

Installation, Safety and Compliance Information for Ericsson Compression Products

Generic Product Information

REFERENCE GUIDE



Video Processing



MediaFirst Video Processing Custom Hardware 2



Integrated Receiver Decoders



Modulators



ENGLISH (UK) - READ THIS FIRST!

If you do not understand the contents of this manual. **DO NOT OPERATE THIS EQUIPMENT.** Also, translation into any EC official language of this manual can be made available, at your cost.

ITALIANO - LEGGERE QUESTO AVVISO PER PRIMO!

Se non si capisce il contenuto del presente manuale. **NON UTILIZZARE L'APPARECCHIATURA.** È anche disponibile la versione italiana di questo manuale, ma il costo è a carico dell'utente.

SVENSKA - LÄS DETTA FÖRST!

Om Ni inte förstår informationen i denna handbok. **ARBETA DÅ INTE MED DENNA UTRUSTNING.** En översättning till detta språk av denna handbok kan också anskaffas, på Er bekostnad.

NEDERLANDS - LEES DIT EERST!

Als u de inhoud van deze handleiding niet begrijpt. **STEL DEZE APPARATUUR DAN NIET IN WERKING.** U kunt tevens, op eigen kosten, een vertaling van deze handleiding krijgen.

PORTUGUÊS - LEIA O TEXTO ABAIXO ANTES DE MAIS NADA!

Se não compreende o texto deste manual. **NÃO UTILIZE O EQUIPAMENTO.** O utilizador poderá também obter uma tradução do manual para o português à própria custa.

SUOMI - LUE ENNEN KÄYTTÖÄ!

Jos et ymmärrä käsikirjan sisältöä. **ÄLÄ KÄYTTÄ LAITETTA.** Käsikirja voidaan myös suomentaa asiakkaan kustannuksella.

FRANÇAIS - AVANT TOUT, LISEZ CE QUI SUIV!

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DANSK - LÆS DETTE FØRST!

Udstyret må ikke betjenes. **MEDMINDRE DE TIL FULDE FORSTÅR INDHOLDET AF DENNE HÅNDBOG.** Vi kan også for Deres regning levere en dansk oversættelse af denne håndbog.

DEUTSCH - LESEN SIE ZUERST DIESEN HINWEIS!

Sollte Ihnen der Inhalt dieses Handbuchs nicht klar verständlich sein, dann. **BEDIENEN SIE DIESE GERÄTE NICHT!** Eine Übersetzung des Handbuchs in diese Sprache ist gegen Berechnung lieferbar.

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Αν δεν καταλάβετε το περιεχόμενο αυτού του βοηθήματος/εγχειριδίου. **ΜΗΝ ΛΕΙΤΟΥΡΓΗΣΤΕ ΑΥΤΟΝ ΤΟΝ ΕΞΟΠΛΙΣΜΟ.** Επίσης, αυτό το εγχειρίδιο είναι διαθέσιμο σε μετάφραση σε αυτή τη γλώσσα και μπορείτε να το αγοράσετε.

ESPAÑOL - LEA ESTE AVISO PRIMERO!

Si no entiende el contenido de este manual. **NO OPERE ESTE EQUIPO.** Podemos asimismo suministrarle una traducción de este manual al (idioma) previo pago de una cantidad adicional que deberá abonar usted mismo.

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1 Introduction

This compliance guide should be kept in a safe place for reference for the life of the equipment. It is not intended that this guide will be amended by the issue of individual pages. Any revision will be a complete re-issue. Latest version of this Guide can either be downloaded from the Ericsson website <http://archive.ericsson.net/service/internet/picov/get?DocNo=17402-FGB101348&Lang=EN&HighestFree=Y> or obtained by contacting customer services. If passing the equipment on to a third party, also pass on the relevant documentation.

1.1 Revision History

Issues of this Installation, Safety and Compliance Reference Guide are listed below.

Issue	Date	Comments
A	July 2013	Initial release
B	Dec 2013	Updated sections with additional information: Environmental Conditions, DC Wiring and Circuit Protection, Power Ratings and Fusing details.
C	Feb 2014	Section 1.3, Product download links replaced with the new ericsson.com link
D	May 2014	Additions to section 2.5 and 9.
E	Sept 2015	Additions to sections 2.4 and 9.
F	Jan 2016	Product name updates to Sections 9 and 10 AVP 2 Platform Product Photo added to front page.
G	April 2016	Cat 6a cabling added, AVP 2 Platform updated to MediaFirst Video Processing Custom Hardware 2, additional power supply warnings, "trained professional" added to installation requirements.
H	July 2016	Update to CE Marking Directives in Section 3.5 & Cable types in section 2.12
J	June 2017	Update to sections 3.4 & 3.5 to cover Radio Equipment Directive.

1.2 Who Should Use this Guide?

This Guide is written for installers, operators and users of Ericsson products and includes all the required safety and compliance information to ensure the correct installation and safe operation of the equipment.



Warning!

Do not remove the top cover of this equipment. Hazardous voltages are present within this equipment and may be exposed if the cover is removed. Only Ericsson trained and approved service engineers are permitted to service this equipment.



Caution!

Unauthorized maintenance or the use of non-approved replacements may affect the equipment specification and invalidate any warranties.

1.3

What Equipment is Covered by this Guide?

This Guide covers all the latest Ericsson Television compression hardware products and provides the generic installation, safety and compliance information applicable to all products as well as some product specific information where applicable.

