

# SPR1200

## MULTI-SCREEN STREAM PROCESSOR



ERICSSON

The Ericsson SPR1200 is a high density adaptive bit-rate (ABR) stream processor for operators to launch television services in the multi-screen environment. It will deliver services to multiple internet connected devices simultaneously, including connected TVs, notepads and mobile phones.

Each Ericsson SPR1200 can be configured in a high input or high output mode. In the high input mode it can transcode 12 services, each into up to 8 output profiles. In the high output mode it can transcode 6 services, each into up to 24 output profiles.

The Ericsson SPR1200 and Ericsson NPR1200 work in unison to deliver services over the internet. The Ericsson SPR1200 transcodes many video and audio services into multiple synchronised profiles, then the Ericsson NPR1200 segments the profiles and wraps the packets to be sent over the internet.

The SPR1200 is supported by a monetisation solution, that enables multiscreen targeted advertising and live-to-file asset generation for multiscreen catch-up TV services.

The SPR1200 is designed for high availability, and offers a hot-standby spare running as automatic 1+1 mirrored units to ensure maximum reliability and service up-time. An advanced web-based user interface allows easy configuration, without the need for an external control system. Alternatively, n+m redundancy is possible, with nCompass Control by Ericsson providing redundancy control.

## PRODUCT OVERVIEW

### Multi-screen Delivery

High density adaptive bit rate video processing for delivering services over the internet to multiple devices simultaneously .

### Flexible Transcoding

The Ericsson SPR1200 will transcode from MPEG-2, MPEG-4 AVC, SD and HD, to MPEG-4 SD and HD for ABR.

### High Density Processing

Class leading density of multiple ABR transcodes for up to 12 services in a 1RU chassis. Solves the scaling problem to deliver more services to more devices.

### “Pay As You Grow” Expansion

Only buy what you need today, the Ericsson SPR1200 can be expanded in the field with additional hot-swap Media Processing Modules and video transcoding licences.

### Reliability to Keep You On Air

Chassis and PSU redundancy options maximise your on air time and minimise off air interruptions.

## BASE UNIT FEATURES

### Ericsson SPR1200 Multi-screen Stream Processor

#### Standalone Configuration

- Single 1RU chassis
- SPR12/CHASSIS/1AC, FAZ 101 0161/61**
- Single AC power supply
- SPR12/CHASSIS/2AC, FAZ 101 0161/62**
- Dual AC power supplies
- SPR12/CHASSIS/1DC, FAZ 101 0161/63**
- Single DC power supply
- SPR12/CHASSIS/2DC, FAZ 101 0161/64**
- Dual DC power supplies

#### Redundant Pair 1+1 configuration

- Pair of units for 1+1 mirrored hot-standby redundancy
- SPR12/CHASSIS/1AC/RAS, FAZ 101 0161/71**
- Each unit has a single AC power supply
- SPR12/CHASSIS/2AC/RAS, FAZ 101 0161/72**
- Each unit has dual AC power supplies
- SPR12/CHASSIS/1DC/RAS, FAZ 101 0161/73**
- Each unit has a single DC power supply
- SPR12/CHASSIS/2DC/RAS, FAZ 101 0161/74**
- Each unit has dual DC power supplies



## BASE UNIT FEATURES cont.

### Base Chassis Functionality includes:

- Control via 2x Electrical Ethernet (100/1000BaseT)
- Data i/o via 4x Electrical Ethernet (100/1000BaseT)
- 1 Gbps duplex communication to each module
- License Key Server to enable software licenses on the chassis

### Platform Processing Capacities

- Up to six Media Processor Modules (MPM) in chassis with single power supply, or with dual PSUs with external power connectors
- Up to four modules in chassis with dual power supplies and internal power connectors
- Up to two services (transcoded to multiple output profiles) per module
- Support for multiple audio tracks per service (including languages, codecs and bitrates)
- Audio Leveling Control for reducing audio level differences
- A generally-available set of resolutions is backed-up by support for custom resolutions

## HARDWARE / SOFTWARE OPTIONS

### Media Processor Module

**SPR/HWO/MPM12, FAZ 101 0161/107**

**SPR/HWO/MPM12/R, FAZ 101 0161/108**

- IP video input, via data interface on chassis
- Support for Closed Captions pass through

### Full HD Profile License

**SPR/SWO/ABR/fullHD, FAZ 101 0161/97**

**SPR/SWO/ABR/fullHD/R, FAZ 101 0161/103**

- License can be used for any resolution ABR profile
- Up to 3 full HD video transcodes per module, 18 per chassis
- Requires full HD input: HD, MPEG-4/MPEG-2

