



# ERICSSON RX8200 CONFIGURATION PACKS



## Advanced Modular Receiver

The RX8200 Advanced Modular Receiver is the world's bestselling IRD. Now with DVB-S2X and HEVC upgradeability it is also the most future-proof.

Broadcasters need to deploy receivers for many different tasks in many different operational circumstances. Ericsson's RX8200 receiver offers ultimate operational flexibility by providing capability for decoding of all video formats, all video compression formats and total connectivity for all transmission mediums via a comprehensive choice of options.

The RX8200 offers the ultimate in compression efficiency. RX8200 now provides HEVC decode capability. And for satellite operators RX8200 offers up to 20% bandwidth efficiency gains through full support of the new DVB-S2X international open standard. Combined, these two new technologies offer a step-change in transmission efficiency enabling Operators to dramatically reduce operational costs or free-up bandwidth to launch new revenue generating services.

## PRODUCT OVERVIEW

### Best Efficiency

The RX8200 Advanced Modular Receiver offers ultimate bandwidth efficiency for satellite transmissions by incorporating the option for the new DVB-S2 Extensions (DVB-S2X) standard. DVB-S2X offers up to 20% bit rate efficiency for typical video applications.

### Multi-format Decoding - Including HEVC

As a true multi-format decoder, the RX8200 can offer MPEG-4 AVC 4:2:0 and 4:2:2 High Definition decoding in all industry-standard compression formats - Including HEVC. By using HEVC compression, combined with DVB-S2X (for satellite applications), Operators can benefit from a step-change in transmission efficiency

### Total Connectivity

The RX8200 Advanced Modular Receiver offers the user total connectivity through the capability to provide satellite, IP and ASI transport stream inputs, all within a single unit. With this flexibility the user is confident that their initial receiver investment is capable of adapting to a fast changing industry.

### Highest Quality

The RX8200 Advanced Modular Receiver has the capability to provide the ultimate feature-set of MPEG-4 HD, 4:2:2 10-bit 1080p50/60 allowing broadcasters to achieve the highest possible video quality.

### Lowest Latency

Broadcasters are increasingly demanding lowest latency for contribution and news applications. Ericsson offers the complete low latency suite of tools for the user – whether that be high quality JPEG 2000 decoding for contribution over fiber applications or low latency MPEG-4 4:2:2 and 4:2:0 decoding for satellite applications.

### Why Ericsson

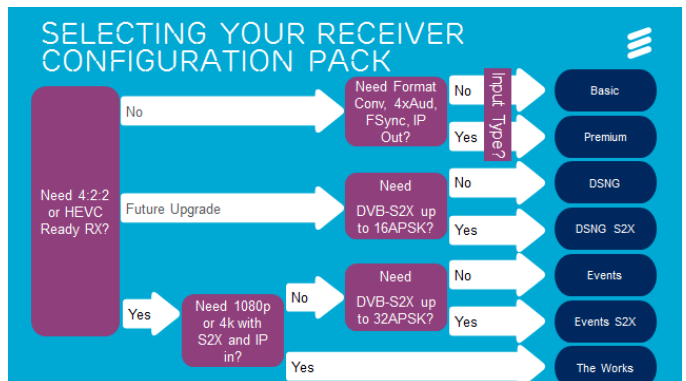
The Ericsson RX8200 Advanced Modular Receiver heads its class as an IRD offering the perfect balance of industry leading capability, flexibility and affordability.

## Configuration Packs

The RX8200 Advanced Modular Receiver is available in Configuration Packs. Each Pack is specifically targeted at different applications and contains all relevant functionality for the intended purpose.



Choosing which RX8200 Configuration Pack is right for your business is simple by using the following flow of questions:



## **BASIC Decoder**

### **RX8200 Configuration Pack**

(RX8200/CP/BASIC/SAT/A, FAZ 101 0113/225)  
 (RX8200/CP/BASIC/OFDM/A, FAZ 101 0113/226)  
 (RX8200/CP/BASIC/IP/A, FAZ 101 0113/227)

Entry level receiver capable of:

- Choice of satellite, OFDM, IP inputs
- MPEG-2 4:2:0 SD & HD decoding
- MPEG-4 4:2:0 SD & HD decoding

#### **Base Chassis with:**

- MPEG-2 4:2:0 SD & HD decoding
- MPEG-4 4:2:0 SD & HD decoding
- SD & HD video output interfaces
- 2x physical audio outputs
- Layer II, Dolby Digital & AAC audio decoding
- ASI output

