ORION TELECOM NETWORKS

VCL-2145-LC and VCL-2145D

Comparison Sheet

Comparison Sheet for Primary Reference Clock, PTP 1588v2 Grandmaster, NTP Server		
Feature	**VCL-2145LC Primary Reference Clock**	**VCL-2145D Primary Reference Clock, NTP Server & IEEE-1588v2 PTP Grandmaster**
Synchronization Inputs:		
GPS	✓	✓
GNSS (Optional)	x	✓
(GPS/GLONASS/Galileo)	x	✓
1+1 GPS / GNSS Receivers	x	✓
<100ns Accuracy when locked with GNSS (GPS/GLONASS)	✓	✓
Anti-Jamming Technology	x	✓
ITU-T G.811 Compliant Clock Outputs	✓	✓
Synchronized Outputs:		
NTP Ports	x	4+1
8 x 2.048 MBits (G.811) E1 Clock Outputs	✓	✓
SSM Message Support on 2.048MBits (G.811) Clock Outputs	✓	✓
8 x 1.544 Mbits/Sec (G.811) T1 Clock Outputs (Optional)		
8 x 2.048 MHz (G.811) Outputs	✓	✓
1 x 10MHz (G.811) Outputs	✓	✓
1 x NMEA [0183] (DB9)	✓	✓
SyncE in as per ITU-T G.8261, G.8262 and G.8264	✓	✓
1 x 1PPS	✓	✓
IRIG-B (BNC) Unmodulated	x	✓
IRIG-B (RJ-45) Modulated	x	x
IEEE-1588v2 PTP Grandmaster	x	✓
IEEE-1588v2 PTP:		
Up to 128 unicast messages per second (Telecom Profile)	x	✓
Up to 32 multicast messages per second (Power Profile)		
ITU-T G.8265.1 (Layer 3 unicast, IPv4)	x	✓
Telecom-2008 Profile (Layer 3 unicast, pre-standard ITU-T G.8265.1, IPv4)	x	✓
Power Profile: IEEE C37.238-2011	x	✓
Communication: Unicast, Multicast or Mixed	x	✓
Best Master Clock Algorithm (BMCA)	x	✓
Remote Management and Monitoring	✓	✓
LCD Display	✓	✓
High bandwidth NTP performance	x	✓
Processes up to 3000 NTP requests per second	x	✓
NTP Ports - 4 x Independent 10/100 Mbit/s, RJ-45 Ethernet interfaces	x	✓

NTP Ports - 1 x Independent 10/100 Mbit/s, RJ-45 Ethernet interface	x	✓
Multiple (supports up to 4 separate) IP addresses for complete network segregation	x	✓
Support for up to 64 VLANs for segregated NTP networks to serve separate classes of assets Synchronization of NTP and SNTP clients	x	✓
Meets and complies with Power Contact and Lightening Protection as per Telcordia GR-1089-CORE and EN61000-4-5 Level 4 specifications.	✓	✓
IEC 61850 compliant	✓	✓
Concurrent IPv6 and IPv4 operation	x	✓
Secure network management: enable or disable options	x	✓
MD5 Authentication for NTP Clients	x	✓
Leap Second Support	x	✓
Double Oven Quartz Oscillator (OCXO) for High Stability Hold-Over Clock	✓	✓
Rubidium Oscillator (RbXO) for Ultra-High Stability Hold-Over Clock	✓	✓
Stratum 1 when synchronized to GPS/GNSS, or Stratum 2 in Hold-Over Mode	✓	✓
Local / Remote Management and Monitoring Ports:		
RS-232C	✓	✓
USB	✓	✓
10/100BaseT Ethernet RJ45	✓	✓
2 x External Alarm Relay Contacts.	✓	✓
Local / Remote Communication and Management Options:		
Telnet	✓	✓
SSH (with option to disable clear text communication to comply with NERC security requirements)	x	✓
CLI Control Interface (HyperTerminal or VT100)	✓	✓
SNMP V2 Traps	✓	✓
Configuration and Monitoring Software:		
NMS - GUI (Graphical User Interface) Runs on any PC operating on Windows 7, Windows 8 or Windows 10 OS.	✓	✓
Power Supply:		
Dual Redundant	✓	✓
1+1 AC power (100 to 240V AC, 50/60 Hz)	✓	✓
1+1 DC 24V power	✓	✓
1+1 DC -48V power	✓	✓
1+1 DC 110/220V DC power	✓	✓
AC or DC	✓	✓
48VDC, or AC, or 1+1 Redundant AC+DC Power Supply options.	✓	✓
18-60VDC Power Supply.	✓	✓
Environmental:	-10C to 60C IP40	-10C to 60C IP40

Technical specifications are subject to changes without notice.
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