



ERICSSON RX9500



Bulk Descrambler

Ericsson's RX9500 Bulk Descrambler provides Cable, IPTV, and other Direct to Home operators with the capability to efficiently turn-around encrypted and free to air content from satellite platforms. The RX9500 allows operators to demodulate and descramble 10s or 100s of services from multiple satellite transponders within a high density, low rack unit occupancy solution.

The RX9500 forms part of Ericsson's Multi-Platform Headend Solution, interfacing seamlessly with Ericsson's encoders and transcoders. The RX9500 Bulk Descrambler is simple to set up and configure offering the benefit of a single management, control and monitoring solution for the complete turn-around system through Ericsson's nCompass Control platform.

PRODUCT OVERVIEW

Channel Density

The RX9500 Bulk Descrambler allows operators to turn-around 10s or hundreds of satellite delivered services within a high density, low rack occupancy solution. The RX9500 can be configured to process up to 6 satellite multiplexes of scrambled or free to air content.

Common Interface Descrambling

The RX9500 Bulk Descrambler is able to descramble services via DVB Common Interface modules ensuring that all frequently used CA systems can be addressed. The RX9500 allows two CAMs to be used per satellite multiplex—ensuring that a high density of services can be descrambled and allows for multiple CA systems on a transponder.

Simple Architecture

The RX9500 Bulk Descrambler exemplifies the benefits of a simple architecture. Each satellite multiplex is processed as siloed modules without dependency on other inputs. Each descrambled or FTA channel is output as an easy to manage single program transport stream on IP interfaces allowing the down-stream equipment to effectively process the services.

One System, One Management Platform

Through Ericsson's Multi-Platform Headend Solution operators can deploy a complete content turn-around solution—where each element can seamlessly interface with the other elements; all monitored and controlled by nCompass Control as a single overarching control platform.

Why Ericsson

The Ericsson RX9500 Bulk Descrambler provides all the necessary elements to acquire channel content for a DTH turn-around platform. More importantly the RX9500 forms part of a single, fully integrated, managed end-to-end system.

BASE UNIT FEATURES

RX9500 – Bulk Descrambler Chassis

(RX9500/BAS/1AC)

Base Chassis Functionality Includes:

- 6x slot, single PSU chassis
- 2x Ethernet control ports
- 2x GigE Ethernet IP Transport Stream outputs
- Web browser control and SNMP monitoring
- Integration with nCompass Control

Optional Features Include:

- Up to 6 satellite input/descrambling cards providing a scalable and service dense solution
- DVB-S2 demodulation capability
- DVB Common Interface CA descrambling
- FTA service turn-around

HARDWARE OPTIONS

The RX9500 Bulk Descrambler allows operators to equip and scale their unit for the density they require by fitting up to 6 satellite input/descrambler cards.

Satellite input Common Interface descrambling card (RX9500/HWO/SAT/CI)

- 1x satellite input
- DVB-S, DVB-S2 capable
- 2x DVB Common Interface Conditional Access Module slots
- Up to 6 cards per chassis

SOFTWARE OPTIONS

Input Options

The RX89500 Bulk Descrambler is enabled for DVB-S reception as standard. The unit can also be entitled to support the DVB-S2 satellite transmission standard.

DVB-S2 QPSK License (RX9500/SWO/DVBS2/QPSK)

- Adds DVB-S2 QPSK capability to DVB-S2 satellite input card
- One licence per satellite card as required

DVB-S2 8PSK License (RX9500/SWO/DVBS2/8PSK)

- Adds DVB-S2 QPSK, 8PSK capability to DVB-S2 satellite input card
- One licence per satellite card as required

DVB-S2 16APSK License (RX9500/SWO/DVBS2/16APSK)

- Adds DVB-S2 QPSK, 8PSK, 16APSK and 32APSK capability to DVB-S2 satellite input card
- One licence per satellite card as required



Descrambling Options

The RX89500 Bulk Descrambler supports DVB Common Interface conditional access. Each satellite input/descrambling card can host 2 Common Interface Conditional Access Modules to provide high service density descrambling or allow for multiple CA systems.

DVB Common Interface Multi-Service Descrambling License (RX9500/SWO/CI/MSD)

- Enables Common Interface multi-service descrambling for the unit

SAMPLE CONFIGURATION



Sample configuration with: 6x satellite input/descrambler cards installed

SPECIFICATIONS

Satellite Input

Satellite Input and Descrambling module

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

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

Modulation: DVB-S QPSK

Standard: EN300 421

Frequency range: 950 MHz to 2150 MHz

Input level: -25 dBm to -65 dBm

DVB-S Symbol rate: 5 Msyms to 45 Msyms

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

DVB-S2 via additional licences

DVB-S2 Symbol rate: 5 Msyms to 60Msyms
(Max bit rate 170Mbps)

DVB-S2 FEC frame: Short & Normal frames

DVB-S2 Physical layer scrambling

DVB-S2 QPSK

Modulation: DVB-S2 QPSK

Standard: EN302 307

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

DVB-S2 8PSK

Includes DVB-S2 QPSK functionality

Modulation: DVB-S2 8PSK

Standard: EN302 307

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 16APSK

Includes DVB-S2 QPSK and 8PSK
functionality

Modulation: DVB-S2 16APSK and 32APSK

Standard: EN302 307

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

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

Conditional Access

Satellite Input and Descrambling module

Free to Air service pass-through

Enables support for all major CAM modules

Single service decryption

Service pre-filtering on multiplexes >72Mbps

DVB Common Interface Multi-service Descrambling

Dual CAM support per card

Descrambling of up to 16 services per CAM

Descrambling of up to 128 PIDs per CAM

Transport Stream Outputs

IP Transport Stream Output

Transport encapsulation into IP

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

Multiple Single Program Transport Stream as
IP/UDP - CBR mode

Multi-Program Transport Stream per satellite
multiplex as IP/UDP*

Number of services per chassis: 196 Max

Number of components per chassis: 1024
Max

PCR Regeneration

PAT, PMT, SDT regeneration

PTS, DTS Pass-through

Management

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

User management via web browser

Front panel keypad and LCD

SNMP v1/v2/v3 for traps and alarms

Support for nCompass Control*

Physical and Power

Dimensions (W x D x H)

442.5 x 596.9 x 44mm (17.5" x 23.5" x 1.75"
approx.)

Input Voltage

100-240VAC 50/60Hz

Power Consumption

50W (Chassis only)

28W Max. per descrambler card. Max 6 cards
per chassis

Cooling

Integrated fan

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 Humidity

5% to 90% (non-condensing)

Compliance

CE marked in accordance with EU Low
Voltage and EMC Directives

EMC Compliance

EN55022, EN61000-3-2, EN61000-3-3,
EN55024, CISPR22, FCC CFR47 Part 15B
Class A

Safety Compliance

EN60950-1, IEC60950-1, UL60950-1

*Check availability