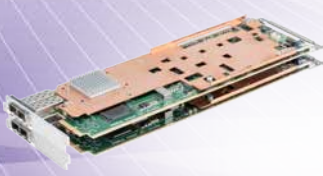


IP GATEWAY USF-10IP SERIES



USF-10IP-TRC



USF-10IP-TRC-FS



USF-10IPSDI6-FS



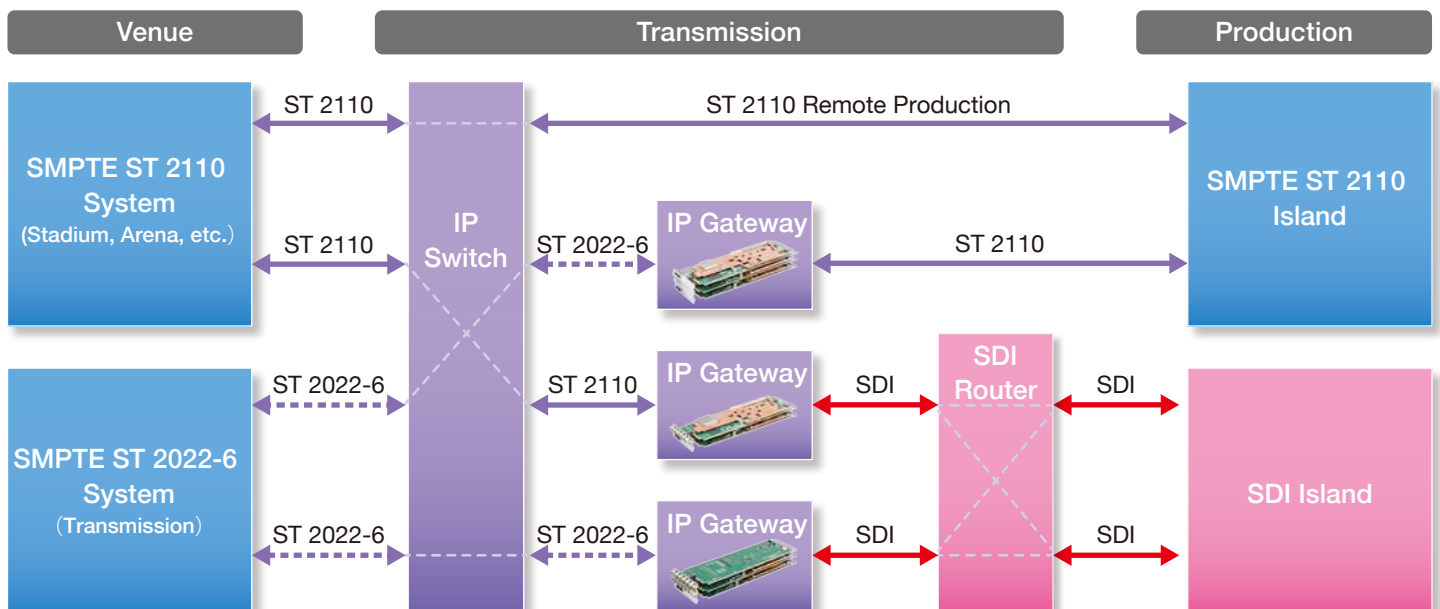
USF-10IPSDI12-FS

Video-over-IP module for Universal System Frame USF-212BS. USF-10IP Series converts video, audio and ancillary data between IP formats (SMPTE ST 2022-6/SMPTE ST 2110, SMPTE ST 2022-8/SMPTE ST 2110) and between IP and SDI.

Two dual (USF-10IP-TRC/USF-10IP-TRC-FS) or dual (USF-10IPSDI6-FS/USF-10IPSDI12-FS) 10 GbE (SFP+) modules can be installed to support hitless operation.

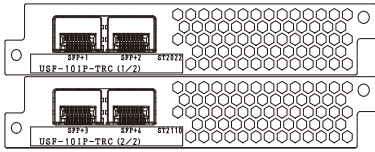
Baseband and IP Hybrid System

For an IP system, the SMPTE ST 2022-6 standard is mainly used in transmission. In a production system, SMPTE ST 2110 is the most commonly used standard. In the future, baseband and IP, as well as SMPTE ST 2022-6 and SMPTE ST 2110 may be mixed for production applications. The USF-10IP Series provides IP and baseband conversion, and supports system configurations with mixed standards.



