XB-T2Mi Gateway DVB-T2

DVB-T2Mi GATEWAY

DVB-T2Mi encapsulator for DVB-T2 networks, Single Frequency Network Synchronizer over ASI and IP.

> XB-T2 GATEWAY

DVB-T2-Mi encapsulator for DVB-T2 networks, Single Frequency Network Synchronizer over ASI and IP.

DVB-T2, as a new terrestrial broadcasting standard, provides an increased bandwidth efficiency and better network management through several tools such as Physical Layer Pipes, MISO, 256QAM, rotated constellation.
XB-T2 Gateway allows your network to reach Single Frequency Network (SFN) perfor-mances and an higher level of robustness.
To unlock these features, the XB-T2 Gateway is your key choice for your DVB-T2 transmission chain.

Applications:
- DVB-T2 SFN networks,
- DVB-T2 Multi-PLPs networks,
- centrally controlled DVB-T2 networks.

XB-T2Mi is a DVB-T2 Gateway compliant (ETSI EN 302 755, ETSI TS 102 773). It generates a "T2-MI" stream, a sequence of T2-MI packets, which is fed to one or more DVB-T2 modulators in a SFN/MFN network. The key features of the T2-Gateway are:

- Standard MPEG-2 TS encapsulated T2-MI outputs (ETSI TS 102 773) over ASI (EN-50083/9), Gigabit Ethernet (PRO-MPEG COP3 R2) and SPI;
- MPEG-2 Transport Stream inputs (ISO 13818-1) over ASI (EN-50083/9), Gigabit Ethernet (PRO-MPEG COP3 R2);
- Manageable remotely via Java GUI and SNMP interface (full operative control) and locally by display (partial control).
- External or GPS clock locking for SFN purpose.
- PAT , PMT and PCR insertion.
- Single PLP and Multi PLPs.
- T2-Base and T2-Lite full compliant.
- Automatically-calculated constant-rate T2-Mi output (using L1 signalling).
- Automatically-calculated constant-rate TS input (using L1 signalling).
- Null packet insertion.
- Null packet deletion (Dynamic PLP).
- Preset configurations
- 16 different configurations can be saved.
- Import and export of the configuration.
- Individual Addressing insertion.
- T2-MIP insertion.
- Configuration check.
- Time Clock synchronization by: Manual, GPS and NTP.
- Configuration monitoring.
- Up to 4 relays.
- ASI and IP I/O support.
- Easy-to-use web based GUI.

PHYSICAL

Rack frame	1U
Size	(W) 484 mm x (H) 45 mm x (D) 346 mm
Weight	4kg

POWER SUPPLY

90-270 VAC PFC corrected power supply	
Nominal power 38 VA	
Power factor: 0.95	
Max inrush current 15A	
M6 screw for extra ground connection	
Power cord	Default - Italy
	Option "UK" - UK standard
	Option "DIN" - Germany and central Europe DIN connector
	Option "US" - US standard

8 X ASI INPUTS

EN 500083-9 compliant
BNC connectors 75 ohm
Maximum bit rate 155 Mbit

ETHERNET CONNECTION

10/100/1000 Mbit Ethernet connector
1 IP address for web server, management, SNMP server and remote update
2 IP address/port for RTP/UDP servers
2 IP address/port for RTP/UDP clients
RTP protocol: ProMpeg cop3 with no FEC packet processing/generation, selectable 90KHz/27MHz timestamps

GPS INPUT

TNC connector 50 ohm
Phantom power 3 Volt 50 mA short circuit protected
GPS L1
12 channel simultaneous operation
45 s typical cold start TTFF
38 s typical warm start TTFF
5 s typical hot start TTFF
<0.5 s reacquisition
Sensitivity Acquisition/Tracking -185dBW / -185dBW
30ns rms accuracy, <10ns resolution

4 ASI OUTPUT

EN 500083-9 compliant
BNC connectors 75 ohm
Maximum bit rate 210 Mbit

FRONT PANEL

4 x 20 alpha displays
8 button navigation
Basic setup and status

REFERENCE INPUTS

10MHz	SMB connector
	1Vpp sine
	50 ohm terminated
	AC coupled
	Option "HIZ" available
1 sec PPS	SMB connector
	0.4 VIL
	1.7 VIH
	Dc coupled
	50 ohm terminated
	Option "HIZ" available

REFERENCE OUTPUTS

10MHz	SMB connector (BNC on request)
	1Vpp sine
	50 ohm
	DC coupled
1 sec PPS	SMB connector (BNC on request)
	0.2 VOL @ 64 mA IOL
	2.2 VOH @ 64 mwA IOH
	Dc coupled
	50 ohm capable

SOFTWARE

Java applet requires Java 6 Version 13 or more recent
Java applet tested on Safari, Internet Explorer, Mozilla
Browser will download automatically suitable version of Java if connected to internet
SNMP is version 1 compliant
MIB files included in CD

