plura

TIMING SOLUTIONS

Rubidium Series
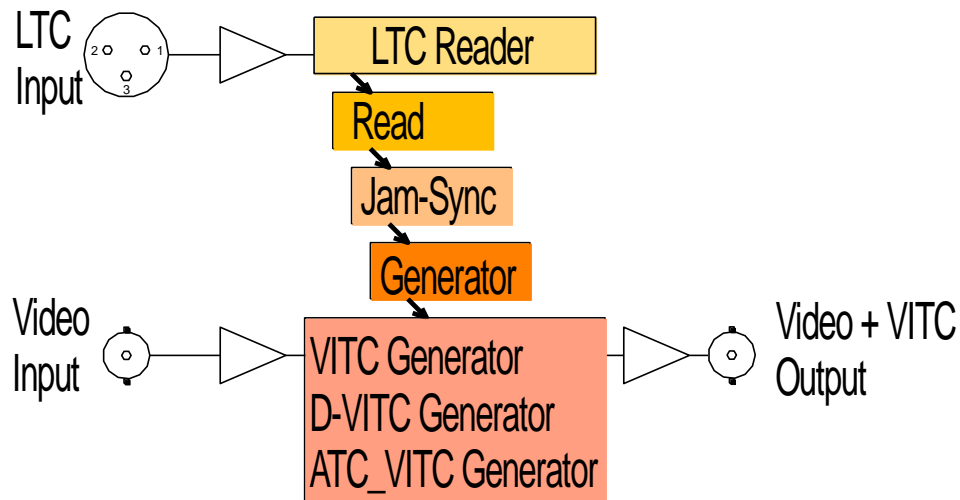# TCC70XS Series
Standalone Systems

UNIVERSAL VIDEO DATA PROCESSOR
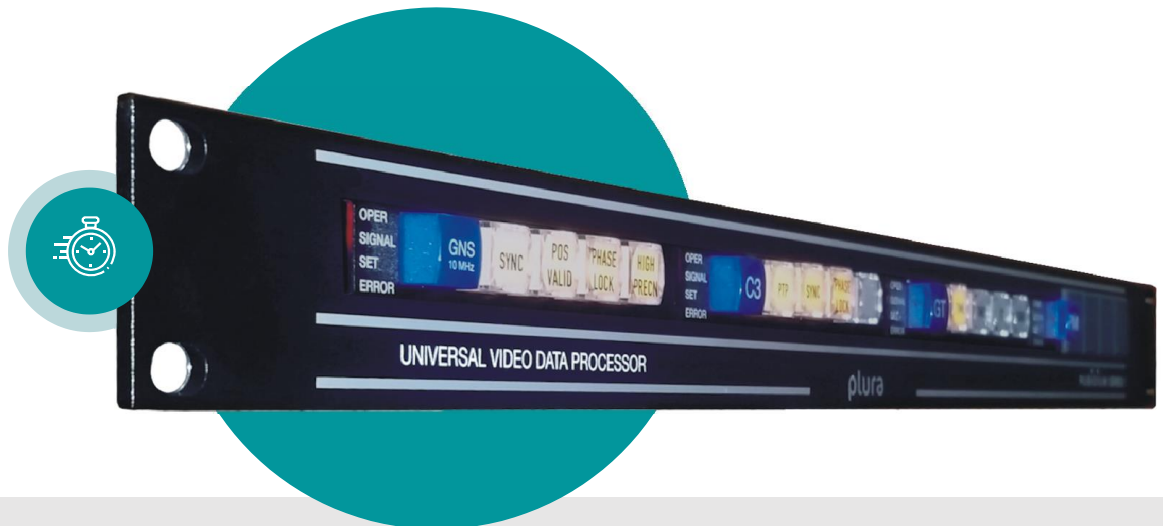
LTC to VITC Converter
LTC to D-VITC Converter
LTC to ATC_VITC Converter

The following description walks you through the installation and the <u>basic</u> set-up process for your special application of an **AT** or **XT** Rubidium module.

Select the module according to the video standard you are using:

AT: Analogue video (CVBS).
XT: 3G or HD or SD digital video.

The external LTC can be received at the XLR3 female connector (if assembled) **or** at the DSUB9 female GPI/LTC IN – please refer to manual for pin assignment.

Step 1:

Load Factory Settings: Preset a Basic Configuration

Activate the **Profile** page and select: Profile: **Factory Settings**

Click on the **OK** button.

