Primary Reference Clock VCH-001

Primary reference clock (PRC) is intented for use as the redundant first class SDH synchronization equipment of digital networks telecommunication. PRC VCH-001 meets all requirements of ITU-T G.811.

VCH-001 is based on a Passive Hydrogen Maser having relative frequency accuracy $\pm3.0\cdot10^{-13}$ and maximum time interval error (MTIE) in 10-20 times better than the requirements of ITU-T G.811. Due to tri-ple reserve equipment, VCH-001 provides the highest reliability and sta-bility of output signals. MTIE of switching over to reserve equipment is less than 1 ns.

PRC VCH-001 contains two units of Primary Reference Source (PRS) **VCH-1008C** , Rubidium Primary Reference Source desciplined by GPS-GLONASS **VCH-311C** , OSA 5548C Signal Synchronization Unit (Smart SSU) and personal computer for control and monitoring functions.

Primary Reference Source VCH-1008C having the best time and frequency stability — $2\cdot10^{-14}$ per day; $1\cdot10^{-12}$ per second perfect for networking applications.

Built in frequency comparison system based on the OSA 5548C monitoring system and the GLONASS/GPS PRS VCH-311C provides PRC diagnostics and self-calibration. The OSA 5548C Network Synchronization Unit (Smart SSU) is de-signed to provide the best timing at SDH network. Smart SSU is a modu-lar, fully redundant timing distribution system for 2048 kbps primary rate networks. The unit tracks incoming clock references, qualifies the signals against network timing standards, then filters and distributes pre-cise timing to all equipment in the node.

Smart SSU meets ETSI and ITU-T synchronization standards and provides holdover that exceeds the requirement for stratum-2 transit and local node performance.

Smart SSU has vast memory of up to 1000 events. In case such as operator errors, frequency standard failure or transmission problems in the network, the unique system OSA 5548C provides insurance from slips by switching to the reserve inputs.

Software: Software for local control and monitoring is applied. Network control and monitoring program VCH-901 is optional.
Interface: LAN.
Power: DC (38.4÷57.6) V, two inputs.
Power consumption: 600 W.
Dimensions (W×H×D): 600×2020×600 mm.
Weight: 240 kg.
Warranty: 3 years.
Life time: 15 years.