

# Technical Specification

# TT-micro<sup>®</sup> S835 HD+

Digital receiver for HD+ by ASTRA



Based on TT-micro<sup>®</sup> family

## BASICS

- Pay- and Free-TV HDTV DVB satellite receiver compliant to EN 302 307
- HD+ compliant
- 4 digit LED Display in Front panel
- Compact and elegant housing
- Common Interface and smartcard reader behind lid
- HDMI output
- MPEG-2 and MPEG-4 AVC/H.264 video decoding
- Video Decoding:
  - ISO/IEC 13818-2 (MPEG-2 Video) - MP@ML & MP@HL
  - ISO/IEC 14496-10 (MPEG-4/Part 10) - HP@4L
  - High Definition and Standard Definition: 1080i, 720p, 576i, 576p
- Audio Decoding:
  - ISO/IEC 13818-3 (MPEG-1/2, Layer 1, 2 & 3)
  - Dolby AC-3 pass-through and down-mix
- Audio and Video out via SCART
- Digital Audio out via optical S/PDIF
- Analogue Audio out (left/right) via RCA (Cinch)
- Reed-Solomon decoding support (EN 300 421)
- Update over the DVB satellite network option

## FRONT PANEL



## BACK PANEL



## REMOTE CONTROL



## RF SPECIFICATION

- QPSK demodulation compliant to DVB satellite standard EN 302 307
- Frequency range: 950...2150 MHz
- Input RF level -25... -65 dBm
- Input connector: IEC F-type female
- Input termination: 75  $\Omega$

For DVB-S

- Input connector: IEC60169-2 female
- SCPC/MCPC support 2 Msymbols/s to 45 Msymbols/s
- QPSK with supported rates 1/2, 2/3, 3/4, 5/6, 6/7, 7/8
- Viterbi soft decoder rate  $\frac{1}{2}$
- outer Reed-Solomon decoder as per DVB-S system
- Up to 60 Mbps channel bit rate

For DVB-S2

- Broadcast profile
- SCPC/MCPC support 10 Msymbols/s to 30 Msymbols/s
- QPSK and 8PSK with supported rates 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
- LDPC and BCH decoder as per DVB-S2 requirements
- Digital Nyquist root filter with 0.20, 0.25, 0.35 roll-off factors
- Up to 90 Mbps channel bit rate



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Digital receiver for HD+ by ASTRA



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## STB MODE FUNCTIONALITY

- DVB satellite TV and Radio reception
- HD+ compliant
- Pay- and Free-TV support
- Reception of High Definition and Standard Definition (HDTV and SDTV) TV programs
- Simultaneous display of HD content on HDMI with HD resolution and on SCART with SD resolution
- Excellent Easy-To-Use graphical user interface
- Context referred help function
- Automatic and manual channel scan
- Separated program list for TV and Radio
- Up to 4 different favourite lists
- Up to 4000 programs storable
- Electronic Program Guide: present/following EPG, 7-Day-EPG plus additional Grid-EPG
- Aspect ratio: 4:3, 16:9, 2.21:1 (PAL only)
- Wide Screen Signalling (WSS)
- One-Touch Timer setting in EPG
- Simultaneous display of HDMI and on SCART
- Multi language support, e.g. German, English, Turkish, Russian, Italian, French, Spanish, Portuguese, Greek
- Integrated Tele text browser and Tele text re-insertion (VBI)
- DVB and EBU subtitling support (ETS 300 743)

## STANDARD + REGULATION COMPLIANCE

- DVB satellite standard EN 302 307
- MPEG2 Transport Stream support to ISO/IEC 13818-1
- DVB-Video/-Audio support to ISO/IEC 13818-2, -3
- MPEG-4 Video (AVC) support to ISO/IEC 14496-10
- Tele text in VBI according to ETS 300 472
- DVB subtitling according EN 300 743
- Safety and EMC regulations: EN 55013, EN 55020 and EN 60065

## LOGOS



## LNB control

- Band selection: 22 KHz
- Polarity selection: 14/18 V
- Tone burst mode
- DiSEqC 1.0
- LNB current support maximal 400 mA

## INPUT / OUTPUT SPECIFICATION

- RF In: Input connector: IEC F-type female (75  $\Omega$ )
- HDMI Digital Video out
- SCART (TV) out accordingly to EN 50049-1:
  - TV SCART out: CVBS, Y/C, RGB, Audio
  - Switching signal: at PIN8 0/6/12 V; at PIN16 0/1-3 V
- Analogue Audio out (left/right) via RCA (Cinch)
- Digital Audio (PCM stereo, AC3) out via optical S/PDIF
- 1x Common Interface
- Smartcard Reader
- USB 2.0 connector

## POWER SUPPLY

- Power supply 230VAC/50Hz to 12VDC
- Operation power consumption less 20 W
- Power consumption in Standby less 0,9 W

## ACCESSORIES

- Receiver (ca. 278x167x42 [mm])
- Power Supply Unit
- Remote Control inclusive battery
- HDMI<sup>®</sup> Standard Cable
- Instruction manual: A5 format black/white



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