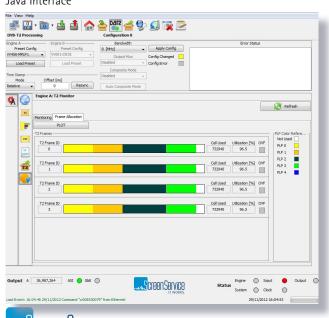| Family	S	M	X				
Description	Single Core Single PLP	Dual Core single PLP	Single Core 2 PLPs	Single Core 4 PLPs	Single Core 8 PLPs	Dual Core 2 PLPs per core	Dual Core 4 PLPs per core
Code	S	M	X2S	X4S	X8S	X2M	X4M
Admitted Configurations							
Single T2 -Base	●	●	●	●	●	●	●
Single T2-lite	●	●	●	●	●	●	●
T2-Base + T2-Lite (Syncrhonized)		●				●	●
T2-Base + T2-Base (Indipendent not Syncrhonized)		●				●	●
T2-Lite + T2-Lite (Indipendent not Syncrhonized)		●				●	●
Main features							
DVB T2 MI output	●	●	●	●	●	●	●
SPLP mode	●	●	●	●	●	●	●
MPLP mode			●	●	●	●	●
MPLP fixed bandwith per each PLP			●	●	●	●	●
MPLP dynamic per each PLP			●	●	●	●	●
Single T2 MI output	●		●	●	●	●	●
Double T2 MI output		●				●	●
T2 Base (v 1.1.1, 1.2.1, 1.3.1)	●	●	●	●	●	●	●
T2 Lite(v 1.3.1)	●	●	●	●	●	●	●
Composite mode (base + Lite)		●				●	●
Composite output		●				●	●
In band signaling A	●	●	●	●	●	●	●
In band signaling B	●	●	●	●	●	●	●
ISSY	●	●	●	●	●	●	●
ISCR Long/short mode	●	●	●	●	●	●	●
FEF	●	●	●	●	●	●	●
Preset mode	●	●	●	●	●	●	●
Advanced T2 Statistics configuration	●	●	●	●	●	●	●
Automatic Check configuration	●	●	●	●	●	●	●
Single and Multiple IF mode	●	●	●	●	●	●	●
I jump => 2 and PI => 2 supported			●	●	●	●	
High Efficency Mode	●	●	●	●	●	●	●
Normal Mode	●	●	●	●	●	●	●
Null Packet Delayed	●	●	●	●	●	●	●
T2-MIP insertion	●	●	●	●	●	●	
T2-MIP funxtions	●	●	●	●	●	●	
T2-MI PID / T2-MI ID setting	●	●	●	●	●	●	●
Auto and manual output rate	●	●	●	●	●	●	●
PAT/PMT insertion	●	●	●	●	●	●	●
BWT 1,7 MHz	●	●	●	●	●	●	●
BWT 5 MHz	●	●	●	●	●	●	●
BWT 6 MHz	●	●	●	●	●	●	●
BWT 7 MHz	●	●	●	●	●	●	●
BWT 8 MHz	●	●	●	●	●	●	●
BWT 10 MHz	●	●	●	●	●	●	●
Time stamp Null	●	●	●	●	●	●	●
Time stamp relative	●	●	●	●	●	●	●
Time stamp absolute	●	●	●	●	●	●	●
Individual Adressing							
MISO	●	●	●	●	●	●	●
PAPR	●	●	●	●	●	●	●
time offset	●	●	●	●	●	●	●
frequency offset	●	●	●	●	●	●	●
tx power	●	●	●	●	●	●	●
cell ID	●	●	●	●	●	●	●
L1 ACE PAPR	●	●	●	●	●	●	●

Screen Service

L1 ACE PAPR	•	•	•	•	•	•	•
TX-SIG	•	•	•	•	•	•	•
Private data	•	•	•	•	•	•	•
Input							
ASI x 8	•	•	•	•	•	•	•
SPI x 1	•	•	•	•	•	•	•
GBE ch 1	•	•	•	•	•	•	•
GBE ch 2							
UDP	•	•	•	•	•	•	•
RTP	•	•	•	•	•	•	•
SMPTE 2202 Tx	•	•	•	•	•	•	
ASI Equilizer	•	•	•	•	•	•	•
Output							
ASI x 4	•	•	•	•	•	•	•
SPI x 1	•	•	•	•	•	•	•
GBE ch 1	•	•	•	•	•	•	•
GBE ch 2							
UDP	•	•	•	•	•	•	•
RTP	•	•	•	•	•	•	•
Additional feature							
NTP/GPS/Internal time	•	•	•	•	•	•	•
Synchronization ext/GPS/Int	•	•	•	•	•	•	•
IGMP v2	•	•	•	•	•	•	•
SNMP v2/v1	•	•	•	•	•	•	•
Java GUI	•	•	•	•	•	•	•
16 configuration saved	•	•	•	•	•	•	•
preset configurations	•	•	•	•	•	•	•
LCD community from LCD	•	•	•	•	•	•	•
New Network GUI interface	•	•	•	•	•	•	•

Java Interface