

CANTERBURY SEISMIC

INSTRUMENTS

CUSP-HUB Central Network / Array Management System

Applications

- Data collection from many accelerographs
- Management of a network as an array via common triggering
- Reliable data storage
- Secure data access gateway to the public

Features

- Intuitive yet powerful user interface
- Handles hundreds of instruments
- All-in-one solution for operating an accelerograph network
- Powerful alerting system via email and SMS
- Available in diverse case form-factors and configurations
- Interface and outputs customisable to user applications
- Up to Tera-bytes of reliable storage



CUSP-HUB Specifications

Processor		Network Triggering	
Type	Low power x86	Type	Global triggering based on a weighted voting scheme, effectively operating a network as a triggered array
OS	Multi-tasking Linux based	Communications	Trigger packages sent via TCP/IP over the Internet
Timing		Subnets	Up to three unique triggering subnets, any instrument can belong to any subnet as a generator, receiver or both.
Type	NTP network timing Low power GPS (option) Backup real-time clock	Compatibility	Compatible with the revision 2 CUSP-3 series instruments and the CUSP-M system
Accuracy	Better than 400us of UTC with GPS lock 10ms NTP timing (typical)	Data Access	
Communications		Type	Instrument data available in the password protected administrator area (read/write) and in the password protected data area (read-only). Data access can be permitted without password if desired.
Type	SSL-HTTP web server, FTP, Telnet, SSH, SFTP, RSYNC Email/SMS alerts-on-event LAN, Dial-up server and client, Serial link, Cellular modem, WiFi	Network Management	
Protocol	TCP-IP, PPP	Diagnostics	Each instrument member is given a unique identifier and acceptable parameter range. Whenever an instrument sends in a status reports the data is checked against the acceptable parameter range with any deviations reported daily to a list of selected administrators via email and/or SMS. Missing status reports also generate alerts.
Data integrity	Password control to access configuration and data areas, with multiple data and administrator accounts SSL/SSH encryption	Graphical status	Daily status report graphical table indicate the current network status at a glance.
Storage		Environmental / Casing	
Type	Dual RAID (mirroring) hard disks, solid state option Remote mirroring with RSYNC option	Protection	Waterproof plastic or metal 19" rack options
Storage time	User specified, up to Tera-bytes	Temperature range	-10 – +50°C standard
Power		Humidity	0 to 100% (non condensing)
Supply voltage	10.5 – 18.0V DC (110-240V AC, 3 day UPS backup option)	Mounting	Various options, contact factory
Power consumption	10 W typical	Contact Details	
Supply monitoring	User adjustable low voltage shut-down and auto re-power on resumption of power	Canterbury Seismic Instruments Limited	
User Interface		149 Chemistry Wing PH +64 3 3643575	
Type	Web browser based Fully interactive Platform independent Linux/Windows/Mac Can be configured / interrogated remotely from any Internet connected PC Secure SSL-encrypted Apache web server	Rutherford Building FAX +64 3 3643574	
		University of Canterbury Campus sales@csi.net.nz	
		Christchurch 8140, New Zealand www.csi.net.nz	