Available Modules

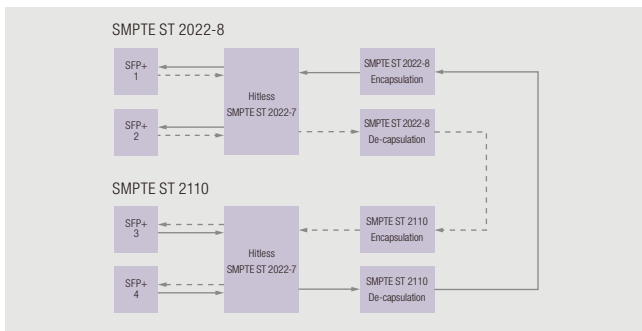
USF-10IP-TRC



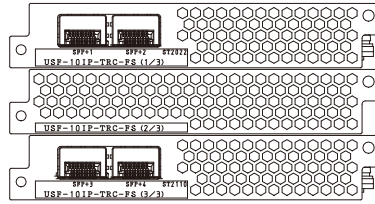
SMPTE ST 2022-8 ↔ SMPTE ST 2110 conversion

- IP format: SMPTE ST 2022-8, SMPTE ST 2110.
- IP synchronization: PTP (SMPTE ST 2059).
- Two dual 10 GbE (SFP+) port supports hitless operation for redundancy (SMPTE ST 2022-7).
- Control: Web GUI, NMOS (IS-04/05).

※ Up to 5 USF-10IP-TRC modules can be installed into USF-212BS.



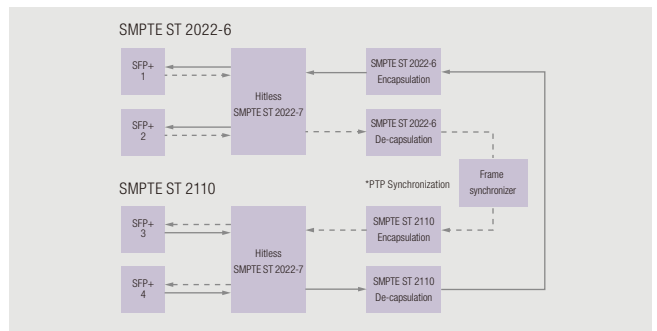
USF-10IP-TRC-FS



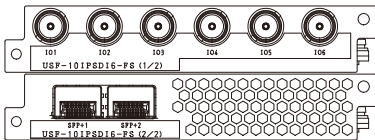
SMPTE ST 2022-6 ↔ SMPTE ST 2110 conversion

- IP format: SMPTE ST 2022-6, SMPTE ST 2110.
- IP synchronization: PTP (SMPTE ST 2059). Equipped with frame synchronization to synchronize SMPTE ST 2022-6 sources using PTP.
- Two dual 10 GbE (SFP+) port supports hitless operation for redundancy (SMPTE ST 2022-7).
- Control: Web GUI, NMOS (IS-04/05).

※ Up to 3 USF-10IP-TRC-FS modules can be installed into USF-212BS.