Note: Some legacy products may be supplied with a reference guide where the safety and compliance information is combined with the operating instructions.

Detailed information on the configuration and operation of the products is provided in the applicable Product Reference Guide.

Product Guide downloads and additional information is available for all Product Families:

<http://www.ericsson.com/ourportfolio/products/television-and-video>

2 Installing the Equipment

2.1 Read This First!

2.1.1 Handling

The equipment must be handled and installed carefully and thoughtfully to prevent safety hazards and damage.

2.1.2 Installing the Equipment

This equipment is intended to be professionally installed. Ensure the personnel designated to fit the unit is a trained professional engineer with appropriate skills and knowledge. If in any doubt, contact Ericsson Customer Services.

Customer Services

Europe, Middle East and Africa	Tel: +44 (0) 23 8048 4455 Fax: +44 (0) 23 8048 4467 Email: tvsupportemea@ericsson.com	
Americas	Tel: +888 671 1268 Tel: +678 812 6255 Fax: +678 812 6263 Email: tvsupportamericas@ericsson.com	US and Canada International
Asia	Tel: +852 2590 3820 Fax: +852 2590 9550 Email: tvsupportapac@ericsson.com	Hong Kong Hong Kong
Australia and New Zealand	Tel: +61 (0) 2 9111 4080 Fax: +61 (0) 2 9111 4949 Email: tvsupportanz@ericsson.com	
Internet Address	www.ericsson.com	

Installation of the product should follow these instructions, and should only use installation accessories recommended by the manufacturers. When rack mounted, this equipment must have shelf supports as well as being fixed at the front panel.

Do not use this product as a support for any other equipment.

2.1.3 Site Requirements

2.1.3.1 AC Mains Input

Ericsson products are fitted with power supplies suitable for all worldwide mains supply voltages (100 - 240 V AC). Refer to *Section 9 - Power Ratings and Fusing* for details of all product ratings.

2.1.3.2 DC Input

Ericsson products with DC power are designed for a nominal -48 V DC input. Refer to *Section 9 - Power Ratings and Fusing* for details of all product ratings.

2.1.3.3 Environmental Conditions

Ericsson products are intended for use in non-hostile environments, (i.e. designed for indoor use only. The product is not fitted with protection against dust or water ingress).

Ericsson products are tested and safety certified for the ratings given below; however some products may be given a different recommended operational specification. Refer to the relevant product reference guide for details.

Operational	Specification
Temperature	0°C to +50°C (14°F to 122°F) ambient with free air-flow. It may require a 10 minute warm-up period before all clocks are within specification if the ambient temperature is less than 0°C
Humidity	0% to 90% (non-condensing)
Cooling Requirements	Cool air input from left side of unit, exhaust from right side of unit.
Handling Movement	Fixed (non-mobile) use only

Transportation (Package)	
Temperature	-40°C to +70°C (-40°F to +158°F)
Humidity	0% to 90% (non-condensing)
Storage	
Temperature	-25°C to +70°C (-13°F to +158°F)
Humidity	0% to 90% (non-condensing)



Only used at altitude not exceeding 2000m.



Only used in not-tropical climate regions.

2.1.3.4 Lightning Protection

Where appropriate, ensure this product has an adequate level of lightning protection. Alternatively, during a lightning storm or when it is left unattended and unused for long periods of time, unplug it from the supply outlet and disconnect the output and input equipment. This prevents damage to the product due to lightning and power line surges.



Warning!

If the product has been subject to a lightning strike or power surge which has stopped it working, disconnect the power immediately. Do not re-apply power until it has been checked for safety. If in doubt, contact Ericsson Customer Services.

2.2 Preliminary Checks

2.2.1 Mechanical Inspection

When taking delivery of a unit check the equipment items delivered against the enclosed delivery note. Inspect the equipment for damage in transit. If in doubt, contact Ericsson Customer Services, (refer to *Preliminary Pages in the relevant Product Reference Guide*).

Note: Do not remove the top covers of this equipment as doing so may invalidate any warranties, cause a safety hazard and/or affect the EMC performance. It may also invalidate any safety tests. Check with Ericsson Customer Services beforehand.

2.2.2 Moving the Equipment Safely



Do not place this product on an unstable cart, stand, bracket, or table. The product may fall, causing serious injury and serious damage to the product.

An product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn. Do not move or carry the equipment whilst it is still connected to the supply or other leads, is live, or is in operation.

In some circumstances the unit might be awkward to lift. In which case, do not attempt to lift or move it without proper assistance or equipment. If in doubt, seek assistance.

2.3 Installing the Equipment

Additional product specific fixing and ventilation information may be provided in the applicable Product Reference Guide.

2.3.1 Fixing

The equipment is designed for fixed use only and has been shipped with fixing brackets suitable for a standard 19-inch rack. When installed in a rack, it should be secured using the fixing brackets. In addition, support shelves must be used to reduce the weight on the brackets. Ensure it is firmly and safely located and it has an adequate flow of free-air.

Mount the equipment on chassis supports and affix to the rack by means of an M6 x 18 mm panhead screw in each corner.

A freestanding unit should be installed on a secure horizontal surface where it is unlikely to be knocked or its connectors and leads disturbed.

2.3.2 Ventilation

2.3.2.1 Openings in the Covers

Openings in the units and cooling fans, are provided for ventilation. They ensure reliable operation of the product and protect it from overheating. The openings for fans and ventilation must not be blocked or covered.

