Network Time Displays

NTP Referenced Clocks

KEY FEATURES

- Digital and Analog Clocks Automatically Synchronize with NTP Network Time Servers Over an Ethernet Network

- AC or Power-over-Ethernet configurations

- Remote Network Configuration Management

- All International Time Zones

- Daylight Savings Support

- High Quality, Professional Appearance

- 2 or 4 Inch Digit Sizes

- 12 Inch analog faces with 12 or 24 hour formats

- High Visibility with Adjustable Brightness

- Multiple Time and Date Formats

KEY BENEFITS

- Correct Time is maintained via Automatic Synchronization to NTP Servers Over the Network

- Easy, Cost Saving Installation Using Existing Ethernet Network and Cabling to Connect to Time Servers Instead of Dedicated Cabling to Transfer Time Signals

- Can Use Wireless Ethernet Connections to Eliminate Difficult Cable Connections

- DHCP for Automatic Network Configuration Saves Time

- Automatic Network Discovery and Remote Management via the Network for Easy and Complete Configuration and Control

- Time Zone and Daylight Savings Support Eliminate Manual Time Adjustments

- Bright Digits Can Be Seen Near or Far Depending on Brightness Level

Symmetricom's Network Time Displays are maintenance free clocks that keep accurate time by synchronizing their time – over the network – to a network time server. These clocks use existing Ethernet network infra-structure and the standard network time protocol (NTP) to keep the time correct. Select between analog or digital displays including 12 or 24 hour formats. All interna-tional time zones are supported as well as daylight savings time transitions so the clock should never need manual adjustment.

Display installation and configuration is an easy, cost effective task made even easier by using existing network wiring instead of requiring dedicated cabling to distribute time signals. All displays are available with either standard AC power and Ethernet connections or a combined Power-over-Ethernet connec-tion (PoE). Time over the network saves both time and money since it is not necessary to pull dedicated cabling (such as coaxial or RS-485) throughout a facility to transfer the time to the displays.

Once connected to the network, automatic network address configuration via DHCP coupled with our display discovery and remote management software makes for easy and complete configuration and control of the displays over the network from a single PC. You do not even need to physically see the display to change the settings and verify the correct time and time formats.

Display configuration is saved to non-volatile memory to survive any power fail situation.

Each display is configurable to synchronize with a network time server and will accommodate a second time server as an alternate. These time servers need only be accessible over the LAN/WAN and support NTP.

The digital displays lend themselves well to network equipment racks, control rooms, manufacturing facilities and large open spaces where the precise and accurate digital time needs to be very visible. The classic analog displays are well suited for formal or smaller spaces such as class rooms and meeting rooms. Multiple displays also work well as time zone clocks in control rooms.

Network Time Displays

ND-2 Network Time Display

The 2U (3.5in) chassis of the ND-2 Network Time Display is rack mountable and the rack mount ears are also detachable. The red LEDs have 14 adjustable brightness levels, making this time display easily seen in most small to medium sized rooms and lighting conditions. AC or PoE models provide the flexibility to accommodate different network topologies and facility/installation requirements.
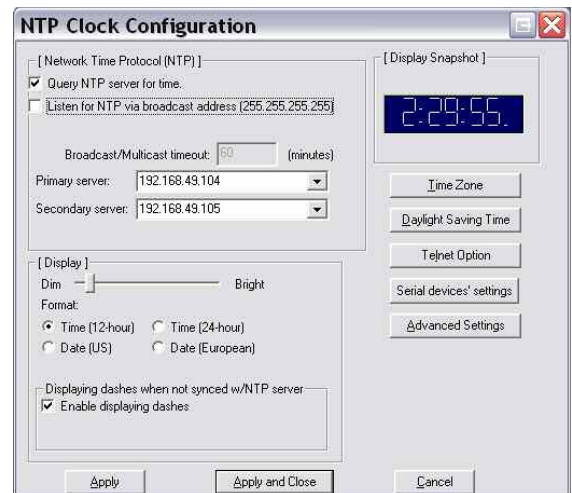
ND-CLK Network Time Display

