



# Synapse

## 2FS10

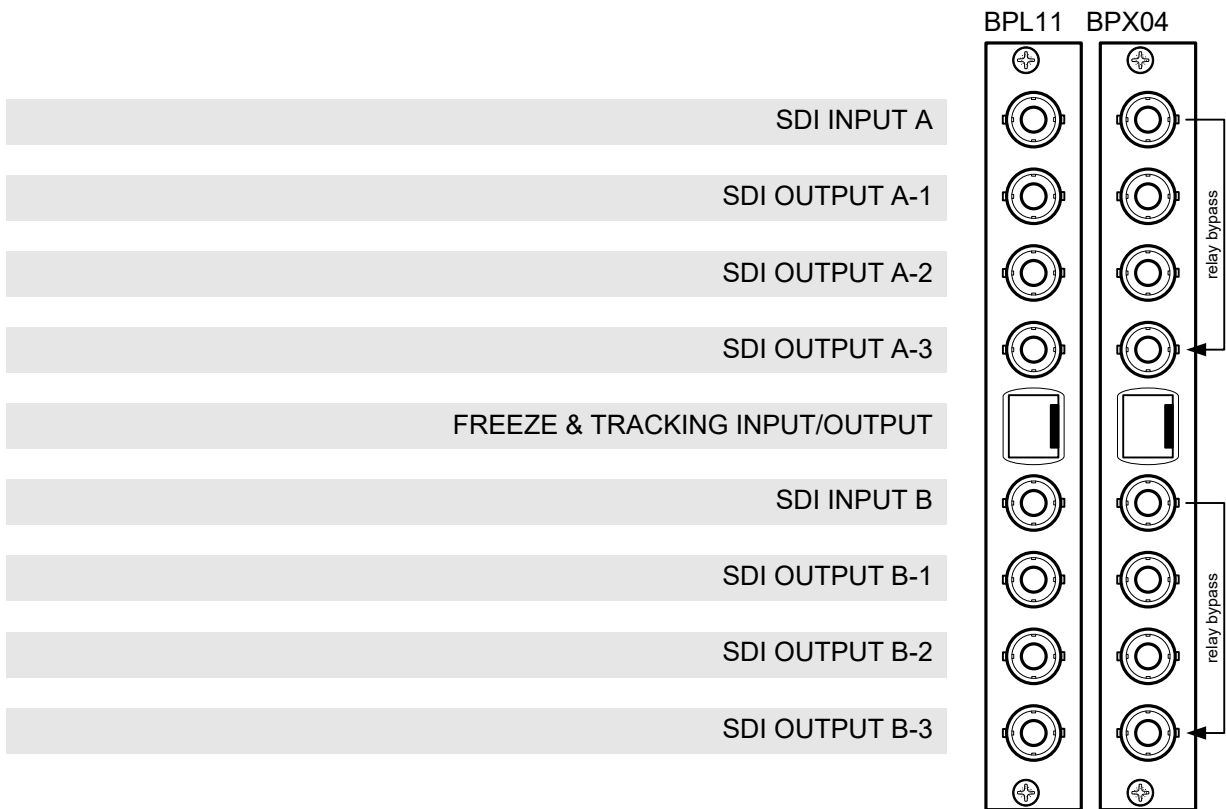
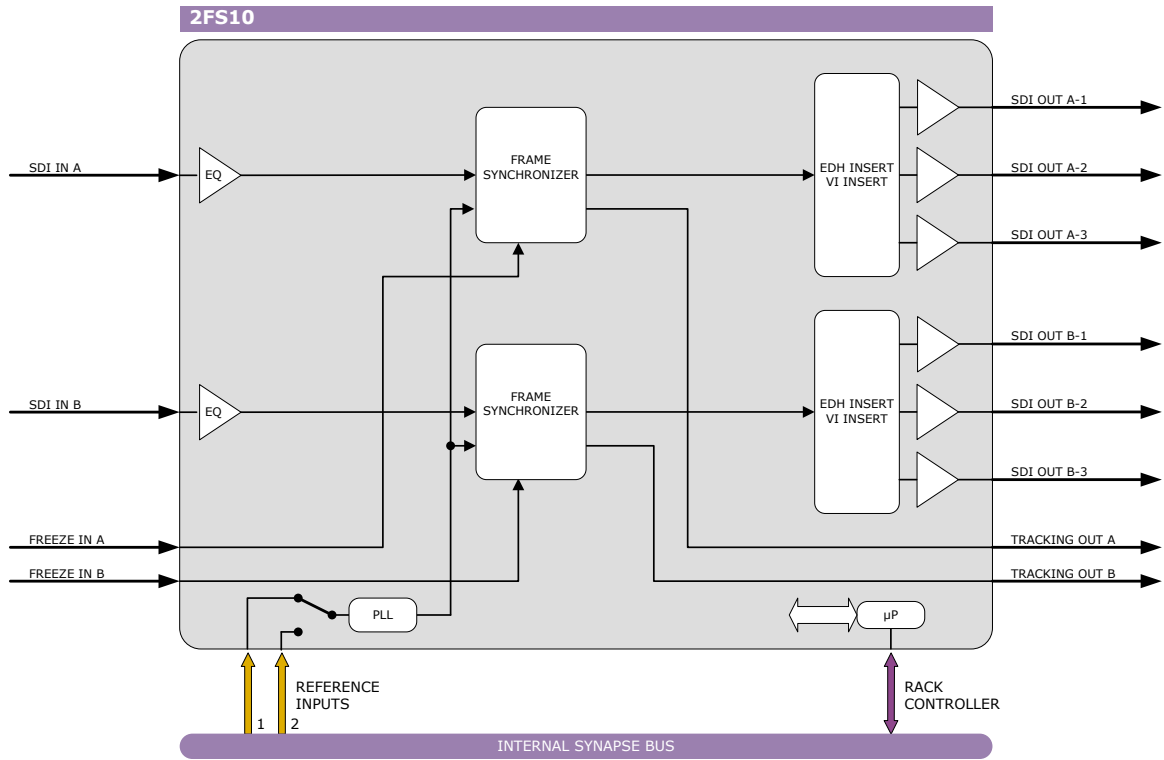
Dual channel frame synchronizer