2.3.2.2 Care in Positioning



Cautions!

The fans contained within this unit are not fitted with a dust/insect filter. Pay attention to the environment in which it is to be used.

Do not install units so that the air intake of one aligns with the outlet on another. Provide baffles and adequate spacing.

The equipment should never be placed near or over a radiator or other source of heat. It should not be placed in a built-in installation such as a rack unless proper ventilation is provided and the instructions have been adhered to.

Allow at least 40 mm free air-space at the front, back and on each side of the equipment to ensure adequate cooling. Racks containing stacked equipment may need to be forced air-cooled to reduce the ambient temperature within the rack.

2.3.2.3 Protection From Moisture

Do not install this equipment in areas of high humidity or where there is a danger of water ingress.

2.3.3 Installing Cables - Safety

Power supply cables should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cables at plugs, socket outlets, and the point where they exit from the appliance.



Warning!

Do not run AC power cables in the same duct as signal leads. Do not move or install equipment whilst it is still attached to the mains supply. Ensure safety and ESD precautions are observed while connecting equipment.

2.4 AC Power Supply

Refer to *Section 9 – Power Ratings and Fusing* for details of your products AC Power specification.



Warnings!

Ericsson Television products should only be operated from the type of power source indicated on the rating label.

Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

Although some Ericsson Television products are fitted with an AC power supply switch, to fully disconnect the power supply the appliance coupler must be removed. The appliance coupler is used as the disconnect device for this product and should therefore be accessible. Failure to isolate the equipment properly may cause a safety hazard.

For products with dual power supplies, both power sources must be fully disconnected to isolate the product from the supply.

Ericsson Television equipment is designed for connection to a polarized mains supply source and is only provided with protection in the live line. If the equipment is connected to a supply where polarity may be reversed or a reversible plug is fitted to the mains lead double pole protection must be provided in the building installation.

2.4.1 IT Power Systems

Ericsson Television products covered by this guide are designed and approved for connection to IT power systems.

2.4.2 AC Supply Variants

Ericsson products may be fitted with one of the supply configurations shown below.



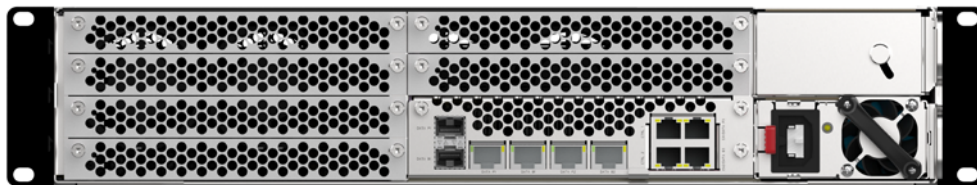
Single AC PSU



Dual AC PSU



Compact Dual AC PSU



*2U Hot swap power supplies (input connector style either IEC60320 C14, C16 or C20)**



Warnings!

The appropriate mains leads are supplied with the product however if alternatives are required they must comply with requirements specified in section 2.4.3 below.




*Certain 2U products use identical footprint hot-swap power supplies with different power characteristics. Care should be taken not to mix power supplies of different ratings.

*Some power supplies such as the DS1600 have a lower power output rating at low input voltage (eg: 110 V AC). Care should be taken to ensure that product configurations do not exceed these rating as this may cause the equipment to shut down unexpectedly.

Equipment with dual power supplies should not be connected such that each input is on a separate phase of the mains supply

2.4.3 AC Power Supply Cord

A mains supply cord is supplied with this product. It is fitted with a molded plug suitable for the region specified at the time of ordering. Please check that it is suitable for the country in which the product is to be used.

Mains Power Supply Cords			
Inlet Type	Plug	Cable	Appliance Coupler
 C13 / C14	125 V / 250 V, 10 A	Minimum 0.75mm ² / 18AWG	125 V / 250 V, 10 A, IEC 60320 C13
 C15 /C16	125 V / 250 V, 12 A	Minimum 1.5mm ² / 16AWG	125 V / 250 V, 12 A, IEC 60320 C15
 C19 / C20	125 V / 250 V, 12 A	Minimum 1.5mm ² / 16AWG	125 V / 250 V, 12 A, IEC 60320 C19

2.4.4 Connecting the Equipment to the AC Power Supply

1. Ensure the power supply is isolated and switched off.
2. Ensure the correct fuse type and rating has been fitted to both the equipment and the power cable.
3. Connect the lead to the product input connector and then to the power supply.
4. Switch on the power.

2.4.5 Connection to line to line mains supplies

Where the supply connection used is line to line rather than line to neutral (eg: 208 V supplies used in North America) suitable double pole protection, as detailed below, must be provided in the building installation to provide the appropriate short circuit and overload protection.

The following double pole circuit breaker values are recommended:-

Product Current Rating	Recommended Double Pole Circuit Breaker
Up to 6 A	10 A
6 A to 10 A	16 A
10 A to 16 A	20 A

2.5 DC Power Supply



Warnings!

This product should be operated only from the type of power source indicated on the rating label. If you are not sure of the type of power supply to your business, consult a qualified electrical engineer.

Reinforced insulation is required between the AC power source and the DC supply to this equipment.

This equipment is not intended for direct connection to centralized DC power systems in the USA or Canada.

This equipment is Class 1 and must have a protective earth.