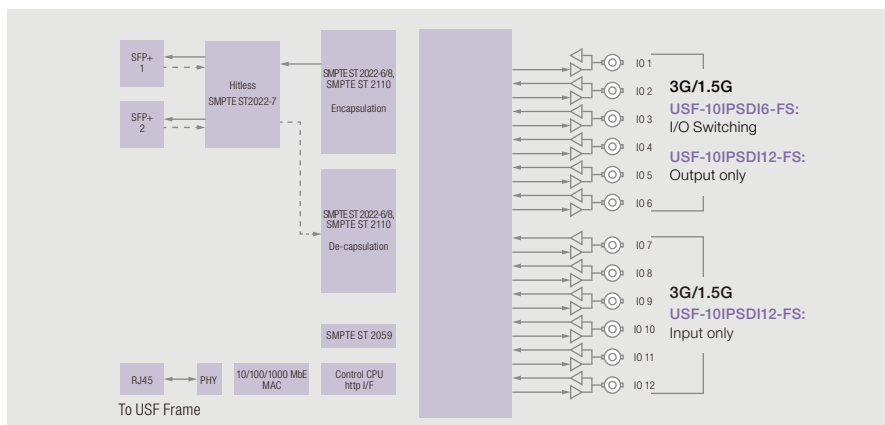
USF-10IPSDI6-FS



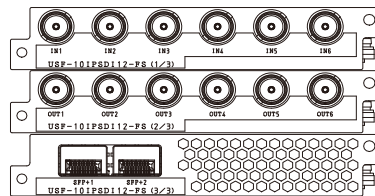
IP ↔ SDI conversion

- IP format: SMPTE ST 2022-6/8, SMPTE ST 2110 (used by switching, cannot be mixed).
- IP synchronization: PTP (SMPTE ST 2059).
- Frame synchronizer: Selectable from sync signal generated from PTP or external BB input.
- Two 10 GbE (SFP+) port supports hitless operation for redundancy (SMPTE ST 2022-7).
- Video format: 1080/59.94p, 1080/50p, 1080/59.94i, 1080/50i.
- Conversion of up to 6 streams. 3G-SDI: 3 inputs/3 outputs. HD-SDI: Up to 6 inputs or 6 outputs, or 3 inputs/3 outputs.
- Compresses 12G-SDI to 3G/1.5G-SDI and processes 4K signals by using codec module USF-106TICO-12G simultaneously with input/output signals.
- Control: Web GUI, NMOS (IS-04/05).

※ Up to 5 USF-10IPSDI6-FS modules can be installed into USF-212BS.



USF-10IPSDI12-FS



IP ↔ SDI conversion

- IP format: SMPTE ST 2022-6/8, SMPTE ST 2110 (used by switching, cannot be mixed).
- IP synchronization: PTP (SMPTE ST 2059).
- Frame synchronizer: Selectable from sync signal generated from PTP or external BB input.
- Two 10 GbE (SFP+) port supports hitless operation for redundancy (SMPTE ST 2022-7).
- Video format: 1080/59.94p, 1080/50p, 1080/59.94i, 1080/50i.
- Conversion of up to 12 streams. 3G-SDI: 3 inputs/3 outputs. HD-SDI: Up to 6 inputs/6 outputs.
- Compresses 12G-SDI to 3G/1.5G-SDI and processes 4K signals by using codec module USF-106TICO-12G simultaneously with input/output signals.
- Control: Web GUI, NMOS (IS-04/05).

※ Up to 3 USF-10IPSDI12-FS modules can be installed into USF-212BS.

Available Frames

USF-212BS



- Hot-swappable, front-accessible power unit and module bays.
- New design combining SDI and Ethernet.
- 2 genlock inputs (black burst (BB) or tri-level sync).
- Built-in gigabit Ethernet hub for GUI-based module configuration.
- Frame operational monitoring (cooling fan and power) and module life-and-death monitoring using SNMP.

Specifications

	USF-10IP-TRC	USF-10IP-TRC-FS	USF-10IPSDI6-FS	USF-10IPSDI12-FS
IP format	· SMPTE ST 2110 · SMPTE ST 2022-8	· SMPTE ST 2110 · SMPTE ST 2022-6	· SMPTE ST 2110 · SMPTE ST 2022-6/8	· SMPTE ST 2110 · SMPTE ST 2022-6/8
IP I/F (SFP+) *Hitless operation for redundancy supported (SMPTE ST 2022-7)	4 ports (2 x 2) ST 2110: 2 ports ST 2022-8: 2 ports	4 ports (2 x 2) ST 2110: 2 ports ST 2022-8: 2 ports	2 ports	2 ports
IP synchronization	PTP (SMPTE ST 2059)			
Video format	3G: 1080/59.94p, 1080/50p HD: 1080/59.94i, 1080/50i			
SDI input	—	—	3G/1.5G-SDI BNCx6	3G/1.5G-SDI BNCx6
SDI output	—	—	(input/output switchable)	3G/1.5G-SDI BNCx6
Number of simultaneous conversion lines	HD: 11ch, 3G: 6ch	HD: 10ch, 3G: 6ch	HD: 6ch, 3G: 6ch	HD: 12ch, 3G: 6ch
Available frames	USF-212BS			
Max. number of mountable modules	5	3	5	3



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