DTS 4148 Grandmaster for NTP and PTP

Hint: Refer to leaflet for more detailed information.

Additional parts and options:

GPS 4500:	GPS receiver
SP 4500:	lightning protector
DTS 2440:	audio time announcer and signal generator
DTS 2340:	IRIG-B distributor
UPS DTS:	battery pack power reserve
MOBA-NMS:	configuration, management and supervision software

The **DTS 4148.timeserver** is contained in a 19 " housing for rack mounting (1U). Main information, such as current time & date, synchronisation status, current network IP-address, power & alarm status, are displayed by LED's and on a LCD display (2 lines of 16 characters).

The DTS 4148 is PTP Grandmaster and NTP Server in order to provide PTP (precision time protocol) and NTP (network time protocol) time distribution services over Ethernet LAN / WAN network.
The NTP Server can be configured in server, client or combined client-server mode in order to provide NTP time in unicast or multicast mode.
It further can operate as a NTP time zone server by providing up to 20 time zones into encoded NTP-frame for world time clock synchronisation.
In addition it provides the following synchronisation outputs: 1x RS232/RS485 configurable time telegram, 1x IRIG-B in both analog and DC level and 1x programmable pulse/frequencies.

The network parameters (IP and gateway addresses) of the master clock can be managed by DHCP protocol (dynamic) from a server or by SSH protocols (static).
Upon login/password identification, the master clock supports management and configuration through network remote access by MOBA-NMS software or via SNMP & encrypted SSH protocols.

The DTS 4148.timeserver can be synchronized by a GPS receiver, by IRIG-B time code or by NTP. It can also operate in stand-alone mode thanks an embedded high quality oscillator (OCXO) (in case of time source fail).

High degree of system redundancy by connecting two DTS 4148 via fibre-optic link:
– high availability
– master-slave operation with automatic switch over in case of an error

The DTS 4148.timeserver manage automatic and autonomous alarm notification by SNMP (alarm and alive traps), SMTP (e-mail) protocols and over embedded alarm relay.

Outputs:
- ⇨ NTP server (on both LAN ports , > 1500 req/s totally, 10/100 Mbit/s, RJ45)
- ⇨ PTP Grandmaster (Multicast master only (active or passive), Layer 2, IPv4/IPv6, E2E, P2P, 2-step only) (2 x RJ45)
- ⇨ PTP profiles: IEEE 1588 anex J, Default, Utility
- ⇨ 1x IRIG-B, with analogue (BNC) and DC level
- ⇨ 1x programmable DCF/pulse/frequency output
- ⇨ 1x serial interface RS 232 / 422 for configurable serial time telegram
- ⇨ 1x DCF current loop
- ⇨ 1x alarm: potential free opening contact (embedded alarm relay)

Synchronisation:	GPS (DCF), IRIG-B or NTP protocol.
Operation:	communication over LAN/WAN (MOBA-NMS, SNMP, SSH or Telnet)
Monitoring:	LEDs: power, synchronization, alarm. Push button allowing to scroll information (status and alarm) on the LCD display.
Housing:	metal 19 "rack mounting, like IT equipment
Dimensions:	W x H x D in mm: 483 x 44 x 125
Power supply:	Redundant: 2x 24 VDC, +20% / - 10%, max. 15 W