For products with dual power supplies, both power sources must be fully disconnected to isolate the product from the supply.

2.5.1 DC Power Supply Variants

Ericsson products may be fitted with one of three DC power supply variants: a Single DC PSU, Dual DC PSU or Compact Dual DC PSU; examples are shown below.



Single / Dual DC connector or terminals

Compact Dual input

2.5.2 DC Supply Wiring and Circuit Protection

For wiring DC power the following minimum wire sizes and circuit breakers ratings to protect the wiring are recommended.

Product Current Rating	Recommended Wire Gauge*	Recommended Circuit Breaker
<10 A	1.0mm ² (17AWG)	16 A
10-16 A	1.5mm ² (14AWG)	20 A
16-25 A	4.0mm ² (10AWG)	32 A

*This may need to be increased for longer cable runs.

2.5.3 Location of the DC Input Connection

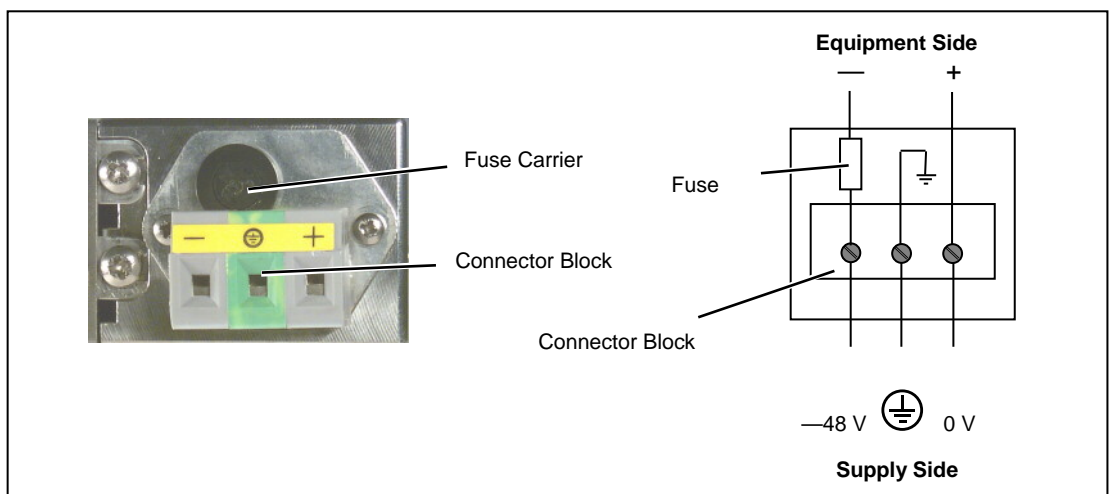
The supply is located at the right-hand rear of the equipment and will comprise either a connector block for direct wiring of the supply or a polarized connector. Both types are described below:



Warning!

The -48 V DC unit is not fitted with an ON/OFF switch. Ensure that the supply has a suitable means of isolation that is easily accessible. Failure to isolate the equipment properly may cause a safety hazard. The equipment should be isolated from the power source before making or breaking DC connections.

2.5.4 Connector Block

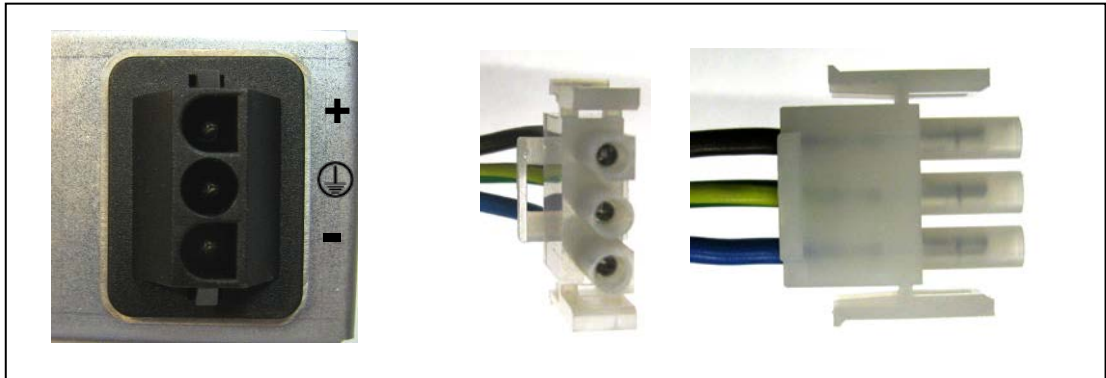


Connector Block for -48 V DC Input

In the connector block, shown above, the equipment fuse is held in an integral fuse carrier at the DC power inlet at the rear of the unit. See *Annex A* for DC fusing information on your product.

Note: It is recommended that a suitable bootlace ferrule or similar is used to terminate the wires prior to attaching them to the wiring terminals.

2.5.5 Polarized Connector



Connector for -48 V DC Input (Without Fuse)

2.5.5.1 DC Connector Details (for polarized connector)

For connection to the –48 V input connector the following parts from AMP or Molex should be used:

AMP Universal MATE-N-LOK
 Housing: AMP no. 1-480700-0
 Female terminal (3 needed per housing): AMP no. 926901-1

Molex MLX
 Housing: Molex no. 50-84-1030
 Female terminal (3 needed per housing): Molex no. 02-08-1002

2.5.5.2 Connection Cable Color Coding

The DC input cable supplied with the product is color coded in accordance with the following.

