ScreenService

DO BRASIL

IT WORKS.

Soluções Headend

Novo Remux BTS

ISDB-T

IRRM 2

BTS Remux

IRRM 2

RRM2-BTS_Remux BT527 is an ISDB-TB:

BTS Re-multiplexer that generates up to 3 Layers composing each one by muxing – with PID filter/remapping capabilities and PSI/SI Table insertion – 2 Input Transport Streams (TS) or BTS (Broadcast Transport Streams) coming from ASI, GbE RTP, DVB-S/S2 interfaces and generates BTS output.

BTS NIT parameters on-the-fly updater (remote_control_key_id, area_code, frequency_table).

Hardware Features

RF Input
Satellite input:
• N° connectors: 1
• Connector type: LNB (female)
• R input: 75 _
• V input: 1.75 V
• Frequenza: 950 to 2150 MHz
• DVB-S (ETSI EN 300 421)
• DVB-S2 (ETSI EN 302 307)

GigabitEthernet
Ethernet input used for management and data input/output:
• N° connectors: 2
• Connector: RJ45
• Standard supported: IEEE 802.3

ASI input
• N° connectors: 2
• onnector type: BNC
• R input: 75 ohm
• V input: 800 mVpp (500 to 1200mVpp)
• MPEG-2 TS ISO/IEC 13818-1
• BTS (Broadcast Transport Stream) ABNT NBR 15601
• CEI EN 50083-9, ARIB

ASI Output
• N° connectors: 4
• Connector type: BNC
• R input: 75 ohm
• V input: 800 mVpp (500 to 1200mVpp)
• BTS (Broadcast Transport Stream) ABNT NBR 15601
• CEI EN 50083-9, ARIB

External management connector
Connector used for external management, relay and opto connection:
• N° connectors: 1
• Connector type: DB25

GPS receiver
GPS receiver input from antenna:

ISDB-T

- N° Inputs: 1
- Sensitivity: -185dBW
- Connectors: TNC
10 MHz reference input

Input from an external 10 MHz reference:
- N° connectors: 1
- Connector: BNC
- Input impedance: 50 ohm
- Input voltage: 2 Vpp
10 MHz reference output
Output of the locked internal 10 MHz reference:
- N° connectors: 1
- Connector: BNC
- Input impedance: 50 ohm
- Input voltage: 2 Vpp

1 PPS reference input
Input from an external 1 PPS reference:
- N° Inputs: 1
- Connector: BNC
- Input impedance: 50 ohm
- Input voltage: TTL (min 1,7V)
- Pulse width: 100us

1 PPS reference output
Output of the locked internal 1 PPS reference:
- N° Inputs: 1
- Connector: BNC
- Input impedance: 50 ohm
- Input voltage: TTL (min 1,7V)
- Pulse width: 100us

Serial Interface
N° connectors: N° 1
Connector: DE-9 female

Relays
- N° outputs: 4
- Connector type: SUB-D 25p Female
- Max voltage: 125VAC / 60VDC @ 0,3A - 30VDC @ 1A

Opto
- N° inputs: 4
- Connector type: SUB-D 25p Female
- Max current: -5 mA

Local User Interface
- LCD
- Keyboard

Management

Operating System
Embedded real time kernel KEIL RTX for ARM v4

Permanent Storage
A file system implementation is available for key support and

management
information:
- Java GUI
- SNMP
- uC
- FPGA image
- Device functional specification file
- Optional special file

Device Programming facility
uC protocol available on port 5000 for device programming

Alarm management
32 bit of alarm management.

Alarm matrix management
Management of the alarm matrix to enable/disable:
- Alarm notification
- Relay excitement
- Trap activation
- Output Mask On/Off

Exportable Event log
Capability to export on text file the event log in memory.

Device configuration management
Load and save of configuration can be managed distinguishing:
- Factory settings: 8 parameters not manageable from the end users and set at factory time or during the upgrade.
- User settings: settings managed by the user that can be set, load and shall retain the value even during software upgrades.

