

# Time Control Equipment

**Rauland**

**MODEL:** TCAMCS — ATOMIC TO MASTER CLOCK SYNCHRONIZATION MODULE



TCAMCS — Atomic to Master Clock Synchronization Module

## SPECIFICATIONS

Input Power: 5 VDC @ 1.6 Amp (maximum)

Outputs (RJ14 jack):

- Pin 1 – ground
- Pin 2 – 130 mA 5VDC digital synch.
- Pin 3 – 130 mA open collector
- Pin 4 – 130 mA open collector
- Pin 5 – 130 mA open collector
- Pin 6 – 550 mA 5VDC

Network Connection: Ethernet 10Base-T

UDP port 123 must be open

USB Port

## DESCRIPTION

The TCAMCS Atomic to Master Clock Synchronization module provides Atomic Time for Rauland education communication systems and master clocks. The TCAMCS also provides secondary clock correction for Rauland analog and digital clocks and many other brands of secondary clocks. Using an Ethernet connection to the internet, the TCAMCS synchronizes its time with the Atomic Time from the NIST (National Institute of Standards and Time). In turn, the TCAMCS synchronizes the associated systems and/or secondary clocks. As an option, in one minute increments, the TCAMCS can be offset by  $\pm$  fifteen (15) minutes from the Atomic Time, based on the requirements of the facility.

## ASSOCIATED EQUIPMENT

TCAMCSRMK Rack Mount Kit for TCAMCS

Communications Systems

- Telecenter 1100
- Telecenter ICS
- Telecenter System 21
- Telecenter VI

## FEATURES

- Synchronizes Rauland education communication systems, master clocks and secondary analog/digital clocks to the Atomic Clock time.
- Daily Atomic Clock synchronization via an internet connection over LAN or a local network time server (NTP)
- Programmable for all time zones in US and around the world
- Automatic Daylight Saving Time correction for all locations
- Multi-vendor secondary clock correction support
- Provides RS-232 and RS-485 signals to synchronize other systems
- Desktop or equipment rack-mountable (using optional TCAMCSRMK kit)

Indicator LEDs:

- Front Panel – Operational Status
- Rear Panel – LAN – link/connection, activity
- USB – status

6-digit Front Panel Display:

- (Display is cycled among the following details using the front panel SYNCH button)
- Current Date & Time Secondary Clock Correction Codes
- Connection Status MAC Address
- Connection Error Codes IP Address
- Location Code Test

Requiring only a LAN connection with internet access and local power, the TCAMCS provides a highly reliable time synchronization device that can be installed in minutes on most networks. The TCAMCS configuration can be modified by a Windows® PC (98 or later) using a USB (1.0 or later) or LAN connection and the TCAMCS configuration software application.

The optional TCAMCSRMK Rack Mount Kit adapts the module for installation into a standard 19" width data or equipment rack.

Master Clocks

- 2524
- 2490 (with optional 2496 firmware upgrade)

Clocks and Accessories

- 2515 Clock Power Supply
- 2418 AC Output Buffer Module
- TCCKINFM Clock Interface Module
- All Rauland-Borg Secondary Analog & Digital Clocks



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