DC Connector Wire Colors

Connection	Wire Color Designation
Earth	Green-and-yellow
–48 V	Blue
0 V	Brown

2.5.6 Connecting the Unit to a DC Power Supply

Connect to the local DC power supply as follows.

1. Ensure the local DC supply is isolated.
2. Ensure circuit protection of a suitable value (e.g. a circuit breaker) is fitted to the product supply wiring.

3. Connect the DC lead to the unit input terminals / connector and then to the local DC power supply.
4. Switch on the DC power supply.

2.6 Units with Both AC and DC Power Supply

Some products are available with a combination of separate AC and DC power inputs. Connection to the supplies should be made in accordance with appropriate instructions above.

2.7 Product Fusing

Many Ericsson products are fitted with a replaceable fuse for additional protection.



Warning to Service Personnel!

The power supplies within the equipment may also contain additional single or double pole fusing.

2.7.1 Fuse Replacement

Fuses are held in integral fuse carriers at the AC or DC power inlets / terminals at the rear panel.

Refer to *Section 9 – Power Rating and Fusing* for details of the specific fusing requirements for your product.

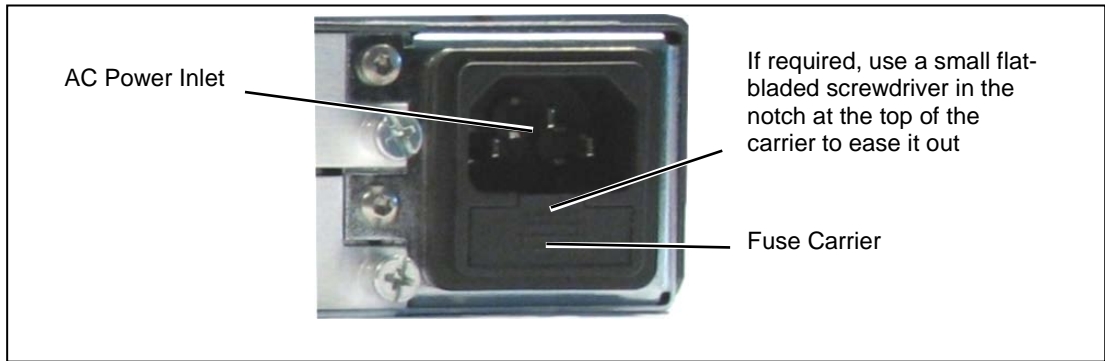
Note: Not all products are fitted with a replaceable fuse.



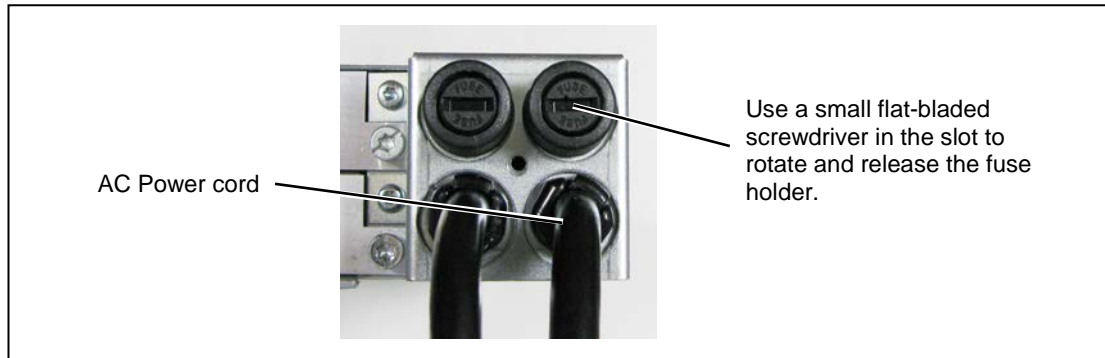
Warnings!

Before replacing the rear panel fuses, disconnect the unit from the supply. Failure to do this may expose hazardous voltages.

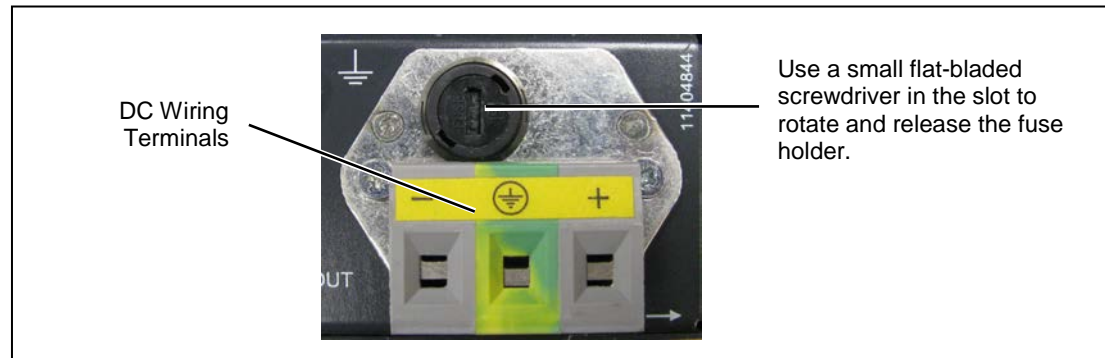
When replacing the power input fuses, always ensure that fuses of the correct type and rating are fitted. Failure to do so results in inadequate protection.



