DIGITAL GPS BASED CLEAN ROOM CLOCKS

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Digital GPS based clean room synchronized clocks are especially designed for pharmaceutical Clean Rooms & other pharma production areas to ensure uniform time across the plant, using the master Slave synchronization of clocks over wired RS 485 or wireless Radio Frequency (RF) communication.

The master GPS clock is customized to accept the global positioning satellite time of the country of use .It is accurate to 500 millisecs & transmits the GPS time to slave clocks over RS 485 wired communication or the wireless RF communication. upto 106 slave clocks can be connected in a wired RS 485 daisy chain or upto 256 slave clocks can be connected to a single master GPS clock.

For India & countries where 865 MHz. is a free to air frequency, the master GPS clock can also be provided with a Radio Frequency (RF) wireless communication, which does not require communication cabling. the master & slave clock communication then works in wireless mesh networking.

The clean room clocks are designed for aesthetic blending into pharma clean rooms with a stainless steel washable front plate, rated IP65. the back body of the clock is made of mild steel with powder coating.the back body goes into the modular clean room panels or brick walls. for overall stainless steel wall mount body, the clocks have full stainless steel 304 (optionally S.S.316) enclosure & can be wall mounted directly onto existing walls.

Time is accurately maintained by inbuilt memory battery even in the case of power cuts. In the event of RS 485 or wireless RF communication failure, the clocks run on in-built high accuracy mode with annual drift ofnot more than +/-60 seconds.

The digital slave clocks are available in a variety of display sizes - 4" / 2.5" high super bright 7 segment display panel with 6 displays, 2 each for Hours, minutes & seconds. the display used is a super bright 7 segment red LED display with exceptional depth & clarity for visibility over a long distance. please contact factory for clocks with only hours & minutes (HH;MM) & customized date & time clocks (HH:MM:SS with DD:MM;YY) with a host of options for display heights..

Model :AI-GPS-W-M2

2.5" Front S.S. Plate
Flush Wall Mount



Master clock

Slave clock

Model AI-CL2 (OVERALL SS)

2.5" Overall S.S. Body
Wall Mount



Model AI-CL4

4" Front S.S. Plate
Flush Mount

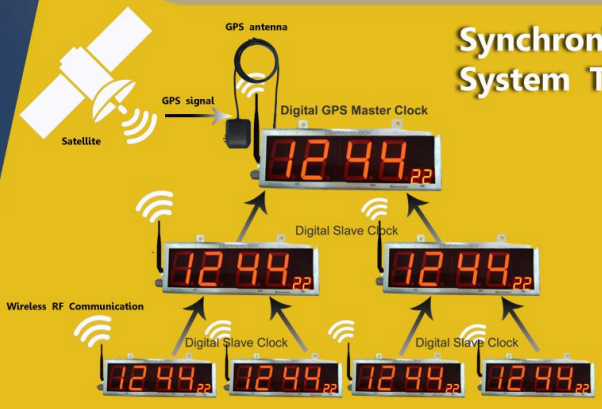


Model AI-CL4 (OVERALL SS)

4" Overall S.S. Body
Wall Mount



Synchronized Clock System Topology



Technical specifications

Display Master GPS Clock For 2.5 " Display	6 Digits 2.5" High 7 Segment Super Bright Red LED Display for Hours , Minutes & Seconds Format HH:MM:SS
For 4" Display	6 Digits 4" High 7 Segment Super Bright Red LED Display for Hours & Minutes , Seconds in 2" high size Format HH:MM:SS
GPS Receiver Specifications of Master Clock	Antenna Type : Active Antenna Wire Length : 3 mtrs. Protocol : NMEA Standard Cold Start : 45 Seconds (Avg) Warm Start : 45 Seconds (Avg) Hot Start : 2 Seconds
Communication	Wired RS 485 Propreitory Protocol/ Optional Wireless RF Communication for Upto 256 Clocks in a single master slave wireless network
Accuracy	Standard GPS Accuracy of +/- 1 second relayed all across the network. In absence of GPS Signal, +/-60 Seconds per year stand alone accuracy
Time Programming	GPS Time from the master clock relayed all across the Wired/Wireless Network Wireless IR Remote for time input for slave clocks in case of Communication Failure
Size Display Master	
Model AI-GPS-W-M2	Body 350 x 105 x 40 mm. (W x H x D) Front Flush Plate 400 x 130 mm (W x H)
Model AI-CL2 (OVERALL SS)	Enclosure-360 x 120 x 60 (W x H x D) mm
Model AI-CL4	Body 480 x 165 x 60 mm. (W x H x D) Front Flush Plate 525 x 180 mm (W x H)
Model AI-CL4(OVERALL SS)	Enclosure - 490 x 170 x 50 (W x H x D) mm
Time Display	24 Hours Time Format Standard / Optional 12 Hours Format
Input Supply	Standard 24 V.D.C. 1 Amps for 2.5" Clocks; 24 V.D.C. ,1.5 Amps for 4" Clocks Optional 230 VAC , 50 Hz. Single Phase for both 2.5" & 4" height clocks

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(An ISO 9001-2015 Certified Company)

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