#### **Satellite Input Option**

- 4x L-band satellite inputs
- DVB-S QPSK and DVB-S2 QPSK, 8PSK demodulation
- Low Symbol Rate Capability

#### **OFDM Input Option**

- VHF/UHF input
- 6MHz, 7MHz, 8MHz input bandwidth
- DVB-T and DVB-T2 demodulation

#### **IP Input Option**

- MPEG transport stream over IP
- 2x 100/1000 BaseT
- SMPTE 2022M ProMPEG FEC

## **PREMIUM Decoder**

### **RX8200 Configuration Pack**

(RX8200/CP/PREM/OFDM/A, FAZ 101 0113/228)  
 (RX8200/CP/PREM/IP/SAT/A, FAZ 101 0113/229)

**As BASIC but adds:**

- Frame sync
- Grade 1 down-conversion
- Up conversion
- Cross conversion
- 4x physical audio out
- IP TS out
- SMPTE 2022M ProMPEG FEC out
- MPE high speed IP data output
- Single service filtering

#### **OFDM Input Option**

- VHF/UHF input
- 6MHz, 7MHz, 8MHz input bandwidth
- DVB-T and DVB-T2 demodulation

#### **Satellite/IP Input Option**

- 4x L-band satellite inputs
- DVB-S QPSK and DVB-S2 QPSK, 8PSK demodulation
- DVB-S2 Low Symbol rate capability
- MPEG transport stream over IP
- 2x 100/1000 BaseT
- SMPTE 2022M ProMPEG FEC

## **DSNG Decoder**

### **RX8200 Configuration Pack**

(RX8200/CP/DSNG/IP/SAT/A, FAZ 101 0113/230)

**As PREMIUM but adds:**

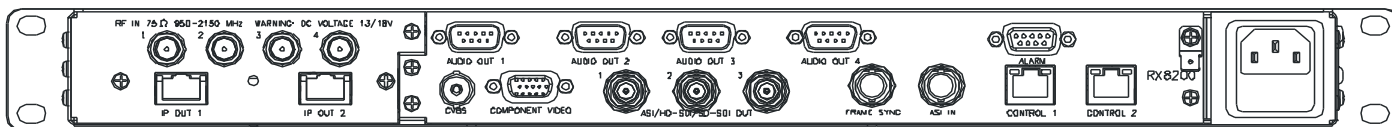
- Dormant HEVC/MPEG-2/4 4:2:2 card - Ready for future enabling by software upgrade
- Low latency decoding
- RAS CA
- RS232 control and data
- DVB-S2 16/32APSK

#### **Satellite/IP Input Option**

- 4x L-band satellite inputs
- DVB-S QPSK and DVB-S2 QPSK, 8PSK demodulation
- Adds DVB-S2 16/32APSK
- DVB-S2 Low Symbol rate capability
- MPEG transport stream over IP
- 2x 100/1000 BaseT
- SMPTE 2022M ProMPEG FEC