The ND-CLK Analog Time Displays are industrial quality, wall mounted clocks that consist of all metal construction and a polycarbonate lens for years of dependable operation. 12 hour or 24 hour faceplate versions are available. The ND-CLK ships with a wall mount bracket.
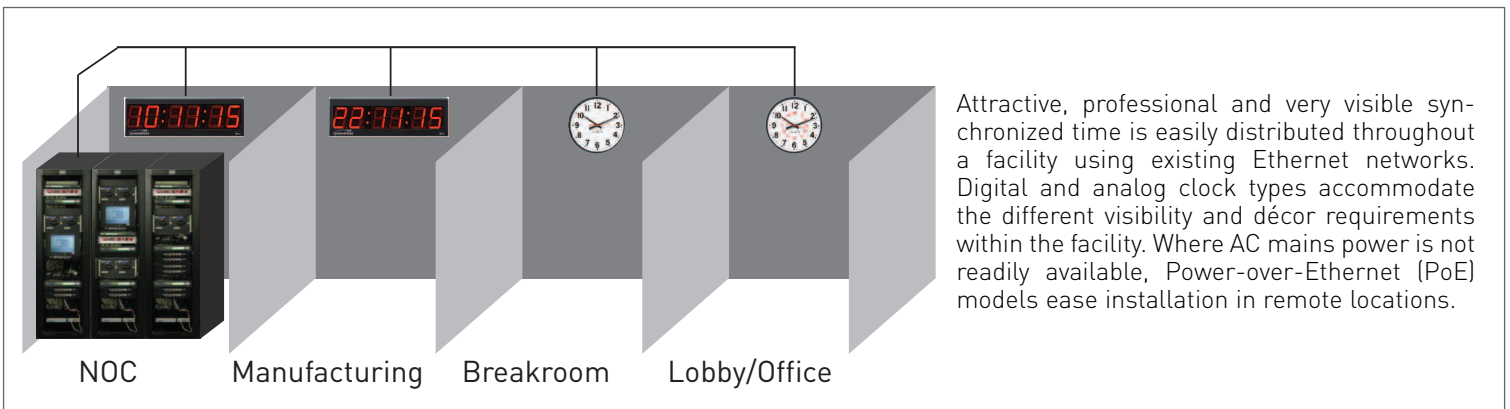
ND-4 Network Time Display

The ND-4 Network Time Display is meant for indoor wall mount applications. The rear of the chassis has 2 keyhole slots with 16" spacing that allow it to be securely hung from studs within a wall. The red LEDs have 14 adjustable brightness levels, making this time display easily seen in most medium to large sized rooms and lighting conditions. AC or PoE models provide the flexibility to accommodate different network topologies and facility/installation requirements.

Remotely discover and configure all ND-2, ND-4 and ND-CLK displays from a single application over the network. Access is password protected and the operation is very intuitive.

Attractive, professional and very visible synchronized time is easily distributed throughout a facility using existing Ethernet networks. Digital and analog clock types accommodate the different visibility and décor requirements within the facility. Where AC mains power is not readily available, Power-over-Ethernet (PoE) models ease installation in remote locations.

NOC   Manufacturing   Breakroom   Lobby/Office

NETWORK TIME DISPLAY SPECIFICATIONS

Model	ND-2	ND-4	ND-CLK
Display	Six 2.3" (5.8 cm) red LED digits hh:mm:ss	Six 4.0" (10.1 cm) red LED digits hh:mm:ss	12 Hr: black text 24 Hr: 1-12 black/13-00 red
Unlock Indicator	■	■	■
12/24 Hour Mode	■	■	Choose clock face type
Daylight Savings	■	■	■
International Time Zones	■	■	■
AM/PM Indicator	■	■	
US Date (mm/dd/yy)	■	■	
European Date (dd/mm/yy)	■	■	
Adjustable Brightness	■	■	
User Interface/Remote Access			
MS Windows GUI	■	■	■
Telnet CLI	■	■	■
Password Protected	■	■	■
Protocols			
NTP Client	■	■	■
SNTP Client	■	■	■
Telnet	■	■	■
DHCP	■	■	■
UDP	■	■	■
Connectors			
Ethernet, 10BaseT, RJ-45	■	■	■
RS-232 DB9	■	■	■
Power: AC Model	IEC 320	IEC 320	IEC 320
Power: POE Model	Via the Ethernet RJ-45	Via the Ethernet RJ-45	Via the Ethernet RJ-45
Mechanical			
Size Inches cm	Width x Height x Depth (1) 19" x 3.5" x 6.5" 48.3 x 8.9 x 16.5	Width x Height x Depth 25.5" x 7.63" x 4.25" 64.1 x 19.4 x 10.8	Diameter x Depth 12.5" x 4.25" 31.8 x 10.8 face
Weight	8.2 Lbs. (3.7 Kg)	9.2 Lbs. (4.0 Kg)	7.6 Lbs. (3.45 Kg)
Material	Welded steel with black powder coat paint inside & out	Welded steel with black powder coat paint inside & out	Round black metal case with polycarbonate lens
Mounting	Rack mount	Wall via keyholes 16" (40.6 cm) apart	Wall via keyhole
Electrical			
Power: AC Models	90 - 264 VAC, 47-63 Hz, <15 W	90 - 264 VAC, 47-63 Hz, <15 W	90 - 265 VAC, 47-63 Hz, < 10 W
Power: POE Models	+48 Vdc, <12.95 W Class 0 per IEEE802.3af	+48 Vdc, <12.95 W Class 0 per IEEE802.3af	+48 Vdc, <12.95 W Class 0 per IEEE802.3af
Certification	CE, FCC	CE, FCC	CE, FCC
Product Includes			
AC powered models	Display, power cord, manual and MS Windows based configuration software on CD. Rack mount removable brackets.	Display, power cord, manual and MS Windows based configuration software on CD.	Display, power cord, manual and MS Windows based configuration software on CD.
POE powered models	Display, manual and MS Windows based configuration software on CD. Rack mount removable brackets.	Display, manual and MS Windows based configuration software on CD.	Clock, manual and MS Windows based configuration software on CD.

1. Size includes rack mount ears. Size without the rack mount ears: 17" W x 3.5" H x 6.2" D (43.2 x 8.9 x 15.7 cm)