



CCR20

**SDI preset based color corrector with frame
synchronizer and enhancement engine**

A Synapse® product

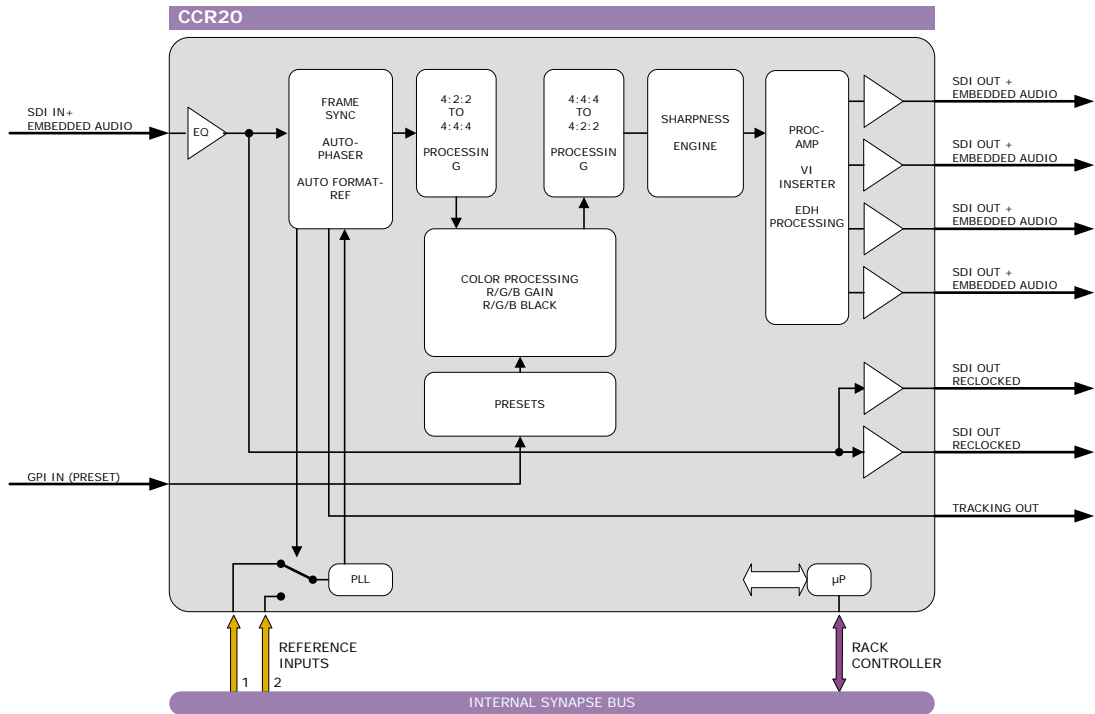
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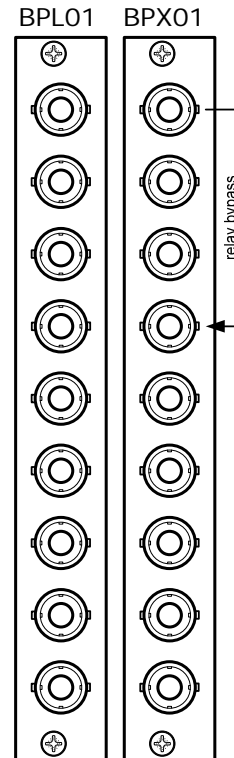
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Block schematic & I/O panel



- SDI INPUT (OPTIONAL FIBER INPUT)
- SDI RECLOCKED OUTPUT 1
- SDI RECLOCKED OUTPUT 2
- SDI PROCESSED OUTPUT 1 (OPTIONAL FIBER OR CVBS OUTPUT)
- SDI PROCESSED OUTPUT 2
- SDI PROCESSED OUTPUT 3
- SDI PROCESSED OUTPUT 4
- TRACKING OUTPUT
- GPI INPUT (PRESET)



For fiber connectivity see www.axon.tv

Features

The CCR20 is a color corrector enhancement engine with a built-in frame synchronizer and black level adjustment. The enhancement engine (the difference between this card and the CCR10) enables post down-conversion sharpness. The internal processing of the color corrector is based on the RGB sampling format 4:4:4. The card has 4 processed outputs and 2 reclocked outputs and allows you to adjust individual or combined R,G,B gain and black levels. Eight presets can be selected directly or via an external GPI16. Only 2 presets can be selected via the local GPI input. The card is ideal for color correction on studio floor monitors or low-cost CCD cameras.

- H+V Sharpness adjustment
- 4 processed outputs
- 8 presets containing the following items:
 - R, G and B gain control
 - R, G and B black level control
 - RGB total gain
 - Black total gain
 - Chroma gain
- Clip status indication
- 2 user presets with local GPI
- 8 user presets with optional GPI16
- Adjustable delay up to 1 frame
- Full frame synchronizer with adjustable H and V offset
- Video Index (VI) insertion
- Ideal in combination with the SCP08 control panel
- Full control and status monitoring through the front panel of the SFR04/SFR08/SFR18 frame and the Ethernet port (ACP)
- Optional 1 fiber input (replacing 1 SDI input) or 1 fiber output (replacing 1 SDI output) on I/O panel
- Optional 1 CVBS outputs (replacing 1 SDI output) on I/O panel

Applications

- Free running CCD camera color correction (includes frame synchronizer)
- Preset based color correction for change from day light to artificial light (sport events)
- In picture display color correction (screens that are visible in a studio shot)
- Post production color correction
- Lines center and ingest color correction

Ordering information

Module:

- **CCR20:** SDI preset based color corrector with frame synchronizer and enhancement engine

Standard I/O:

- **BPL01_CCR20:** I/O panel for CCR20
- **BPX01_CCR20:** I/O panel for CCR20 with relay bypass

Fiber outputs:

- **BPLOT_FC/PC_CCR20:** I/O panel for CCR20 with fiber transmitter on FC/PC
- **BPLOT_SC_CCR20:** I/O panel for CCR20 with fiber transmitter on SC

Fiber inputs:

- **BPL0R_FC/PC_CCR20:** I/O panel for CCR20 with fiber receiver on FC/PC
- **BPL0R_SC_CCR20:** I/O panel for CCR20 with fiber receiver on SC

CVBS output:

- **BPL01C_CCR20:** I/O panel for CCR20 with CVBS output

Specifications

Serial Video Input

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

SD Serial Video Output

| | |
|--------------------------|---|
| Standard | 625/50 or 525/59.94 SMPTE 259M-C (270Mb/s) with SMPTE 272M embedded audio |
| Number of Outputs | 4 |
| Signal Level | 800mV nominal |
| DC Offset | 0V \pm 0.5V |
| Rise/Fall Time | 800ps nominal |
| Overshoot | < 10% of amplitude |
| Return Loss | > 15dB up to 270MHz |

Reference Video Input

| | |
|-------------------------|---|
| Standard | PAL (ITU624-4), NTSC (SMPTE 170M) |
| Number of Inputs | 2 on SFR18, 2 on SFR08, 1 on SFR04 |
| Connector | BNC |
| Signal Level | 1V nominal |
| Impedance | High impedance, with loop for termination |
| Return Loss | > 25dB to 10MHz |

Miscellaneous

| | |
|------------------------------|---------------------------|
| Weight | Approx. 250g |
| Operating Temperature | 0 °C to 50 °C |
| Dimensions | 137 x 296 x 20 mm (HxWxD) |

Electrical

| | |
|----------------|--------------|
| Voltage | +24V to +30V |
| Power | <7 Watts |