<p><b>DSNG S2X Decoder</b>  <b>RX8200 Configuration Pack</b>  (RX8200/CP/DSNG/IP/S2X/A, FAZ 101 0113/231)</p> <p><b>As DSNG but:</b></p> <ul style="list-style-type: none"> <li>• DVB-S2/S2X input up to 16APSK</li> </ul>	<p><b>DVB-S2X Satellite/IP Input Option</b></p> <ul style="list-style-type: none"> <li>• 4x L-band satellite inputs</li> <li>• DVB-S QPSK and DVB-S2 QPSK, 8PSK demodulation</li> <li>• Adds DVB-S2 16/32APSK</li> <li>• DVB-S2 Low Symbol rate capability</li> <li>• Adds DVB-S2X QPSK to 16APSK Capability</li> <li>• MPEG transport stream over IP</li> <li>• 2x 100/1000 BaseT</li> <li>• SMPTE 2022M ProMPEG FEC</li> </ul>
<p><b>EVENTS Decoder</b>  <b>RX8200 Configuration Pack</b>  (RX8200/CP/EVENTS/IP/SAT/A, FAZ 101 0113/232)</p> <p><b>As DSNG but adds:</b></p> <ul style="list-style-type: none"> <li>• MPEG-2 4:2:2 SD/HD decoding</li> <li>• MPEG-4 4:2:2 SD/HD decoding</li> <li>• JPEG 2000 SH/HD Decoding</li> <li>• HEVC 4:2:0 &amp; 4:2:2 Ready</li> <li>• Phase Aligned Audio</li> </ul>	<p><b>Satellite/IP Input Option</b></p> <ul style="list-style-type: none"> <li>• 4x L-band satellite inputs</li> <li>• DVB-S QPSK and DVB-S2 QPSK, 8PSK, 16/32APSK demodulation</li> <li>• DVB-S2 Low Symbol rate capability</li> <li>• MPEG transport stream over IP</li> <li>• 2x 100/1000 BaseT</li> <li>• SMPTE 2022M ProMPEG FEC</li> </ul>
<p><b>EVENTS S2X Decoder</b>  <b>RX8200 Configuration Pack</b>  (RX8200/CP/EVENTS/IP/S2X/A, FAZ 101 0113/233)</p> <p><b>As Events but adds:</b></p> <ul style="list-style-type: none"> <li>• DVB-S2X input up to 32APSK</li> </ul>	<p><b>DVB-S2X Satellite/IP Input Option</b></p> <ul style="list-style-type: none"> <li>• 4x L-band satellite inputs</li> <li>• DVB-S QPSK and DVB-S2 QPSK, 8PSK demodulation</li> <li>• Adds DVB-S2 16/32APSK</li> <li>• DVB-S2 Low Symbol rate capability</li> <li>• Adds DVB-S2X QPSK to 32APSK Capability</li> <li>• MPEG transport stream over IP</li> <li>• 2x 100/1000 BaseT</li> <li>• SMPTE 2022M ProMPEG FEC</li> </ul>
<p><b>THE WORKS Decoder</b>  <b>RX8200 Configuration Pack</b>  (RX8200/CP/WORKS/IP/S2X/A, FAZ 101 0113/234)</p> <p><b>As EVENTS but adds:</b></p> <ul style="list-style-type: none"> <li>• MPEG-4 1080p50/59.94 decoding</li> <li>• Symulsync 3D/4k decoding</li> <li>• Multi-service filtering</li> </ul>	<p><b>DVB-S2X Satellite/IP Input Option</b></p> <ul style="list-style-type: none"> <li>• 4x L-band satellite inputs</li> <li>• DVB-S QPSK and DVB-S2 QPSK, 8PSK demodulation</li> <li>• Adds DVB-S2 16/32APSK</li> <li>• DVB-S2 Low Symbol rate capability</li> <li>• Adds DVB-S2X QPSK to 32APSK Capability</li> <li>• MPEG transport stream over IP</li> <li>• 2x 100/1000 BaseT</li> <li>• SMPTE 2022M ProMPEG FEC</li> </ul>

## SAMPLE CONFIGURATION



Sample configuration with: Satellite input, frame sync, HD video output, IP transport stream output and 2x Audio output modules installed

## SPECIFICATIONS

### INPUT

#### ASI Transport Stream Input

Connector: 1x BNC (F) 75 Ohm

Max. input rate: 208 Mbps

Packet length: 188/204 byte packets

Standard: EN50083-9

#### Satellite Input Options

#### 2nd Generation Satellite Input, Satellite & IP input

(FAZ 101 0113/183, FAZ 101 0113/187)

Connector: 4x F-Type (F), 75 Ohm

Frequency range: 950 MHz to 2150 MHz

Input level: -25 dBm to -65 dBm

Modulation: DVB-S QPSK, DVB-S2 QPSK, 8PSK

Standard: EN300 421, EN302 307

DVB-S Symbol rate: 1 Msyms to 45 Msyms

DVB-S2 Symbol rate: 1 Msyms to 60Msyms on inputs 1 & 2, Max bit rate 170Mbps, 31 Msyms, Max bit rate: 81Mbps on input 3 & 4

FEC DVB-S : 1/2, 2/3, 3/4, 5/6, 7/8

FEC DVB-S2 QPSK: 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10

FEC, DVB-S2 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10

DVB-S2 FEC frame: Short & Normal frames

DVB-S2 Physical layer scrambling

LNB Power: 13V, 18V or off, 22 kHz on/off

#### DVB-S2 16APSK (FAZ 101 0113/29)

Modulation: DVB-S2 16APSK and 32APSK

FEC, DVB-S2 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10

FEC, DVB-S2 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10

Requires FAZ 101 0113/183 or /187 option

#### DVB-S2X Satellite Input

(FAZ 101 0113/207)

