SFN ADAPTER

Digital TV

The **SFN Adapter** by Neetra is a compact high performance DVB-T/H and DTMB MIP/SIP inserter.

As highlighted by name it is part of a terrestrial DTV network when Single Frequency Network operations are required. It is generally located just after the DVB multiplexer. It performs the computation and the insertion of the Mega frame Information Packet (MIP) in the MPEG-TS flow according to the ETSI recommendation TS 101 191 v1.4.1 (2004-06).

The **SFN Adapter** from Neetra supports all DVB-T and DVB-H modes, hierarchical or non hierarchical, and all channel bandwidths (5, 6, 7, 8MHz) in a single unit.

The **SFN Adapter** processes the reference signals (1PPS and 10MHz) coming from a GPS receiver in order to compute the time stamp information that is part of the MIP packet.

The equipment offers 2 ASI inputs and 2 ASI outputs. In non hierarchical modes: the 2 ASI inputs could be used for redundancy, and the 2 ASI outputs generate the same signal. In hierarchical modes: the 2 ASI inputs receive the 2 transport stream flows (HP & LP) coming from 2 DVB multiplexers, and the 2 ASI outputs generate the HP and LP flows, ready to feed the modulator through a transport network.

This means that a single equipment is able to perform the MIP insertion in non hierarchical modes as well as in hierarchical modes. Powerful management of the synchronisation signals (10MHz, 1PPS) allows reliable operations even in case of a loss of reference signals and minimises the resulting disturbances.

A display on front panel helps the user to program the working modes and to read the equipment status. Leds on front panel give to the operator a quick view of the status.

The **SFN Adapter** can be controlled by remote by a USB connector on front panel or RS485 on rear panel.

For DTMB operation the operating mode is exactly the same, apart from SIP insertion which replaces MIP insertion.

Main characteristics

- Compact high performance MIP inserter
- Perfect choice for DVB SFN network
- 2 ASI Inputs: redundancy in non hierarchical mode, HP & LP in hierarchical mode
- 2 ASI Outputs: same signal in non hierarchical mode, HP & LP in hierarchical mode
- 1PPS and 10MHz sync signals on BNC connectors
- Front panel Display and LEDs indication
- Remote Control by USB or Rs485
- Universal Power Supply
- SIP insertion for DTMB

ASI INPUT SECTION

Connector	BNC
Impedance	75 Ohm
Packet Size	188 or 204 bytes, with or without RS coding
Bit-rate	From 0.2Mb/s to 32Mb/s (depends on the mode)

ASI OUTPUT SECTION

Connector	BNC
Impedance	75 Ohm
Packet Size	188 bytes without RS coding or 204 bytes with RS coding
Bit-rate	From 5Mb/s to 32Mb/s (depends on the mode)
Transfer Time	< 50us (from ASI Input to ASI Output)

10MHz REFERENCE INPUT SECTION

Connector	BNC
Impedance	50 Ohm
Level	-5dBm to +10dBm

1PPS REFERENCE INPUT SECTION

Connector	BNC
Impedance	5kOhm
Level	TTL
Minimum Pulse Width	1us
Time Stamp Computation Accuracy	±100ns

DVB-T/H MODES SECTION

Modes	All DVB-T & DVB-H modes
FFT Size	2k, 4k, 8k
Code Rate	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval	1/32, 1/16, 1/8, 1/4
Constellation	QPSK, 16 QAM, 64 QAM
Hierarchical Parameter	α = 1, 2, 4
Inner Interleaver	Native / In Depth

DTMB MODES SECTION

Modes	All DTMB modes
Code Rate	4/9, 2/3, 8/9
Guard Interval	1/4, 1/7, 1/9
Constellation	4 QAM, 16 QAM, 32 QAM, 64 QAM
Inner Interleaver	OFF, 48, 240, 270

GENERAL

Physical	Case 19"-1U, 4kg
Local Control Port	USB
Remote Control Port	RS485
User Interface on Front Panel	LCD Display + Keyboard + Status LEDs
Power Supply Voltage	90 - 250VAC
Power Consumption	< 15W
Operating Temperature	0 - 45°C

Specifications and characteristics are subject to change without notice

Powered by NEETRA

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