A Synapse® product



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Block schematic & I/O panel



## Features

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The 2FS10 is a broadcast quality full featured dual channel frame synchronizer/autophaser. Two fully independent free running signals can be synchronized to the same Black & Burst reference. The density of the Synapse system is doubled by the introduction of "TWINS", to an impressive 8 channels in 1 rack unit and 36 channels in 4 rack units. The 2FS10 is fully transparent for embedded audio.

- Frame synchronizer or delay mode
- Line synchronizer/autophaser
- Full frame adjustable output phase (channel independent) with respect to reference in sample increments
- V-bit autophasing (625 only)
- VI insertion
- EDH processing
- GPI Freeze input
- Tracking audio output
- Selectable manual freeze
- Black, Green or freeze video output on loss of input
- Selectable horizontal and vertical blanking
- Freeze and tracking signals on an easy to wire RJ45 connector
- Locks to Bi-level sync
- Full control and status monitoring through the front panel of the SFR04/SFR08/SFR18 frame and the Ethernet port (ACP)

## Applications

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- Generic multi channel frame synchronization
- Lines centre input synchronization
- Post router autophasing – line synchronization
- Dual SDI delay line applications
- High density applications as in OB-Trucks

## Ordering information

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**Module:**

- **2FS10:** Dual channel frame synchronizer

**Standard I/O:**

- **BPL11\_2FS10:** I/O panel for 2FS10
- **BPX04\_2FS10:** I/O panel for 2FS10 with relay bypass

## Specifications

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### Serial Video Input

<b>Standard</b>	625/50 or 525/59.94 SMPTE 259M-C (270Mb/s) with SMPTE 272M embedded audio
<b>Number of Inputs</b>	2 (1 per channel)
<b>Equalization</b>	Automatic to 300m @ 270Mb/s with Belden 1694A or equivalent cable
<b>Return Loss</b>	> 15dB up to 270MHz

### SD Serial Video Output

<b>Standard</b>	625/50 or 525/59.94 SMPTE 259M-C (270Mb/s) with SMPTE 272M embedded audio
<b>Number of Outputs</b>	6 (3 per channel)
<b>Signal Level</b>	800mV nominal
<b>DC Offset</b>	0V $\pm$ 0.5V
<b>Rise/Fall Time</b>	800ps nominal
<b>Overshoot</b>	< 10% of amplitude
<b>Return Loss</b>	> 15dB up to 270MHz

### Reference Input through RRC

<b>Number of Inputs</b>	2 on SFR18, 2 on SFR08 and 1 on SFR04
<b>Bi-level</b>	PAL Black Burst ITU624-4/SMPTE318, Composite NTSC SMPTE 170M 1Vp-p nominal, 75 Ohms terminated through loop

### Miscellaneous

<b>Weight</b>	Approx. 250g
<b>Operating Temperature</b>	0 °C to +50 °C
<b>Dimensions</b>	137 x 296 x 20 mm (HxWxD)

### Electrical

<b>Voltage</b>	+24V to +30V
<b>Power</b>	<9 Watts