Connector: 4x F-Type (F), 75 Ohm

Frequency range: 950 MHz to 2150 MHz

Input level: -25 dBm to -65 dBm nominal (Symbol rate dependent)

Modulation: DVB-S QPSK, DVB-S2 QPSK, 8PSK, 16APSK, DVB-S2X QPSK, 8PSK, 16APSK

Standard: EN300 421, EN302 307-1, EN302 307-2

DVB-S Symbol rate: 1 Msyms to 45 Msyms

DVB-S2 Symbol rate: 1 Msyms to 54Msyms

Max bit rate 170Mbps

DVB-S2X Symbol rate: 54MSyms

DVB-S2 FEC frame: Short & Normal frames

DVB-S2 Physical layer scrambling

LNB Power: 13V, 18V or off, 22 kHz on/off

#### DVB-S2X 32APSK (FAZ 101 0113/206)

Modulation: DVB-S2X 32APSK

Requires FAZ 101 0113/207 option

### IP Input

#### MPEG over Gigabit Ethernet IP Input, Satellite & IP input

(FAZ 101 0113/184, FAZ 101 0113/187, FAZ 101 0113/13, FAZ 101 0113/210)

Connector: 2 x RJ 45

Format: 100/1000BaseT

Max. input rate: 208Mbps

SMPTE 2022M (Pro-MPEG) FEC

### DVB-T/T2 Input Options

#### DVB-T/T2 Input (FAZ 101 0113/70)

Connector: 1x F-Type (F) 75 Ohm

Channel bandwidth: 6, 7, 8MHz

Frequency range: UHF 470 – 862 MHz, VHF 174 – 230 MHz

Input MER level: 6 - 36dB

### Conditional Access

#### Director by Ericsson

Director single service decryption

Director over-air remote control

Director overt fingerprinting

#### DVB Common Interface

Enables support for all major CAM modules

Single service decryption

Service pre-filtering

#### BISS Decryption

Decryption of BISS Mode 1 and E

#### RAS Decryption (FAZ 101 0113/52)

Decryption of Ericsson RAS 1

## SPECIFICATIONS

### VIDEO DECODING OPTIONS

#### 4:2:0 Decoding

##### **MPEG-2 SD Decode**

Profiles: MP@ML

Max video rate: 15 Mbps (MP@ML)

Video format: 480i and 576i 29.97, 25 fps

##### **MPEG-4 AVC SD Decode**

Profiles: MP@L3 - All units

MP@L3.1—Needs MPEG-2 & 4 4:2:2 HW option

Max. video rate: 12 Mbps - All units

17.5 Mbps\* - Needs MPEG-2 & 4 4:2:2 HW option

Video format: 480i and 576i 29.97, 25 fps

##### **HEVC SD Decode (FAZ 101 0113/220)**

HEVC Profiles: MAIN / MAIN10

Sampling: 8-bit and 10-bit

Levels and max. video rate

L3 - 6 Mbps, L3.1 - 10 Mbps

L4 - 30 Mbps, L4.1 - 50 Mbps

Video format: 480i and 576i 29.97, 25 fps

##### **MPEG-2 HD Decode (FAZ 101 0113/41)**

Profiles: MP@HL

Max. video rate: 80 Mbps (MP@HL)

Video format: 1080i at 29.97 and 25 fps, 720p at 59.94 and 50 fps

##### **MPEG-4 AVC HD Decode (FAZ 101 0113/41)**

Profiles: MP@L4, HP@L4 - All units

HP@L4.1 - Needs MPEG-2 & 4 4:2:2 HW option

Max. video rate: 25 Mbps - All units, 62.5Mbps - Needs MPEG-2 & 4 4:2:2 HW option

Video format: 1080i at 29.97 and 25 fps, 720p at 59.94 and 50 fps

##### **HEVC HD Decode (FAZ 101 0113/220)**

HEVC Profiles: MAIN / MAIN10

Sampling: 8-bit and 10-bit

Levels and max. video rate

L4 - 30 Mbps, L4.1 - 50 Mbps

Video format: 1080i at 29.97 and 25 fps, 720p at 59.94 and 50 fps

##### **VBI with 4:2:0 Decoding Modes**

Closed captions, DVB Subtitle burn-in, SD resolution Teletext burn-in

WST, Inverted Teletext, EBU Teletext subtitles and non-subtitles, WSS, VITC, VITC in PES, VPS, Video Index, VANC data-piping, Service name in VANC, monochrome samples, OP47 pass-through

