GPSA – Central Time GPS module

The Central Time Module with an active GPS antenna is the basic unit of the Central Time System, that provides precise time information derived each second from the GPS satellite system (L1 frequency 1575,42 MHz). If the GPS signal was blocked, the GPSD time information is controlled by precision internal time unit.

- Central time module synchronized by GPS satellite system
- Receiver Type: GPS - L1 frequency (1575,42 MHz), C/A Code
- Tracking Capability: 12 simultaneous satellite vehicles
- Timing Accuracy: ±20 µsec
- Time Offset (Time Zone): UTC-11 až UTC+12, user choice
- Timing Accuracy without GPS Signal: ±10 sec/month
- Acquisition Time: max. 15 sec (hot start)
                                 max. 45 sec (warm start)
                                 max. 90 sec (cold start)
- Input: BNC connector for active antenna (KOAX 75 Ω, max. 25 m)
- Outputs: 2x serial port RS232 - time string OSC/Meinberg
                     1x serial port RS485/422 - time string OSC/Meinberg
                     2x programmable TTL switches/slave clock control signal
                     1x interface for service LCD display 2x16 chars
- Supply: 5 V= ±5 % /160 mA max
- Operating temperature: -10 °C až +50 °C
- Housing: module for 19" rack, 25 mm width

Figure 1: GPSA module (front view)

Position (latitude, longitude, height, velocity) can be displayed on service LCD display.

Time zone, serial interfaces and TTL outputs can be set by 2 buttons and service LCD display.

Czech or English language can be selected for LCD communication.

For slave clock loop driving use additional modules PH06 - relay driver (polarized minute pulses 24V, 1.5 A max). For more serial interface use additional DCFRS modules. One DCFRS module adds 4 RS232 and 4 RS485/422 serial outputs.

It is recommended to use GPSPWR supply unit with GPSA module. There is possibility of 24 VDC backup battery.

Supply voltage and outputs are connected by system connector. Active antenna is connected through the BNC connector.