Design Change Notification

spectracom

REFERENCE : SYN18070   **Date : 20/02/2018**

Equipment *: EPSILON CLOCK EC20S*

Design Change :

Dear Valued Customer,

As a part of SPECTRACOM's ongoing commitment to superior product performance and reliability, we inform you that a new application software version is now available for EPSILON CLOCK EC20S products.

Description

The new EC20S Software version **V17.02** is available through our SPECTRACOM WEB site at the following address:

https://spectracom.com/get-help/product-software

Important note : Depending on the current version on your unit, upgrade process may have to be performed differently, please read the **important note** *at the end of this document.*

Changes notifications

NEW !!

V 17.02 : Binary version for EC20S including the following improvements:

Software evolutions

-Galileo constellation is now supported on units mounted with adapted GNSS receiver (Model Trimble Res SMT360) – from January 2018 (available on standard version - no specific License needed).

Improvement & solutions

- Mute function: 10Mhz and 1PPS Distribution will now be muted during start-up process (few seconds) after a software reboot.
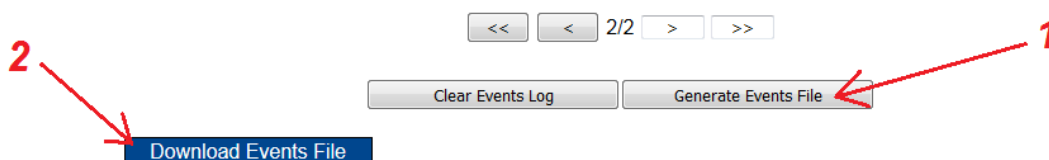
170524-1_R5_FP

Previous features

V 16.04 : Binary version for EC20S including the following improvements:

Software evolutions

- The log file is now not generated automatically to avoid Watchdog reset. We added a button to generate the file before downloading it.

Improvement & solutions

- Internal System improvement: Replace system call by standard function in order to avoid some network overload alarm erratic cases.

- Fix an issue when a Lassen IQ – Trimble receiver is used. When the antenna is disconnected and then connected, the system could stay in "Tracking search" mode. This evolution fixed the issue.

V 16.03 : Binary version for EC20S including the following improvements:

Software evolutions

The FPGA can now be automatically updated simultaneous with the Software upgrade process. The new version contains the firmware of the FPGA. The update can be possible only from the version 3.00 of the FPGA. For information, the V16.03 contains the FPGA V3.02 version.

A new "network overload" message can occur (meaning network load could impact the timing sequences). This will appear only 5 minutes on the status web page and then it will be acquitted and saved in the log file).

When the user changes the Network configuration, the new values become effective immediately after saving the configuration. It doesn't need anymore to reboot the system.

The user doesn't need anymore to pay a license to have the GLONASS option.
(For unit equipped with Res SMT GG module only).

Serial number is now visible through the "Tools / Software Version" WEB UI page.

System Setup	Clock Setup	Clock Status	Tools
			Events Logging
	EC20S Version		Software Version
			Software Upgrade
			Admin
			Reboot

Mother board	
Serial Number	LX1200198563
Archive version	16.03

MAC Address is now visible for the user. Following network and task management enhancements, network status fields are now available through the "NETWORK SETUP" WEB UI page

System Setup	Clock Setup	Clock Status	Tools
Network Setup			
SNMP & Traps Setup	**Network Setup**		
Logout			

Network Status	
Link Status	Ok
Link Speed	100 Mb
Ethernet Mode	Full

MAC Address	00:0C:EC:09:02:5F

New parameters added in the MIB file. (no impact on the previous MIB file structure – see MIB file for details).

Improvement & solutions

Rework on the main program task - fixing random internal timing errors (causing real time issues and WEB UI lock up).

Change internal task monitoring script (causing web UI lock up).

Fix an issue for the Lassen IQ receiver concerning the NTP time.

Upgrade process enhanced and secured.

Fix an issue on NTP distribution that caused random second shifting.

V 13.02 : Binary version for EC20S including the following improvements:

Software evolutions
- IMPORTANT FOR NTP Services : Leap second management improvement.
  This version allows the EC20S to communicate (through LI Bit information) the Quality of the synchronisation status in the NTP frame and furthermore, the next Leap Second introduction indication. SPECTRACOM recommands strongly this evolution to every users who use NTP protocol to transfert Leap Second indication to their network devices.
- Output Mute at startup : Disable mode has changed : now waiting to meet a first SFN condition after start up (MUTE_UNTIL_1ST_SYNC) or First Reference Locked status (MUTE_UNTIL_STABLE). See user Manual for details.

Improvement & solutions
- Disciplining parameters have been modified in order to provide more stable 1 pps and 10 MHz signals, when using GPS and Glonass satellites. Combined with last firmware V1.8.0 version of the integrated GNSS receiver board, the EC20S provides full time & frequency performances in every GNSS modes.
- MIB parameter updated : ec20s-NTP-STRATUM-LEVEL (OID). See MIB file for details

V 12.01 : Binary version for EC20S including the following improvements:

Software evolutions

- Output Mute at startup : Disable mode has changed : now waiting to meet a first SFN condition after start up.
- Mute Ontime value : Now disables individualy the function field when 0 is set.