VITS, NABTS, AMOL48, AMOL96, TV Guide

#### 4:2:2 Decoding

##### **MPEG-2 SD 4:2:2 (FAZ 101 0113/59)**

Profile: 422@ML

Max. video rate: 50 Mbps

Video format: 480i and 576i 29.97, 25 fps

##### **MPEG-2 HD 4:2:2 (FAZ 101 0113/181)**

Profiles: 422P@HL

Max. video rate: 90 Mbps

Video format: 1080i at 29.97, 30 and 25 fps, 720p at 59.94, 60 and 50 fps

##### **MPEG-4 AVC SD 4:2:2 (FAZ 101 0113/181)**

MPEG-4 Profile: 422HP@L3

Max. video rate: 50 Mbps

Video format: 480i and 576i 29.97, 25 fps

##### **HEVC SD 4:2:2 (FAZ 101 0113/221)**

HEVC Profile: MAIN 4:2:2:10

Sampling: 8-bit and 10-bit

Levels and max. video rate:

L3 - 6 Mbps, L3.1 - 10 Mbps

L4 - 30 Mbps, L4.1 - 50Mbps

Video format: 480i and 576i 29.97, 25 fps

##### **MPEG-4 AVC HD 4:2:2 Decode (FAZ 101 0113/181)**

MPEG-4 Profiles: HIGH / HIGH10 / HIGH422@L4.2

Sampling: 8-bit and 10-bit

Max. video rate: 50 Mbps CABAC, 85 Mbps CAVLC

Video format: 1080i at 29.97 and 25 fps 720p at 59.94 and 50 fps

##### **HEVC HD 4:2:2 Decode (FAZ 101 0113/221)**

HEVC Profiles: MAIN 4:2:2 10@L4.2

Sampling: 8-bit and 10-bit

Levels and max. video rate

L4 - 30 Mbps, L4.1 - 50 Mbps

Video format: 1080i at 29.97 and 25 fps 720p at 59.94 and 50 fps

##### **MPEG-4 AVC HD 4:2:2 1080p 50/60 decode (FAZ 101 0113/34)**

Profiles: 422HP@L4.2

Max video rate: 85 Mbps CAVLC

Video format: 1080p at 59.94 and 50fps

##### **VBI with 4:2:2 decoding modes**

Closed Captions, VITC, VBI in PIX

∇License key dependent

\* Check availability

#### Audio Options

##### **Balanced Audio Output (FAZ 101 0113/3)**

Connector: 2x 9-Pin D-type

Analog audio: two balanced stereo pairs

Digital audio: two balanced stereo pairs

QTY 1 fitted as standard

QTY 2 can be fitted for 4x stereo pair output - requires RX8200/SWO/4AUD)

