounting	LEG9092AE

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