### Half HD Profile License

**SPR/SWO/ABR/halfHD, FAZ 101 0161/98**

**SPR/SWO/ABR/halfHD/R, FAZ 101 0161/104**

- License for output profiles up to 720 p 25/30
- License can also be used for SD or sub SD profiles
- Up to 12 half HD video transcodes per module, 72 per chassis
- Requires an HD input: HD, MPEG-4/MPEG-2

### SD Profile License

**SPR/SWO/ABR/SD, FAZ 101 0161/99**

**SPR/SWO/ABR/SD/R, FAZ 101 0161/105**

- License for output profiles up to 480p 25/30
- License can also be used for sub SD profiles
- Up to 24 SD video transcodes per module, 144 per chassis
- Any input: HD/SD, MPEG-4/MPEG-2

### Sub SD Profile License

**SPR/SWO/ABR/subSD, FAZ 101 0161/100**

**SPR/SWO/ABR/subSD/R, FAZ 101 0161/106**

- License for output profiles up to 359p 25/30
- Up to 24 SD video transcodes per module, 144 per chassis
- Any input: HD/SD, MPEG-4/MPEG-2

## ERICSSON SPR1200 MULTI-SCREEN STREAM PROCESSOR

### MPEG-1 & MPEG-2 Layer II Audio License

**SPR/SWO/AUD/MP2, FAZ 101 0161/18**

**SPR/SWO/AUD/MP2/R, FAZ 101 0161/26**

- Multiple audio transcodes per video service, depending on system configuration

### AAC Audio License

**SPR/SWO/AUD/AAC, FAZ 101 0161/19**

**SPR/SWO/AUD/AAC/R, FAZ 101 0161/27**

- Multiple audio transcodes per video service, depending on system configuration

### Dolby® Digital (AC-3) Audio License

**SPR/SWO/AUD/AC3, FAZ 101 0161/20**

**SPR/SWO/AUD/AC3/R, FAZ 101 0161/28**

- Multiple audio transcodes per video service, depending on system configuration

### Dolby® Digital Plus (E-AC-3) Audio License

**SPR/SWO/AUD/EAC3, FAZ 101 0161/120**

**SPR/SWO/AUD/EAC3/R, FAZ 101 0161/123**

- Multiple audio transcodes per video service, depending on system configuration

### Dolby® Digital (AC-3) Decode License

**SPR/SWO/AUD/AC3DEC, FAZ 101 0161/95**

**SPR/SWO/AUD/AC3DEC/R, FAZ 101 0161/101**

- Up to 1 audio decode per video service

### Audio Levelling Control License

**SPR/SWO/ALC/C, FAZ 101 0161/111**

**SPR/SWO/ALC/F, FAZ 101 0161/112**

**SPR/SWO/ALC/C/R, FAZ 101 0161/113**

**SPR/SWO/ALC/F/R, FAZ 101 0161/114**

- License audio levelling control on one stereo pair
- First 12 stereo pairs per chassis are charged; remainder per chassis are free

## SPECIFICATIONS

### Media Processor Module

Up to six Media Processor Modules per chassis

### Module Inputs and Outputs

#### Video & Audio

All video and audio services are input and output via transport streams via the data Ethernet ports

#### HD Video Decode

##### Supports Video Resolutions (HD):

1080i x 1920 / 1440 / 1280 @ 25 fps

1080i x 1920 / 1440 / 1280 @ 29.97 fps

720p x 1280 / 960 @ 50 fps

720p x 1280 / 960 @ 59.94 fps

##### Bit-rates (HD):

MPEG-2: MP@HL 0.5 Mbps to 30 Mbps

MPEG-4: HP@L4.0-L4.1 0.5 Mbps to 25 Mbps

#### SD Video Decode

##### Supports Video Resolutions (SD):

576i x 720 / 704 / 640 / 544 / 528 / 480 / 352 @ 25 fps

480i x 720 / 704 / 640 / 544 / 528 / 480 / 352 @ 29.97 fps

##### Bit-rates (SD):

MPEG-2: MP@ML 0.256 Mbps to 15 Mbps

MPEG-4: MP@L3-L4.1 0.256 Mbps to 12 Mbps

#### Audio Decode

MPEG-1 & MPEG-2 Layer II audio (mono, stereo, dual-mono)