Configuration file import/export
Capability to import and export on file the machine configuration

Serial Numbers
Capability to factory set the on-board devices serial numbers to make them available for reading afterwards

ARP
Address Resolution Protocol implemented on Gigabit Ethernet port for RTP transmission

Multi configuration
8x .sav supported

Satellite Receiver

Tuner
Frequency range
 950 to 2150 MHz

Supported Standard
- A. DVB-S EN 300 421 v1.1.2: Digital Video Broadcasting

- (DVB); Framing structure, channel coding and modulation for 11/12 GHz satellite services;
- B. DVB-S2 EN 302 307 v1.1.2: Digital Video Broadcasting (DVB); Second generation framing structure, channel coding and modulation systems for Broadcasting, Interactive Services, News Gathering and other broadband satellite applications

SAT RF input
Tuning parameters:
Frequency;
- Symbol Rate;
- ISI;
- S/N Threshold;
- LNB_pwr_supply;
- Local osc High;
- Local osc Low;
- BER/BCH Threshold;
- Force Tuning;

Monitoring:
- Actual_DVBS_mode;
- Modulation Code;
- Modulation Type;
- Roll Off;
- Pilots Enable Status;
- Rx Level [dBm];
- S/N [dB];
- Tuner Status;
- Tuner Lock Flag;
- Error Values.

DVB-S Demodulator

Demodulator settings:
- QPSK;
- FEC: 1/2, 2/3, 3/4, 5/6, 7/8;
- FECFRAME: both normal and short;
- Broadcast operating range 45 MSymbols/s;
- CCM;

Automatic settings and monitoring:
- modulation type;
- filter roll-off;
- pilot presence (on/off);
- long frames only;
- Forward error correction;
- Viterbi and Reed-Solomon dual decoder;
- Error monitoring.

DVB-S2 Demodulator

Demodulator settings:
- FEC QPSK: 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10;
- FEC 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10;

- FEC 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10;
- FEC 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10;
- FECFRAME: both normal and short;
- Broadcast operating range from 1 to 67 MSymb/s;
- CCM, VCM and ACM;

Automatic settings and monitoring:
- modulation type;
- filter roll-off;
- pilot presence (on/off);
- long frames only;
- Forward error correction;
- LDPC + BCH dual decoder;
- Error monitoring.

Physical layer scrambling

SConfigurações:
- Mode
- First Physical Layer Scrambling sequence.
- Second Physical Layer Scrambling sequence.
- Third Physical Layer Scrambling sequence.

Monitoração
- Actual Used Code

Saída TS
Saída de Monitoração TS;
- Taxa de bits
- Taxa de bits filtrada
- Formato
- Lock

Matriz de comutação

1x Entrada PLP Selecionada'
2x Entrada ASI TS/BTS
1x Entrada GbE RTP TS/BTS'
Matriz interna de comutação TS:
N=2 independente

Adaptador de rede ISDB-T

Adaptador de rede ISDB-T
Saída única de canal BTS BTS Single channel output

Taxa de bits automática ISDB-T
Ajuste da taxa de bits automática ISDB-T

Análises SI/PSI

Como padrão ISO 13818-1,ETSI EN 300 468, ABNT NBR 16802-3, 15603-1, 15603-2 especificando PID, Identificação de tabela, sintaxe de seção e presença CRC dentro do arquivo .def, análise limitada a seguinte lista:

- PAT
- PMT
- SDT
- NIT
- Privado
- CAT
- TOT
- RST
- TDT
- TSDT
- SIT
- BAT
- DIT
- ST

TS Mux nx1
2 Entradas lógicas selecionadas independentemente para cada Layer

Filtragem PIDem cada PID incluso

Remapeamento PID em cada PID

BTS Multiplexer

SI/PSI inserção/edição
Como padrão ISO 13818-1, ETSI EN 300 468, ABNT NBR 16802-3, 15603-1, 15603-2. limitado a
seguinte lista:
- PAT
- PMT
- SDT
- NIT
- Privado
- CAT
- TOT
- RST
- TDT
- TSDT
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- ST
- CAT
- TOT
- RST
- TDT
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- SIT
- BAT
- DIT
- ST

Recolocação PCR na Layer A
Na entrada lógica 1 selecionada como Layer A

Inserção de IIP com informação de SFN

Saída BTS
4x ASI + 1x RTP
Saída BTS RTP

Geral

- Estatísticas de entrada
- Registro de eventos
  - 1008 eventos
- Servidor SNMP
  - 8 Traps
- Servidor Web
- IGMP
- Relé
- Equalizador bypass ASI

BTS Multiplexer troca de parâmetros NIT BTS

Troca de parâmetros da NIT BTS:
Substituição de parâmetros NIT BTS On-the-fly:
- remote_control_key_id
- area_code
- frequency_table