Improvement & solutions
- Disciplining parameters have been modified in order to provide more stable 1 pps and 10 MHz signals, when using combined GPS and Glonass satellites.(The best stability is still obtained, however, when using GPS only or Glonass only).
- Bad httpd.conf file format – correction applied.

V 11.02 : Binary version for EC20S including the following improvements:

Software evolutions
- Additional GNSS feature: auto detection and information about GNSS receiver type – including multi-constellation devices – new indication in the LOG files.
- New SNMP feature (MIB updated) – allowing dedicated restart network services.

Improvement & solutions
- Fix configuration file issues after reboot.
- Fix Http interface issues depending on the network condition.
- Fix bad GNSS location indication on web page.

V 10.01 : Binary version for EC20S including the following improvements:

Software evolutions
- NTP Services : STRATUM is now managed in coherence with global SFN status.
- Management of the Leap Second application with external datation source (External 1PPS/NMEA).

Improvement & solutions
- A new EC20S status has been added in the MIB for the SNMP Management : Type of Oscillator (0: Unknown ; 1 : OCXO ; 2 : Rubidium). This information is now also displayed on the web page "CLOCK STATUS" in the 'Source Disciplining' box.
- Mute function : errating displaying errors found in the log files – fixed.
- MIB syntax mistakes - fixed.

V 9.01 : Binary version for EC20S including the following improvements:

Software evolutions
- Possibility to use, as a synchronization reference source called "GNSS source", a 1PPS signal generated by a multi GNSS receiver (including both GPS and GLONASS constellations).
- The processing of the GLONASS constellation as a sales option subject to a license.
- The possibility to enable/disable separately the GPS and GLONASS constellations to define the "GNSS source".

Improvement & solutions

- Mute On Time Conditions : correction of random periodical cases causing suspension of the distribution of the output signals.
- SNMP agent : improvement of the robustness and standardization of the service application.

Binary version V2.02 for EC20S including the following improvements:

- Leap second function management improvement.
- Additional GPS receiver features for new SMT-REST type.
- « False GPS Saturday event » corrections.
- NTP signal accuracy improvement.
- WEB UI Navigation improvement.

Binary version V3.1 for EC20S including the following improvements:

- NTP service-Stratum management additional features
- Web UI functions with ergonomic interface.

- Improved features: Global Status EC20S information, GPS antenna management, Mute & Holdover functions.

Binary version V5.1 for EC20S including the following improvements:

- Trap management improvement.

Binary version V6.02 for EC20S including the following improvements:

- Front Panel reset button function change: now, the action on the reset button makes the unit return to Factory Setting. With this function, the IP address keeps returning in IP fixed mode.

- Internet Explorer navigation improvement.

Binary version V6.03 for EC20S including the following improvements:

- Correction of a regression found on the V6.02 previous version which modifies the MAC address when a reset is performed (hardware reset on front panel or software reset trough web UI).

Binary version V7.01 for EC20S including the following improvements:

- The front panel reset management has been improved in order to reinforce immunity against reset button rebound.

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Important note :

Please, read the instruction below before upgrade (Do not proceed if you have already done it previously) :

Check your current version with a web browser and first, determine which system software version is currently installed on your EC20S unit :

- Go to Tools/Software Version through the Web UI.
- Read the version in the "Archive version" Field (see example below)

System Setup	Clock Setup	Clock Status	Tools
			Events Logging
EC20S Version			Software Version
			Software Upgrade
Mother board			Admin
Serial Number	LX1200198563		Reboot
Archive version	16.03		

Depending on the Version number, please perform A, B or C process , as described below :

A) If your product version is below 2.02 (exclusive) :
- Intall first the patch – XXXXXX and let the unit reboot.
- Install the new release and let the unit reboot.
- At the end of the installation, your password will be invalid (even if it's not modified).
- With a clip, press the button 'factory reset' on the front panel of the product as shown below:

HW reset

- Wait 5 minutes for the reboot.
- At this stage, your product has a fixed IP address (@192.168.0.100), with factory configuration and 'pwd' as standard password.
- Configure your product (Network, user's parameters).

B) If your product version is below V14.00 and above V2.02 (included):
- Intall first the **EC20S_patch_01.01.tgz** file and let the unit reboot.
- Install the latest release and let the unit reboot.
- Proceed a "reset to default setup" through the "admin" Web page menu.

System Reset

Reset to default setup

| Activate |

Reset to default setup + Clear events log

| Activate |

- At the end of the installation, the product is ready and keeps your network and configuration settings available.

C) If your product version is above V14.00 :
- Install the latest release and let the unit reboot.
- Proceed a "Reset to default setup" through the "admin" Web page menu
- At the end of the installation, the product is ready and keeps your network and configuration settings available.

Installation guide

The operation is described in the user manual at the 13.11 and 13.12 Software and Firmware Upgrade chapters:

https://spectracom.com/support/product-manuals

In case of needed assistance please contact our help desk at :
EMEA Tech Support techsupport-EMEA@spectracom.com

Production application date:

This version of the EC 20S software will be installed in all units delivered after the 28th of February 2018.