AC Power Inlet – Fuse Carrier



AC Power Cord – Fuse Holder



DC Fuse Holder

2.8 Power Switch



Warnings!

Some Ericsson products are fitted with a power switch on the front panel for powering the unit on and off.

This switch does not fully isolate the product from the mains power supply. Disconnect the power cord to isolate the unit.



Front Panel Power Switch

2.9 Protective Earth/Technical Earth



Warnings!

This unit must be correctly earthed through the supply connection; if the local mains supply does not have an earth conductor do not connect the unit. Contact Ericsson Customer Services for advice.

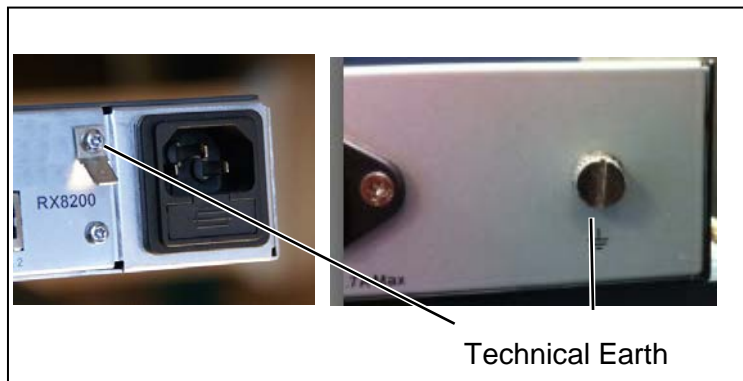
The terminal marked \perp at the rear panel is a Technical Earth. Its use is recommended. This is NOT a protective earth for electric shock protection. The terminal is provided to:

1. Ensure all equipment chassis fixed within a rack are at the same technical earth potential.
2. Eliminate the migration of stray charges when connecting between equipment.

To make the connection, connect a wire between the Technical Earth terminal and a suitable point on the rack.

The Technical Earth provides a suitable connection between the equipment and the installation to give a low impedance path at normal operating frequencies.

Examples of Technical Earth Connections are shown below:



2.10 Signal Connections

Details of signal connections are provided in the product specific reference guide however please read the following cautions



Caution!

It is strongly recommended that the terminal marked \perp at the rear panel of the equipment is connected to a site Technical Earth before any external connections are made and the equipment is powered. This limits the migration of stray charges.

2.10.1 Mini USB Interface

Some Ericsson Television products are provided with a mini USB interface on the front panel. This interface is only for factory or service use and is not for connection of additional equipment or accessory (for example, a scanner, mouse, keyboard, DVD drive, CD ROM drive or joystick).

2.11 DC Power Output

Cautions!

Some Ericsson products provide DC power via an active L-band input connector to drive an LNB. Do not connect equipment other than an LNB to this connector. Failure to do this may result in damage to the external equipment. The maximum output current available on this connector is 350mA.

The F-type connector is not suitable for repeated connection and disconnection. When intended for use in this way, fit a sacrificial connector and connect to it.

2.12 Cable Types

The signal cable types (or similar) in the table below are those recommended by Ericsson in order to maintain product EMC compliance.

Suitable Signal Cable Types

Signal Type	Connector	Cable
Ethernet (1G data)	RJ-45	CAT 5E S/FTP Patch Cable As per ANSI/TIA-568-C.2. and ISO/IEC 11801 standards
	RJ-45	Cat 6 S/FTP Patch Cable As per ANSI/TIA-568-C.2. and ISO/IEC 11801 standards
Ethernet (10G data)	SFP+ Optical	As per ANSI/TIA-568-C.3., TIA 492AAAA/B/C/D, and ISO/IEC 11801 standards
	SFP+ DirectAttach	Active twin-ax / optical cable assembly up to 15 m. As per SFF-8431 specification
HD-SDI In (Digital Video Input)	BNC	Belden 1694A
SDI In (Digital Video Input)	BNC	Belden 1694A (or) Canford Audio BBC 1/3 PSF (type 2 video cable)
Digital Audio	D-Type	Canford Audio Cable DST 110 Ω
Analogue Audio	D-Type	Canford Audio Cable DST 110 Ω
Ext Sync Frame Sync H-Sync	BNC	Belden 1694A (or) Canford Audio BBC 1/3 PSF
ASI Output	BNC	Belden 1694A (or) Canford Audio BBC 1/3 PSF
G.703 Transceiver	BNC	Belden 1694A (or) Canford Audio BBC 1/3 PSF
Satellite Modulator IF Output (75 Ω)	BNC	Belden 1694A (or) Canford Audio BBC 1/3 PSF
Satellite Modulator L-Band In/Main out	SMA	Belden RG-223
Satellite Modulator L- Band Out Monitor	F-Type (75 Ω)	Belden 1694A
Alarm relay and RS232/RS422	D-type	Belden 8162 CM 2PR24 shielded



Signal Type	Connector	Cable
CVBS	BNC	Belden 1694A (or) Canford Audio BBC 1/3 PSF
Component video (RX8200)	D-Type	Screened low voltage computer cable, 28AWG 30V
RF Out (EQ8096)	F-Type (75Ω)	Belden 1694A
RF input (Receivers)	F-Type (75Ω)	Belden 1694A

3 Compliance

3.1 Safety

This equipment has been designed and tested to meet the requirements of the following:

EN 60950-1	European	Information technology equipment - Safety.
IEC 60950-1	International	Information technology equipment - Safety.
UL 60950-1	USA	Information technology equipment - Safety.

