



VCL-2106, NTP Display Clock

Industrial NTP Synchronized Digital Clock

High-Precision Network Time Display with
Quad NTP Server Redundancy

PRODUCT OVERVIEW

The **VCL-2106, NTP Display Clock** is a rugged industrial network time clock designed to provide highly accurate time display by synchronizing with multiple up to 4 Network Time Protocol (NTP) servers over Ethernet. Engineered for mission-critical applications, it delivers reliable and continuous time synchronization for substations, transportation systems, industrial automation, utilities, control rooms, airports, manufacturing facilities, and data centers.

The clock supports synchronization with up to four independent NTP server sources, providing multiple-source redundancy and automatically switching to the best available server if the primary NTP source becomes unavailable or its clock quality degrades. During temporary network outages, an integrated high-stability internal oscillator maintains accurate time until synchronization is restored.

Featuring dual Ethernet interfaces, IPv4/IPv6 networking, SNMP monitoring, Syslog support, configurable brightness, and flexible mounting options, the VCL-2106, NTP Display Clock provides a dependable timing solution for 24x7 industrial environments.

AVAILABLE MODELS



Model: VCL-2106-06-01-SS-R055

Digit Height: 55 mm (2.16")

Viewing Distance: Up to 20 m

Mounting: Wall / Rack mount



Model: VCL-2106-06-01-SS-R022

Digit Height: 22 mm

Viewing Distance: Up to 5 m

Mounting: Console / Table-top

Viewing distance depends on ambient lighting and installation height



FEATURES

KEY FEATURES

- High-precision NTP synchronized digital clock
- Supports up to four redundant NTP server Sources
- Automatic NTP server failover
- High-stability internal oscillator for holdover
- Dual 10/100 Mbps Ethernet interfaces
- Dedicated Management and NTP network ports
- IPv4 and IPv6 support
- Static IP or DHCP configuration
- SNMP V2/V3 monitoring
- Remote Syslog support
- Secure password-protected Web GUI and CLI
- Firmware upgrade via Ethernet
- Adjustable LED brightness with scheduling
- UTC, Local Time and World Time display
- Configurable Time Zone
- Daylight Saving Time (DST)
- High-brightness LED display
- TIME: HH:MM:SS
- Date: DD:MM:YY
- Industrial hardened design
- Hardware reset switch for device restart and reset
- Surge protected Ethernet interfaces

DISPLAY FEATURES

- High-brightness seven-segment LED display
- Adjustable brightness
- Scheduled brightness control
- Automatic Time/Date alternating display
- Non-glare front panel
- Synchronization status LED indication
- Sync Loss LED indication

POWER SUPPLY

Input Voltage	Option
12 VDC	Input
48 VDC / 110 VDC	External Adapter
90–240 VAC, 50/60 Hz	Standard / Optional
Power Consumption	Less than 15 W

APPLICATIONS

- Electrical Power Substations
- Smart Grid & SCADA Systems
- Airports & Air Traffic Control
- Railway & Metro Stations
- Industrial Automation
- Manufacturing Plants
- Oil & Gas Facilities
- Defense Installations
- Mining Industry
- Data Centers
- Control Rooms
- Telecommunication Networks
- Commercial Buildings

SYNCHRONIZATION

Parameter	Specification
Time Source	NTP Server
Supported NTP servers Sources	Up to 4
Redundancy	Automatic Failover
Holdover	High-Stability Internal Oscillator
Network Protocol	IPv4 / IPv6
Time Display	UTC / Local / World Time
Time Format	12 or 24 Hour (HH:MM:SS)
Date Format	MM:DD:YY
Alternate Display	Time / Date (programable)

NETWORK INTERFACES

Parameter	Specification
Management Port	10/100Base-T Ethernet (RJ45)
NTP Port	10/100Base-T Ethernet (RJ45)
IP Assignment	Static or DHCP
IP Protocol	IPv4 / IPv6

