

MMT/TLV Station

1708A

NEW

General

- This device can record and reproduce MMT/TLV stream.
- The MMT stream can be converted to TLV (Or TLV signal with TMCC basic information ※) format and can be reproduced.
- When Analyzer Option or Analyzer + Monitor Option is equipped, the stream can be analyzed on real time.



※Will support to “ARIB TR-B39 Operational Guidelines for Advanced Digital Satellite Broadcasting

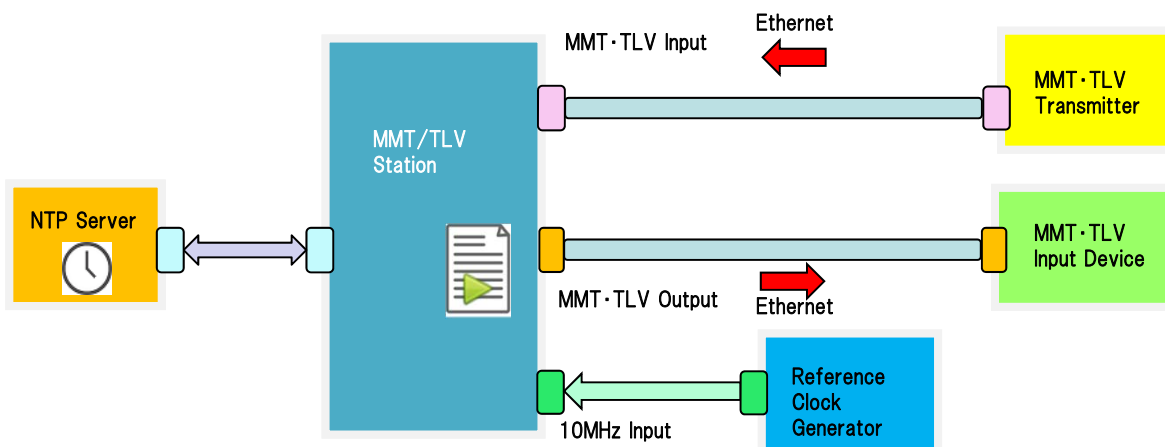
<Supporting Standard>

- ARIB STD-B32 Video Coding, Audio Coding and Multiplexing Specifications for Digital Broadcasting
- ARIB STD-B44 Transmission System for Advanced Wide Band Digital Satellite Broadcasting (ISDB-S3)
- ARIB STD-B60 MMT-Based Media Transport Scheme in Digital Broadcasting Systems

Features

- MMT/TLV streams can be reproduced, according to the time stamp at the recording. (File format: pcap, pcapng)
Possible to play-back MMT/TLV stream re-stamping time stamp (NTP, MMTP Packet, Delivery time stamp, MPU time stamp descriptor) of the packet relating to time information.
- MMT/TLV stream can be transmitted on the rate synchronizing with the external 10 MHz signal.
- IP packet can be recorded and reproduced without the packet-loss.
- The stream can be record and reproduced directly to the external HDD.
- The bit rate of each layer (Ethernet/IP/UDP/TLV/IP/UDP/MMT) can be displayed.
- Analyzer Option (1708A-S01) or Monitor Option (1708A-S02) can be equipped.
※ Monitor Option (1708A-S02) must be equipped with Analyzer Option (
- PC installing Windows 10 is used and GUI which has excellent operability and visibility is realized. (The touch panel is used.)

Connection Image Figure



Interface

Item	Contents
IP input	RJ-45 x 1, 1000BASE-T
IP output	RJ-45 x 1, 1000BASE-T
10MHz input	BNC-R x 1, 10MHz±1ppm, 0dBm± less than 3dB, 50Ω
Capacity of Internal HDD	500GB
Time Synchronization (NTP)	RJ-45 x 1, 100BASE-TX/10BASE-T (※Share with LAN interface)

Specifications

● Standard Specifications

Item	Contents
Packet Capture	Capture Mode (Manual setting, Timer function (1sec. Step))
	Filter Setting (Non (All Packets Capture), On (Designating IP Address, UDP Address Port No.))
Packet Player	Control of time Stamp (Non (Replay), Re-stamp (NTP, MMTP Delivery time stamp, MPU time stamp descriptor))
	MMTP Packet, Packet Sequence No., Seamless re-playing
	Re-playing Mode (Loop, Single, Manual (possible to designate the loop number))
Packet Monitor	Bit Rate of each layer indication (Ethernet/IP/UDP/TLV/IP/UDP/MMT)
	Bit Rate of each TLV Packet type indication (IPv4, IPv6, Header-Compressed IP, Transmission Control Signal, NULL)
	Bit Rate of each MMT Packet identifier (PID) indication (MPU, MMT-SI)
Generator	MMT→TLV Conversion function (※ 1 stream) <ul style="list-style-type: none"> ·IP setting: IP Version, Source Address, Destination Address ·UDP setting: Source port number, Destination port number ·TLV Stream setting: Relative stream number ·TLV-SI Multiplex function (TLV-NIT, AMT) ·NTP packet multiplex setting: IP Source/Destination address, UDP Source/Destination port number, Offset time (Sec.)
	TLV Signal with TMCC basic information creating function (※TLV Multiplex Stream number: 1) <ul style="list-style-type: none"> ·IP setting: IP version, Sender address, Destination address ·UDP setting: Source port number, Destination port number ·TMCC basic information: Relative stream number, Modulation system, code rate, Number of Slots.
Time Synchronization	Synchronization with NTP Server
External synchronization	Synchronization by input of 10MHz Clock
Status	IP input, IP output, 10MHz input
Others	File format: pcapng, pcap
	IP input/output setting <Protocol> <ul style="list-style-type: none"> ·Ethernet Setting: IP, NTP ·TLV Setting: IP, NTP, SI, NULL
	<Input/Output> <ul style="list-style-type: none"> ·IP destination address, UDP destination port number

● Analyzer Option (1708A-S01)

Item	Contents
Whole	Header information of each layer indication (Ethernet/IP/UDP/TLV/IP/UDP/MMT)
	IP Header Check-sum, UDP Header Check-sum
	Analyzing number of stream: 1 stream (※ IP destination address, UDP destination port number)
MMT	MMT-SI Cycle indication (Current/Minimum/Maximum)
	Syntax of MMT-SI indication (Message, Table, Descriptor)
	Dump of MMT Payload data indication (MPU(Visual, Audio, Data))
	Monitoring discontinuity of MMT Packet Sequence Number
	NTP Jitter measurement (Minimum/Maximum Value)
TLV	Time indication (NTP, MH-TOT, MPU Time Stamp descriptor)
	Cycle of TLV-SI (Current/Minimum/Maximum Value) indication
TLV Signal with TMCC Basic Information	Syntax of TLV-SI (TLV-NIT, AMT) indication
	TMCC Basic Information indication Transmission Stream ID, Transmission Mode(Modulation system, Code Rate, Number of Slots)

● Monitor Option (1708A-S02)

Item	Contents
ARIB TR-B39 (Operational Guidelines)	Cycle analyzing (TLV-SI, MMT-SI)
	Inspecting illegal for Transmission operational rules
	Recording stream, when illegal for the rules occurs
	Error log file output