Step 2:

Activate/Deactivate Functions

Activate the "Functions" page and **activate/deactivate** as shown:

RUB AT	RUB RUB XT: LTC to D-VITC - SD video only!	RUB RUB XT: LTC to ATC_VITC

- We suggest that you deactivate the **Use** check-boxes of all functions you are presently not using.
- We suggest that you deactivate the **Edit** check-boxes of all functions after the installation process. That avoids unintentional operating and malfunctions.

Step 3:

LTC Time Code Reader Configuration

Activate the **LTC Read** page and select:

Frame Rate: If you have always the same frame rate at the input (24/25/30/30 drop), please fix it accordingly. Frame rate of time code input should be equal to the frame rate of time code output and equal to the picture rate of the video signal. If you are working with different video formats (NTSC, PAL), select "Auto", in this case the frame rate of the incoming LTC will be detected automatically.
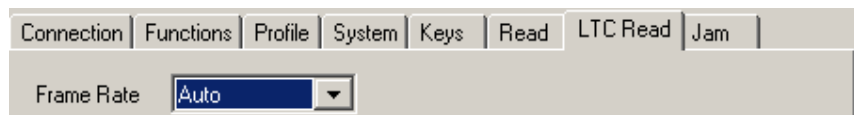
Step 4:

Time Code Reader Configuration

Activate the **Read** page and select:

Frame Rate: If you have always the same frame rate at the input (24/25/30/30 drop), please fix it accordingly. Frame rate of time code input should be equal to the frame rate of time code output and equal to the picture rate of the video signal. If you are working with different video formats (NTSC, PAL), select "Auto", in this case the frame rate of the incoming time code will be detected automatically.

Priority: All "Off" except "LTC Read = High".

MTD: "Source = Off".

User: "Mode = Off".

Example for XT modules:
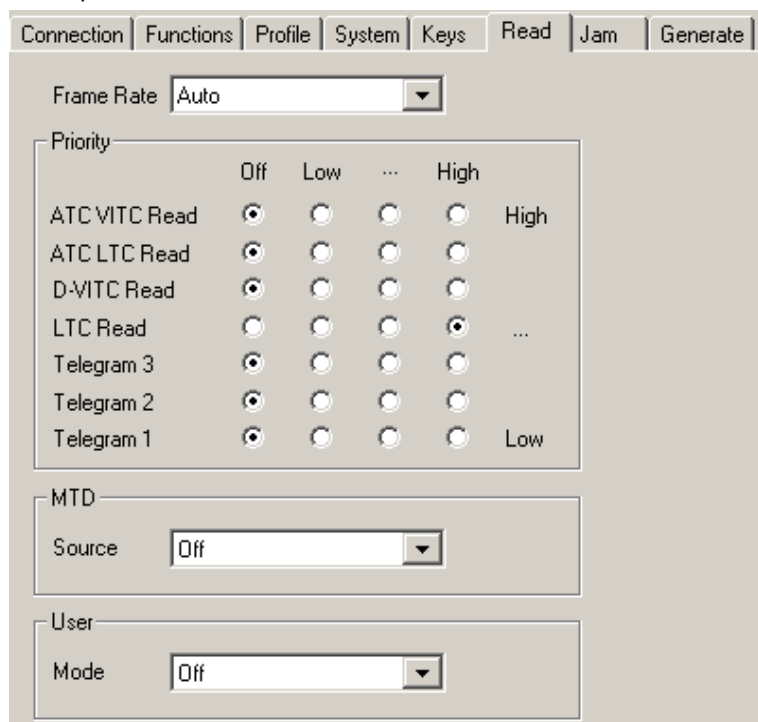
Step 5:

Set Sync Mode and Frame Rate of Timcode Generator

Activate the **Generate** page and select:

Frame Rate: If you are working with one frame rate only, please fix it accordingly. Frame rate of time code output should be equal to the picture rate of the video signal.

XT modules only: If you are working with different video formats, select "Follow Video"; in this case the frame rate of the time code output will follow the picture rate of the video.

Sync: "Video".

Example for XT modules:

Step 6:

Activate the Jam-Sync Mode

Activate the **Jam** page and select:

Mode: "Continuous" - if the time addresses of the VITC output should continuously be generated in an up-counting manner.

"Cont. 1 Frame" or "Cont. Wheel" - if the VITC time should stop in case of an LTC failure or in case of a "still" time code input.

