Symmetricom®

OfficeTime 21e

GPS and CDMA Primary Reference Source

KEY FEATURES

- GPS or CDMA G.811 Sources
- Compact ETSI/ITU-T Compliant Unit
- Two E1/T1 Inputs
- Retiming of Input Signals
- Two Weeks G.811 Holdover With Rubidium Clock Option
- Ten E1/2.048 kHz/T1 Output
- PRS or SSU Modes

INTRODUCTION

Symmetricom's OfficeTime 21e is a G.811 GPS or CDMA primary reference source. It is used by telecom operators to generate the highest quality synchronization signals. The OfficeTime 21e architecture is designed with intelligent software for superior performance, reliability and flexibility. Remote software upgrades and user settable features are fully supported.

G.811 GPS/CDMA

The OfficeTime 21e can receive GPS or CDMA G.811 sources. GPS is available with a rooftop or window-mounted antenna. A selection of clock technologies is available to meet specific G.812 Type I-VI holdover requirements.

INPUTS

The OfficeTime 21e accepts up to two 2048 kbit/s G.703/9 or DS1 input reference signals. Input signals are automatically passed through in case of internal clock failure. They fully support SSM for provisioning self-healing networks. The OfficeTime 21e can optionally be programmed to retime up to two 2048 kbit/s G.703/9 or DS1 input reference signals.

The OfficeTime 21e can be provisioned with input references for use if the GPS/CDMA reference fails. If both the GPS/CDMA and the input references fail, the OfficeTime's intelligent software enhances output performance beyond the internal clock's holdover stability.

OUTPUTS

The OfficeTime provides 10 outputs configurable as follows:
- 10x 2048 kbit/s G.703/9 or DS1
- 2x 2048 kbit/s G.703/9 with 8x 2048 kHz G.703/13
- 6x 2048 kbit/s G.703/9 with 4x 2048 kHz G.703/13

Output signals fully support SSM for provisioning self-healing networks. It also provides TOD (Time-Of-Day) through the SNTP (Simple Network Time Protocol) interface. SNTP is supported through the GPS or CDMA engine.

OfficeTime 21e

MANAGEMENT

The OfficeTime 21e provides communications capability for network management and craft personnel. The following interfaces are supported:
- 2x EIA-232 ports
- 1x Ethernet port (10 Base-T)
- TL1 command set
- Interactive ASCII command set

The OfficeTime 21e supports the management of critical, major and minor alarms.

INDUSTRY STANDARDS COMPLIANCE

The OfficeTime 21e meets industry standards, including ITU-T, ETS, EN, EIA, ANSI, Telcordia, marked CE (Class B) and CSA/NRTL. It also complies to EMC Class B requirements for installation in "Other than Telecommunications Center" environments.

OfficeTime 21e Specifications

GENERAL
- Long term frequency: Stratum 1 PRS per ANSI T1.101 and ITU-T G.811
- Reference signals: Determined by the type of Radio Receiver:
  GPS navigation signal
  CDMA signal
  2 x DS1/E1

ALARMS
- MINOR: 1 Amp Form C contact closure
- MAJOR: 1 Amp Form C contact closure
- CRITICAL: 1 Amp Form C contact closure

MECHANICAL
- Width: 431.8 mm
- Depth: 213 mm
- Height: 150 mm
- Weight: 5.44 kg

GPS ANTENNA
- Temperature: -40° C to +75° C
- Relative humidity: 100% Non-Immersed
- Altitude: 60 m below sea level to 4,000 m above sea level

OPERATING CONDITIONS
- Temperature: 0° C to 50° C
- Temperature rate of change: 8.3° C/Hr
- Relative humidity: 5 to 85%
- Altitude: 60 m below sea level to 4,000 m above sea level

POWER
- Supply power: -40.5 to -74.99 vDC (-48/60 vDC nominal)
- Maximum: 48 watts at start-up
- Typical: <30 watts at normal operation
- Connector: 3 pin D-Type

OUTPUTS
- E1
  - Format (user selectable):   Framed, all ones, Alternate Mark Inversion (AMI) Per ITU Rec.G.704 (1995)
  - Signal: HDB3
- 2048 kHz Clock
  - Format: Per ITU Rec.G.703/13 (1998)
- DS1
  - Format (user selectable):   Framed, all ones, Alternate Mark Inversion (AMI) Per ANSI T1.403 (1995)
  - Signal: Each output D4/Super Frame (SF)or Extended Super Frame (ESF), user selectable