3.2 EMC

The equipment has been designed and tested to meet the following:

EN 55022 and CISPR22	European International	Emission Standard Limits and methods of measurement of radio frequency interference characteristics of information technology equipment - Class A.
EN 61000-3-2 ¹	European	Electromagnetic Compatibility (EMC), Part 3 Limits; Section 2. Limits for harmonic current emissions (equipment input current \leq 16 A per phase).
EN 61000-3-3 ¹	European	Electromagnetic Compatibility (EMC), Part 3. Limits; Section 3. Limitation of voltage fluctuations and flicker in low voltage supply systems for equipment with rated current \leq 16 A.
EN 55024	European	Information technology equipment - Immunity characteristics - Limits and methods of measurement.
FCC	USA	Conducted and radiated emission limits for a Class A digital device, pursuant to the Code of Federal Regulations (CFR) Title 47-Telecommunications, Part 15: Radio frequency devices, subpart B - Unintentional Radiators.

¹ Applies only to models of the Product using AC power sources.

3.3 EMC Compliance Statements

3.3.1 EN 55022 / CISPR 22

This is a Class A product. In a domestic environment this product may cause radio interference in which case the User may be required to take adequate measures.

3.3.2 FCC

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the Reference Guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the User will be required to correct the interference at ones own expense.

3.3.3 RCM Mark



The RCM mark is affixed to denote compliance with the Australian Radio communications (Compliance and Labeling – Incidental Emissions) Notice made under s.182 of Radio communications Act 1992.

3.4 Radio Equipment Directive

If certain Option Modules (broadcast receiver inputs) are fitted, the equipment stated in the declarations below comes within the scope of the Radio Equipment Directive, 2014/53/EU.

Herby, Ericsson Television declares that the radio equipment (1U series 10, RX8300, 1U Series 11, RX9500 and 1U Series 12, RX8200, when configured as a broadcast receiver) is in compliance with Directive 2014/53/EU.

The full text of the EU declarations of conformity is available at the following internet address:

RX8200:

<http://archive.ericsson.net/service/internet/picov/get?DocNo=1/17402-FGB101348&Lang=EN&HighestFree=Y>

RX8300:

<http://archive.ericsson.net/service/internet/picov/get?DocNo=2/17402-FGB101348&Lang=EN&HighestFree=Y>

RX9500:

<http://archive.ericsson.net/service/internet/picov/get?DocNo=3/17402-FGB101348&Lang=EN&HighestFree=Y>

3.5 CE Marking



The CE mark is affixed to indicate compliance with the following directives:

Low Voltage Directive (LVD): Directive 2014/35/EC on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits.

Electromagnetic Compatibility (EMC) Directive: Directive 2014/30/EU on the harmonisation of the laws of the Member States relating to electromagnetic

compatibility.

Radio Equipment Directive (RED):

(If the product is configured as a broadcast receiver).

Directive 2014/53/EU of 16 April 2014 on the harmonization of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC

Restriction of Hazardous Substances (RoHS) Directive: Directive 2011/65/EU of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment

4 Equipment Packaging

4.1 Packaging Statement

The Stratocell® or Ethafoam 220® polyethylene foam inserts can be easily recycled with other low density polyethylene (LDPE) materials

4.2 Packaging Markings

The symbols printed on the outer carton are described below:



Handle with care.



This way up.



Fragile.



Protect from moisture.



Indicates compliance with applicable EU directives.



Indicates compliance for Australia



Defines country of origin.



The packaging is reusable per GB 18455-2001.



This symbol guarantees that packaging with this symbol is recyclable and will be accepted by cardboard recyclers.



Recyclable per GB 18455-2001.

5 Materials

5.1 Overview

Ericsson products are designed and manufactured in keeping with good environmental practice. Our component and materials selection policy prohibits the use of a range of potentially hazardous materials. In addition, we comply with relevant environmental legislation.

5.2 For the European Union

We comply with the EU RoHS Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment. We also comply with the WEEE and REACH Directives.

5.3 For China

For product sold into China after 1st March 2007, we comply with the “Administrative Measure on the Control of Pollution by Electronic Information Products”. In the first stage of this legislation, content of six hazardous materials has to be declared together with a statement of the “Environmentally Friendly Use Period (EFUP)”: the time the product can be used in normal service life without leaking the hazardous materials. Ericsson expects the normal use environment to be in an equipment room at controlled temperatures (around 22°C) with moderate humidity (around 60%) and clean air, near sea level, not subject to vibration or shock.

Where Ericsson product contains potentially hazardous materials, this is indicated on the product by the appropriate symbol containing the EFUP. For Ericsson products, the hazardous material content is limited to lead (Pb) in some solders. This is extremely stable in normal use and the EFUP is taken as 50 years, by comparison with the EFUP given for Digital Exchange/Switching Platform in equipment in Appendix A of “General Rule of Environment-Friendly Use Period of Electronic Information Products”. This is indicated by the product marking:



It is assumed that while the product is in normal use, any batteries associated with real-time clocks or battery-backed RAM will be replaced at the regular intervals.

The EFUP relates only to the environmental impact of the product in normal use, it does not imply that the product will continue to be supported for 50 years.