Values: "Time, User".

Use Offset: Not activated – unless you explicitly have to do an offset correction.

Step 7:

Set/Verify the VITC Lines of the Generator

SMPTE 12M recommendations:

VITC, inserted on analogue (CVBS) NTSC: Line 14 and optionally line 16.
VITC, inserted on analogue (CVBS) PAL: Lines 19 and 21.
D-VITC, inserted on digital standard definition (SD) 525/60: Line 14 and optionally line 16.
D-VITC, inserted on digital standard definition (SD) 625/50: Line 19 and optionally line 21.
ATC_VITC, inserted on digital standard definition (SD) 525/60: V-ANC, line 13.
ATC_VITC, inserted on digital standard definition (SD) 625/50: V-ANC, line 9.
ATC_VITC, inserted on digital high definition (HD): H-ANC, line 9.

VITC or D-VITC application:

Activate the **(D-)VITC Generate** page and select:

Mode/1st Line/2nd Line: See recommendation above or select according to application.
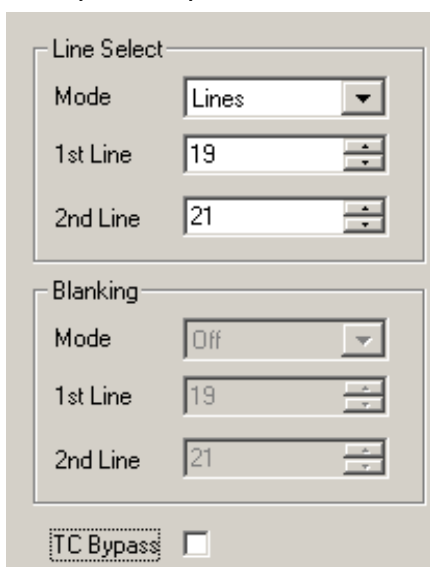
ATC_VITC application:

Activate the **ANC Generate** page and select:

VITC: See recommendation above or select according to your application.
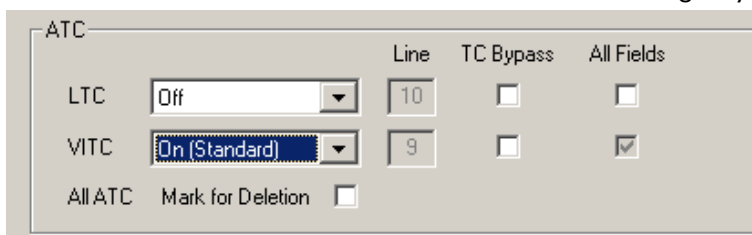
TC Bypass:

Checking **TC Bypass** will activate the following automatic: Only in case that there is <u>no</u> VITC/D-VITC/ATC_VITC present in the incoming video, the VITC/D-VITC/ATC_VITC generator will insert a new one. If there is already a VITC/D-VITC/ATC_VITC, then no new VITC/D-VITC/ATC_VITC will be inserted. For this feature the VITC/D-VITC/ATC_VITC reader has to be enabled: At the **Functions** page click **Use** at **VITC Read**/**D-VITC Read**/**ANC Read**, in case of ATC_VITC select "VITC = enable" at the **ANC Read** page.

Configuration of the Video Channel

Activate the **Video** page and select:

System: Fix it according to your application.

                     XT modules only: If you are working with different video formats, select "Auto".

Insert Enable: Check this box only in case you want to have a visible window inserted onto the video screen.

Optionally: Select LED Functions to Watch Status

Activate the **Keys** page and select:

LED SIGNAL: "Gen Sync Status" indicates the status of the video synchronization:

             LED lights up during video lock.
             LED flashes slowly during the fine trim procedure.
             LED flashes fast if video synchronization is lost.

LED SET: "Jam" indicates the status of the Jam-Sync mode:

             LED lights up = Generator accepts reader input time code.
             LED flashes = Generator does not accept or receive the reader time code.

Contact Us

plura®

Corporate Offices:
Plura Broadcast, Inc.
Ph: +1-602-944-1044
Sales@plurainc.com

U.S.A.

Plura Europe GmbH
Ph: +49-6725-918006-70
Sales@plurainc.com

GERMANY

Plura MEA
Ph: +971-50-715-9625
Sales@plurainc.com

U.A.E.

Plura Asia
Ph: +82-10-6688-8826
Sales@plurainc.com

S. KOREA