

Product Features

- Multiplexes streams compatible with MPEG-2 TS
- Compatible with TS (188 bytes) and BTS (204 bytes) inputs
- PSI/SI information generation with data descriptors insertion
- Allows configuration of PSI/SI tables and the respective transmission layer definition
- Stored PSI/SI tables transmission
- Filtering and remapping of input PIDs and PCR correction
- SFN Network configuration
- Compliant with ABNT NBR 15601 recommendations
- ISDB-T and ISDB-T_B compliant
- Allows GINGA interactivity transmission generated by external functions implementer
- Allows Closed Caption transmission generated by external functions implementer
- Allows EPG transmission generated by external functions implementer
- Allows OAD transmission generated by external functions implementer
- Management and updating are performed remotely using an embedded Web server



Optional Features

- GbE (IP) input according to Pro-MPEG CoP #3 / SMPTE 2022
- 4 additional ASI inputs
- Integrated GPS Receiver which provides 10 MHz and 1 PPS reference signals

Description and Application

The UNA 7000 is a Multiplexer and Re-multiplexer developed for ISDB-T and ISDB-T_B digital television standards.

The UNA 7000 supports multi-programming according to the needs of the broadcaster. Additionally, it allows editing of PSI/SI tables, IIP packet generation and Single Frequency Network (SFN) operation.

The multiplexer has 2 input channels (ASI) and 2 copies of the BTS output channel (ASI). Additional ASI inputs (up to a total of 6 input) and 2 IP inputs could be supported as an option.

System management and upgrades are performed remotely over the network via Ethernet.

ISDB-T/T_B Multiplexer / Re-multiplexer

Model: UNA 7000



Rear Panel

Product Specifications

Signal Input

DVB-ASI	2x Input Connectors: BNC (F) (6x Inputs optional) Impedance: 75 Ω TS Packet Size: 188/204 bytes
GbE Transport Stream (optional)	Protocol: Pro-MPEG CoP #3 / SMPTE 2022 Connector: RJ45
BTS Output	
DVB-ASI	2x Output Connectors: BNC (F) Impedance: 75 Ω
BTS Specification	Based on ARIB STD-B31 and ABNT NBR 15601:2007
Bit Rate	512X4/63 Mbps (~32.508 Mbps)

Control Interfaces

Front Panel	LCD display and cursor/ execute keys
Ethernet Interface	2 Connector: RJ45 Speed: 10/100/1000 Base-T
USB Interface	Connector: USB Type B
RS232 Interface	Connector: 9-pin SUB-D Male
RS485 Interface	Connector: 9-pin SUB-D Female
CLI (Command Line Interface)	Connector: USB (HyperTerminal) or Ethernet (HyperTerminal and Telnet)
Web GUI	Internet Explorer, Firefox, etc. Connector: Ethernet
SNMP Control Interface	Connector: Ethernet Note: MIBs are provided

10 MHz and 1PPS Inputs

10 MHz (Note 1)	Connector: BNC (F), 50 Ω Frequency: 10 MHz Level: 0 dBm to 15 dBm
1 PPS (Note 1)	Connector: BNC (F), 50 Ω Frequency: 1 PPS Level: TTL Trigger: Positive transition

Power Supply

Voltage	100 - 240 VAC
Frequency	50 - 60 Hz
Power Consumption	max. 45 VA
Harmonic Correction	EN61000-3-2

Environmental

Operating Temperature	0°C to +50°C (+32°F to +122°F)
Storage Temperature	-30°C to +70°C (-22°F to +158°F)
Relative Humidity (operating/storage)	max. 95%
Cooling	Internal fans to assist natural convection

Mechanical

Size	1 U of 19" wide cabinet
Dimension (W x H x D)	48.3cm x 4.39cm x 42.7cm (19" x 1.73" x 16.8")
Weight	6.0 kg (13.2 lbs)

ETSI Compliance

Essential Requirement R&TTE Directive 1995/5/EC	Standard / Specification
Safety	EN 60950-1: 2001, A11: 2004 First Edition
Health	Not applicable. No antenna.
EMC	EN 301 489-1 V1.8.1

CE Compliance

This equipment is CE Compliant.



Note 1: The "10MHz" and "1pps" are inputs, except when the UNA 7000 is equipped with an internal GPS receivers, where they become Monitoring Outputs (high impedance).



ISDB-T/T_B Multiplexer / Re-multiplexer

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Product Specifications

Optional GPS Receiver

Input Connector	F-type (F), 75 Ω 5 Vdc biased
Recommended Antenna	Bullet III GPS antenna - Trimble model no. 57860-10 or equivalent
Receiver Architecture	L1 1575.42 MHz
12 Parallel Channels	C/A code (1.023 MHz chip rate) Code plus carrier tracking (carrier aided tracking)
Tracking Capability	12 simultaneous satellite vehicles
Acquisition Time (Time To First Fix, TTFF)	< 15 seconds typical TTFF-hot (with current almanac, position, time and ephemeris) < 150 seconds typical TTFF-cold (no stored information)
Positioning Accuracy	< 5 m, 1 - sigma < 10 m, 2 - sigma
Timing Accuracy	< 2 ns, 1 - sigma < 6 ns, 6 - sigma
Holdover Time	± 1 usec during 2 hours
10 MHz Output Signal	Level: 10 dBm ± 2.5 dBm, sine wave Harmonic Level: -40 dBc max. Phase Noise: 1 Hz: < -75 dBc/Hz 10 Hz: < -110 dBc/Hz 100 Hz: < -125 dBc/Hz 1 kHz: < -135 dBc/Hz 10 kHz: < -155 dBc/Hz 100 kHz: < -155 dBc/Hz
1PPS Output Signal	Level: TTL