##### **Standard with any Video Decode Option:**

2x MPEG-1 Layer-II audio decode

2x Dolby Digital® decode

2x Dolby Digital® Pass-through

2x Dolby® Digital Plus Pass-through

2x Dolby®E pass-through

2x Linear PCM decode

Audio sampling rate: 48 kHz

Decoded audio gain adjustment

##### **Dolby® Digital**

2x Dolby® Digital 5.1 decode and down-mix to 2.0

2x Dolby® Digital 2.0/5.1 pass-through compressed and embedded in (HD)SDI

1x Dolby® Digital 5.1 decode<sup>∇</sup>

##### **Dolby® Digital Plus**

2x Dolby® Digital Plus 2.0/5.1 pass-through compressed and embedded in (HD)SDI

##### **AAC Audio (FAZ 101 0113/21)**

2x 5.1 down-mix to 2.0

2x 2.0 decode

1x 5.1 decode<sup>∇</sup>

##### **Phase Aligned Audio (FAZ 101 0113/49)**

MPEG-1 Layer II audio

2x phase aligned groups of 4x stereo pairs, Phase aligned to enable 5.1 carriage

Requires 4x audio license FAZ 101 0113/20

##### **4x Audio Capability (FAZ 101 0113/216)**

Extends licensed audio decodes to more channels

8x MPEG-1 Layer II audio decode

6x Dolby® Digital 2.0 decode, 5.1 to 2.0 down-mix

4x Dolby® Digital 2.0/5.1 pass-through - compressed and embedded in (HD)SDI

4x Dolby® Digital Plus 2.0/5/1 pass-through - compressed and embedded in (HD)SDI

1x Dolby® Digital 5.1 decode

8x AAC stereo pairs

4x Dolby®E pass-through

4x Linear PCM pass-through

## SPECIFICATIONS

### Video Processing

#### High Quality Format-Conversion (FAZ 101 0113/188)

#### Grade 1 quality down-conversion

Simultaneous Down-conversion (HD to SD): center cut out, manual/AFD controlled

Down-conversion from 1080p 50/60 to 1080i, 720p or SD

#### Up-conversion

Non-simultaneous up-conversion (SD to HD): To 720p or 1080i (4:2:0 modes only)

#### Cross-conversion

Non-simultaneous cross-conversion 720p to 1080i or 1080 to 720p

No frame rate conversion

#### Aspect Ratio Conversion

16:9 to 4:3 center cut ARC in SD modes

#### Frame Synchronization (FAZ 101 0113/33)

Enables Frame Sync

Connector: 1x BNC (F) 75 Ohm

Input signal: Analog SD HSync (black & burst)

### VIDEO AND TS OUTPUT

#### Video Output

#### HD and SD Video Output (FAZ 101 0113/10)

#### Composite Video

Connector: 1x BNC (F) 75 Ohm

Format: PAL / NTSC

#### Video RGB-HD (SVGA)

Connector: 1x 15-pin D-type

Format: RGB H&V/YPrPb (switchable)

#### SDI/HD-SDI/DVB ASI-C (switchable)

Connector: 3x BNC 75 ohms

3 Gbps HD-SDI standard: SMPTE 424M

HD-SDI standard: SMPTE 292M

SD-SDI standard: SMPTE 259M

Embedded Audio: SMPTE 299M (HD)  
SMPTE 272M (SD)

Embedded Audio Channels: up to 8x stereo pairs

ASI standard: EN50083-9

### TS Output

For ASI Out See HD & SD video out options

#### IP Output (FAZ 101 0113/189, FAZ 101 0113/13)

Transport encapsulation into IP

MPTS/IP/UDP/RTP

SPTS/IP/UDP/RTP with single service filtering - CBR mode

IP output VBR mode - Null packets dropped

2x Gigabit Ethernet outputs, 100/1000 auto-sensing

SMPTE 2022M (Pro-MPEG) FEC

Multiple services filtered to 1 outgoing service on ASI and IP TS output

Remap PIDs for the filtered service

Output: CBR on ASI and IP SPTS

MPE based data de-encapsulation

MPE max. bit-rate: 100 Mbps

### Stream Processing Options

#### Multi-Service Filtering (FAZ 101 0113/47)

Filter N incoming services to M outgoing services

Number of services: 24 max as 1x MPTS.

Remap PIDs on a single service

Output: CBR on ASI and IP MPTS

Stream splitting - up to 8 services as IP SPTS

### Data and Control Options

#### RS232 Remote Control and Data (FAZ 101 0113/17)

Remote control connector: 1x 9-pin D-type

RS232 remote control

Ericsson Alteia protocol

RS232 data connector: 1x 9-pin D-type

RS232 asynchronous data

RS232 data rate: Max. 38.4 kbps

### STANDARD FEATURES

#### Features

Program selection for ATSC, DVB and MPEG-only streams

One alarm relay, two relays under SCTE 35 control

#### Control

Front panel keypad and LCD

SNMP control, traps and alarms

Web browser

### Physical and Power

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

442.5 x 545 x 44mm (17.5" x 20.7" x 1.75" approx.)

#### Input Voltage

110 VAC / 240 VAC

#### Power Consumption

100W Max. (depending on options fitted)

#### Cooling

Integrated fan

### Environmental Conditions

#### Operating Temperature

0°C to +50°C (32° to 122°F)

#### Storage Temperature

-20°C to +60°C (-4° to 140°F)

#### Relative Humidity

5% to 95%

### Compliance

CE Marked in accordance with all applicable EU Directives

#### EMC Compliance

EN55022, EN55024, EN61000-3-2, EN61000-3-3, AS/NZS CISPR 22, ICES-003 and FCC CFR47 Part 15B Class A

#### Safety Compliance

EN60950-1, IEC60950-1, UL 60950-1 and CAN/CSA-C22.2 No 60950-1.  
NRTL Listed.