PERFORMANCE

Parameter	Specification
Synchronization Accuracy	Up to ± 1 ms (Network Dependent)
Holdover Drift	Less than ± 0.1 second per 24 hours
Synchronization Source	NTP
Redundant NTP Server Sources	4

RELIABILITY

Standard	Value
MIL-HDBK-217F MTBF	>16 Years @ 40°C
Telcordia SR-332 MTBF	>19 Years @ 40°C

MANAGEMENT & MONITORING

MANAGEMENT

- Secure Web GUI
- CLI
- USB Local Configuration
- Firmware Upgrade
- Factory Reset
- Remote Reboot

NETWORK MANAGEMENT

- SNMP v2
- SNMP v3
- Multiple SNMP Trap Destinations
- Syslog Server Support
- Event & System Logs

USER MANAGEMENT

- Multi-user access
- Password protection
- Login history
- Session timeout

COMPLIANCES

EMC:

IEC 61000-4-2	IEC 61000-4-3
IEC 61000-4-4	IEC 61000-4-5
IEC 61000-4-6	IEC 61000-4-11
CISPR 32 / EN55022 Class B	

CERTIFICATIONS

CE	FCC	IEC	RoHS
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MECHANICAL

Parameter	Specification
Enclosure	Powder-Coated CRCA Steel / GI / MS / ABS
Front Panel	Anti-Reflective Lexan
Protection	IP20
Color	Black (RAL 9005)
Mounting	Wall, Rack, Ceiling, Console, Table Top

ENVIRONMENTAL

Parameter	Specification
Operating Temperature	0°C to +65°C
Storage Temperature	-40°C to +85°C
Humidity	Up to 95% RH (Non-condensing)
Altitude	Up to 3000 m

ORDERING INFORMATION

Part#	Description
VCL-2106-06-01-SS-R055	VCL-2106, High Reliability Industrial NTP Synchronized Digital Display Clock with Quad NTP Server Redundancy Supports: - Six-digit (HH:MM:SS) 12- or 24-hr format - Single Sided, Seven Segment, RED LED, Digit Height 55mm - Dual Ethernet, IPv4/IPv6, SNMP v2c/v3, Syslog - Internal Holdover Oscillator - 1 x 12VDC Power Supply Input (in-built) - Management: Remote Management over TCP-IP Network - Installation Kit : System Core Cables, Mounting Hardware, Documentation
VCL-2106-06-01-SS-R022	VCL-2106, High Reliability Industrial NTP Synchronized Digital Display Clock with Quad NTP Server Redundancy Supports: - Six-digit (HH:MM:SS) 12- or 24-hr format - Single Sided, Seven Segment, RED LED, Digit Height 22mm - Dual Ethernet, IPv4/IPv6, SNMP v2c/v3, Syslog - Internal Holdover Oscillator - 1 x 12VDC Power Supply Input (in-built) - Management: Remote Management Over TCP-IP Network - Installation Kit: System Core Cables, Mounting Hardware, Documentation

Add Power Supply (External Adapter)

Part#	Description
VCL-EP5A0005	Power Supply (External) AC to DC Converter, Portable Adapter Version, PW-024A-1Y120KZ, - 1 x Universal AC Input [90 ~ 264VAC, 47 - 63Hz] - 1 x DC Output [12VDC~2.00A 24W] Equiped with interchangeable AC clips
VCL-EMOD0423-AC220	External Power Supply - DIN Rail Mount Power Supply (External) AC to DC Converter DIN Rail Mount - Input : 1 x AC Input [90~240V AC, 50-60Hz] - Output 1 x DC Output [12VDC~2.1A, 25.2W]
VCL-EMOD0423-DC220	External Power Supply - DIN Rail Mount Power Supply (External) DC to DC Converter DIN Rail Mount - Input 1 x DC Input [110~250V DC] - Output 1 x DC Output [12VDC~2.1A, 25.2W]

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Technical specifications are subject to changes without notice.

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