Bit-rate: 32-384 Kbps

AAC-LC & HE-AAC (v1 and v2) (stereo, 5.1)

Bit-rate: stereo: 64-192 Kbps (AAC-LC),

32-128 Kbps (HE-AAC)

5.1 Surround Sound: 160-512 Kbps (AAC-LC),

128-192 Kbps (HE-AAC)

Dolby® Digital (AC3)

Bit-rate: 56-640 Kbps (mono, stereo)

224-640 Kbps (5.1)

### Video Encode

CBR rate control

Progressive encoding only

#### Applies to

SPR/SWO/ABR/fullHD, FAZ 101 0161/97

##### Supports Video Resolutions (full HD):

1920 x 1080p @ 25 / 29.97 fps

1280 x 720p @ 50 / 59.94 fps

SPR/SWO/ABR/halfHD, FAZ 101 0161/98

##### Supports Video Resolutions (half HD):

1280 x 720p @ 25 / 29.97 fps

1024 x 576p @ 25 / 29.97 fps

960 x 540p @ 25 / 29.97 fps

##### Bit-rates \* (HD):

full HD: 2.8 Mbps to 25 Mbps

half HD: 0.8 Mbps to 25 Mbps

#### Applies to

SPR/SWO/ABR/SD, FAZ 101 0161/99 &

##### Supports Video Resolutions (SD):

16:9 - 854 x 480p, 704 x 396p, 640 x 360p @ 25 / 29.97 fps

4:3 - 640 x 480p, 544 x 408p, 480 x 360p @ 25 / 29.97 fps

Broadcast - 704 x 480p, 704 x 576p (576p not possible if source is 480i)

SPR/SWO/ABR/subSD, FAZ 101 0161/100

##### Supports Video Resolutions (subSD):

16:9 - 544 x 306p, 480 x 270p, 416 x 234p, 320 x 180p @ 25 / 29.97 fps

4:3 - 400 x 300p, 320 x 240p @ 25 / 29.97 fps

##### Bit-rates \* (SD):

SD: 0.27 Mbps to 20 Mbps

sub SD: 0.1 Mbps to 20 Mbps

\* At full frame rate. Dependant on resolution, profile & level.

### Audio Encode

MPEG-1 & MPEG-2 Layer II audio (mono, stereo, dual-mono)

Bit-rate: 32-384 Kbps

AAC, AAC-LC & HE-AAC (v1 and v2) (stereo, 5.1)

Bit-rate: stereo 64-192 Kbps ((LC),

32-128 Kbps (HE)

5.1 Surround Sound: 160-512 Kbps (LC),

128-192 Kbps (HE)

Dolby® Digital (AC3)

Bit-rate: 56-640 Kbps (mono, stereo),

224-640 Kbps (5.1)

Dolby® Digital Plus (E-AC3)

Bit-rate: 32-56 Kbps (mono)

64-640 Kbps (mono, stereo)

192-640 Kbps (5.1)

Multiple audio transcodes per input video service

### VBI

Closed captioning EIA-608, EIA-708 and SCTE 20

### Output Interfacing

#### Output

4x Electrical Ethernet (10/100/1000BaseT)

#### Management

2x Electrical Ethernet (10/100/1000BaseT)

SNMP v1/v2 for alarm traps

User management via web browser and XML

IP v4

nCompass Control by Ericsson for monitoring alarms

IGMP v1/v2/v3

### Physical and Power

#### Dimensions (H x W x D)

4.45 x 44.20 x 59.69 cm (1.75 x 17.40 x 23.50 inches)

#### Weight

7.3 kg (16 lbs) with a single PSU

8.3 kg (18.3 lbs) with a dual PSU

0.33 kg (0.73 lbs) per module

#### Input Voltage

100 VAC to 240 VAC, 50/60 Hz

#### Power Consumption

Chassis only 40 Watt

MPM 40 Watt

Up to 300W depending on modules fitted

### Environmental Conditions

#### Operating Temperature

-10°C to +50°C (14°F to 122°F)

#### Storage Temperature

-40°C to +85°C (-40°F to 185°F)

#### Relative Operating Humidity

10% to 90% (non-condensing)

### Compliance

CE marked in accordance with EU Low Voltage and EMC Directives

#### EMC Compliance

EN55022, EN55024, AS/NZS3548, EN61000-3-2, EN61000-3-3 and FCC CFR47 Part 15B Class A

#### Safety Compliance

EN60950-1, IEC60950-1, UL60950-1 and NRTL listed