XM-1630
MPEG-2-TS Multiplexing Board
For Terrestrial Digital Broadcasting

The XM-1630 is a MPEG-2-TS multiplexing board which multiplexes various MPEG-2-TS signals from HDTV/SDTV/1SEG encoders, data broadcasting equipments, SI/EPG equipments, subtitle equipments and EMM/ECM equipments, to the ISDB-T frame structure format Broadcasting TS (BTS) signal. This board can be installed into the XF-730 frame and XF-712 frame.

Features

**Input bitrate limiter**
The packets which exceeded input bitrate limiter value don’t affect the other ports so that it is rejected.

**Input PID filtering and replacement**
For each TS input port, the unit can filter out the undesigned PIDs and replace each input PID with a new one designated from the host controller.

**PSI generation and multiplexing**
The unit multiplexes not only the inputted PSI packets but also the generated PSI packets based on information from the host controller.

**TOT generation and multiplexing**
The unit generates TOT packets based on time and date information from an external clock equipment and multiplexes them together.

**PCR generation and multiplexing**
The unit generates PCR packets synchronized with an external STC sync signal and multiplexes them together.

**Synchronizing with external signals**
The unit synchronizes the transport clock, the STC value, the setting change timing and the ISDB-T frame phase with each external signal.

**TS compression**
The unit compresses the broadcasting TS (204 bytes) of 32.5 Mbps into the MPEG-2-TS (188 bytes) of 19.0 Mbps or less.

**Custom support to the number of input TS signals, sync signals and control signals**
By changing a rear board depending on application, you can change the number of the corresponding input TS signals, sync signal inputs and control signals.

NEC Corporation
http://www.nec.com/global/prod/nw/broadcast/
XM-1630 MPEG-2-TS Multiplexing Board for Terrestrial Digital Broadcasting

Specifications

Input signal
(1) Multiplexed data TS signal
MPEG-2-TS, DVB-ASI
4 to 6 channels (*1)

Output signal
(1) Broadcasting TS signal or Compressed broadcasting TS signal
MPEG-2-TS DVB-ASI
3 channels (*2)

Sync signal
(1) STC/GOP/ISDB-T frame sync signal
MPEG-2-TS, DVB-ASI
1 channel (*3)
(2) ISDB-T system clock signal or external 10 MHz clock signal
0.8 Vp-p/75 Ω, Frequency ±0.1 ppm
1 channel
(3) 1 pps signal
TTL/75 Ω
1 channel
(4) Time and date information
RS-485, BCD, Communication rate: 2400 bps, asynchronous (start-stop sync)
1 channel

Control signal
(1) VBR data multiplexing information
RS-422
4 channels

Operation temperature
0 ºC to 40 ºC

Power supply
85 to 264 V AC, 50/60 Hz single phase

Power consumption
18 VA or less

External dimensions
100(H) x 480(W) x 500(D) mm

Weight
1 kg or less

*1 (1) Compliant with both burst mode (byte mode) and packet mode.
(2) Supports both 188 byte format and 204 byte format (no RS error correction function.)
(3) Supports up to 4 programs and 16 types of PIDs per port (individual and range assignment.)
(4) The number of inputs: 4 ports for standard, able to increase it to max. 6 ports by changing a rear board.

*2 (1) Compliant with both burst mode (byte mode) and packet mode.
(2) Broadcasting TS signal of ISDB-T transmission scheme with the transmit control information (ISDB-T_information) and RS error correction code added.
(3) Supports an output TS bitrate of 32.5 Mbps, 37.9 Mbps and 43.3 Mbps.
(4) For the compressed broadcasting TS signal.

*3 (1) Compliant with 188 byte format, packet mode.
(2) Inputs the output signal of ISDB-T Sync Signal Generator (TS-G1630.)

XM-1630 Series

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Input/Output Signal (Number of Connectors)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Input</td>
</tr>
<tr>
<td></td>
<td>TS IN</td>
</tr>
<tr>
<td>XM-1630-R1</td>
<td>4</td>
</tr>
<tr>
<td>XM-1630-R2</td>
<td>6</td>
</tr>
<tr>
<td>XM-1630-R3</td>
<td>4</td>
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</tbody>
</table>

To install, make connections and operate this product, please carefully read and observe instructions, precautions and recommendations in our instruction manuals.

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