6 Disposal of this Equipment

6.1 General

Dispose of this equipment safely at the end of its life. Local codes and/or environmental restrictions may affect its disposal. Regulations, policies and/or environmental restrictions differ throughout the world. Contact your local jurisdiction or local authority for specific advice on disposal.

6.2 For the European Union



"This product is subject to the EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE) and should not be disposed of as unsorted municipal waste."

7 Recycling

Ericsson Recycling has a process facility that enables customers to return Old and End-of-Life Products for recycling if it is required.

Ericsson provides assistance to customers and recyclers through our Ericsson Recycling eBusiness Portal.

This can be reached at: <https://ebusiness.ericsson.net/>.

To gain access to the Recycling site, you must be set up with a unique login and password.

To request the login, please contact sa.media.communications@ericsson.com, and include the information below:

- First/Last name
- Password request (6 numbers/characters). If you do not include this information one will be created for you.
- Phone
- Location (Country)
- Company
- Work Area (select one of the below)
 - Executive Management
 - Marketing and Sales
 - Planning/Engineering
 - Procurement/Supply
 - Project & Programme
 - Implementation
 - Operations and Maintenance
 - R&D
 - Other

8 Lithium Batteries

Ericsson equipment may use a single Lithium battery to allow an internal real-time clock to continue operating during periods when the unit is powered down. This cell is not a USA Environmental Protection Agency listed hazardous waste. It is fully encapsulated and should not be tampered with.

9 Power Ratings and Fusing



Warning!

The information in the table below is provided for reference. To ensure the correct fuse type and rating is fitted refer to the product rating label.

Model	Type	Group	Electrical Ratings*			Fusing**
			Voltage	Frequency	Current	
RX82xx	Receivers / Transcoders	1U Series 12	100-240 V (90-254 V)	50-60 Hz (47-63 Hz)	1.8 A - 0.8 A	2 A 250 V T HBC
RX83xx	Receivers / Decryptors	1U Series 10	100-240 V (90-254 V)	50-60 Hz (47-63 Hz)	1.0 A	2 A 250 V T HBC
RX8305	Receiver	RX8305	100-240 V (90-254 V)	50-60 Hz (47-63 Hz)	0.7 A	No fuse fitted
RX9500	Bulk Descrambler	1U Series 11	100-240 V (90-254 V)	50-60 Hz (47-63 Hz)	4.0 A - 2.0 A 4.5 A - 2.0 A	5 A 250 V T HBC
Video Processor Contribution Encoder Voyager II AVP1000 AVP2000 AVP3000 AVP4000 SPR1100 SPR1200		1U Series 11	100-240 V (90-254 V)	50-60 Hz (47-63 Hz)	4.0 A - 2.0 A 4.5 A - 2.0 A	5 A 250 V T HBC
			-48 V DC (-40 to -60 V)	-	9.0 A	No fuse fitted
AVP4000/BAS/1AC/ED (<i>Custom configured unit</i>)		1U Series 11	100-240 V (90-254 V)	50-60 Hz (47-63 Hz)	7.0 A – 3.0 A	10 A 250 V T HBC
MX84xx EQ80xx	Multiplexers EdgeQAM	2U Series 2	100-240 V (90-254 V)	50-60 Hz (47-63 Hz)	4.5 A – 2.5 A	5 A 250 V T HBC
			-48 V DC (-40 to -60 V)	-	9.0 A	10 A 250 V T HBC (where fitted)
MediaFirst Video Processing Custom Hardware 2	Stream Processor	2U Series 4 (DS1200 PSU)	100-240 V (90-254 V)	50-60 Hz (47-63 Hz)	12-6 A	No fuse fitted
			-48 V DC (-40 to -60 V)	-	25 A (max)	No fuse fitted
		2U Series 4 (DS1100 PSU)	100-130 V 200-240 V	50/60 Hz	12 A (max) 6 A (max)	No fuse fitted
		2U Series 4 (DS1600 PSU)	100-130 V 200-240 V	50/60 Hz	9.0 A (max) 9.0 A (max)	No fuse fitted

* Operational tolerance values shown in parenthesis	
** All fuses must be one of the following types:-	
Bussmann S505 or Littelfuse 215	5x20 mm time delay (T) 1500 A breaking capacity (HBC) IEC/EN 60127-2 Sheet 5

9.1 DC Power Output

Certain Ericsson products and options provide DC power via an active L-band input connector to drive an LNB (see individual product manuals). The maximum output current available on these connectors is 350mA.

10 Physical Properties

Product	Height	Width (inc. fixings)	Depth (inc. connectors)	Rack Mounting	Weight (depending on configuration)
RX82xx	43.6 mm	482 mm	530 mm	1U x 19-inch	5.0kg max
RX83xx	43.6 mm	482 mm	430 mm	1U x 19-inch	5.0kg max
RX8305	43.6 mm	482 mm	395 mm	1U x 19-inch	5.0kg max
RX9500	43.6 mm	482 mm	550 mm	1U x 19-inch	7.5kg max
AVP1000 AVP2000 AVP3000 AVP4000 Video Processor Contribution Encoder Voyager II SPR1100 SPR1200	43.6 mm	482 mm	550 mm	1U x 19-inch	7.5kg max
MediaFirst Video Processing Custom Hardware 2	87.2 mm	482 mm	624 mm	2U x 19 inch	15kg max
MX84xx EQ80xx	88.10 mm	483 mm	543 mm	2U x 19-inch	15kg max

