

# WISI GNHWUW2

## Chameleon Module



### Technical data

#### Input DVB-S/S2

|                       |                               |
|-----------------------|-------------------------------|
| Input frequency range | 925...2175 MHz                |
| Input level range     | 44...84 dBμV                  |
| Symbol rate           | 1...45 MS/s (max. 100 Mbit/s) |
| Spectral inversion    | Yes, selectable               |
| DVB-S-Compliance      | DVB-S (EN 300 421)            |
| DVB-S2-Compliance     | DVB-S2 (EN 302 307)           |

#### Input DVB-C/T/T2

|                                  |                                |
|----------------------------------|--------------------------------|
| Input frequency range DVB-C/T/T2 | 43...1002 MHz                  |
| Input level range DVB-T          | 39...79 dBμV (-70...-30 dBm)   |
| Input level range DVB-T2         | 39...79 dBμV (-70...-30 dBm)   |
| Input level range DVB-C          | 49...79 dBμV (-60...-30 dBm)   |
| band width DVB_T                 | 6/7/8 MHz                      |
| band width DVB_T2                | 1.7/5/6/7/8 MHz                |
| band width DVB_C                 | 8 MHz                          |
| Symbol rate DVB-C                | 1...7,2 Mbaud                  |
| DVB-T-Compliance                 | DVB-T (EN 300 744)             |
| DVB-T2-Compliance                | DVB-T2 (ETSI EN 302 755)       |
| DVB-C-Compliance                 | DVB-C (EN 300 429, Appendix A) |

#### Input ISDB-T

|                              |                      |
|------------------------------|----------------------|
| Input frequency range ISDB-T | 47...862 MHz         |
| Input level range ISDB-T     | 38...90 dBμV         |
| Bandwidth ISDB-T             | 6/7/8 MHz            |
| ISDB-T-Compliance            | ISDB-T (ARIB STD-B3) |

#### ASI input / output

|                              |                 |
|------------------------------|-----------------|
| Input max. payload bit rate  | 200 Mbps (typ.) |
| Output max. payload bit rate | 200 Mbps (typ.) |
| PCR restamping               | Yes             |
| Paket size                   | 188 byte        |

#### IPTV In-/ Output

### Technical data

|                             |                                                 |
|-----------------------------|-------------------------------------------------|
| Input bitrate IP-interface  | max. 110 Mbit/s pro IPTS, max. 200 Mbit/s total |
| Output bitrate IP interface | max. 110 Mbps per IPTS, max. 400 Mbps total     |
| Output protocol             | UDP/RTP Multicast/Unicast                       |
| IPTV TS Input format        | CBR/VBR, max. 20 SPTS/MPTS                      |
| IPTV TS Output format       | CBR/VBR, max. 20 SPTS/MPTS                      |

#### DVB-C Modulation

|                          |                                                  |
|--------------------------|--------------------------------------------------|
| Number of output channel | 4 pcs.                                           |
| QAM-Modulationsart       | 16-, 32-, 64-, 128-, 256-QAM                     |
| Symbol rate              | 2.4...13.6 Mbaud                                 |
| MER                      | 44 dB (typ. for 256-QAM)                         |
| Output frequency range   | 40...860 MHz                                     |
| Output level 1           | 105 dBμV (51...858 MHz, 1 channel)               |
| Output level 2           | 102 dBμV (51...858 MHz, 2 channel)               |
| Output level 3           | 99/96 dBμV (51...858 MHz, 3 channels/4 channels) |

|                      |        |
|----------------------|--------|
| Spurious suppression | >60 dB |
|----------------------|--------|

#### SDI / HD-SDI output

|                   |                            |
|-------------------|----------------------------|
| Video-Format      | SDI, Audio embedded        |
| Audio format      | Mono, Stereo, Joint Stereo |
| SDI-SD conformity | SMPTE 259M, SMPTE 272M     |

#### MPEG Decoder – Audio / Video

|               |                                                                |
|---------------|----------------------------------------------------------------|
| Video decoder | MPEG2 MP@ML, MPEG2 MP@HL, bis zu MPEG4 H.264 AVC, HiP, level 4 |
| Aspect ratio  | Letterbox, Pan/Scan, 14:9, WSS                                 |
| Teletext      | Subtitle Teletext or DVB teletext                              |

#### VSB - AM modulation

| Technical data                                  |                                                                    |
|-------------------------------------------------|--------------------------------------------------------------------|
| Number of output channel                        | 2 pcs.                                                             |
| Video standard                                  | PAL B/G, D/K, I, SECAM D/K, B/G, L                                 |
| Group delay pre-correction                      | B/G general, D/K GOST20532-75, M FCC, not any                      |
| Audio format                                    |                                                                    |
| Video modulation                                | VSB AM (negative or positive)                                      |
| Video bandwidth                                 | 4,2/5,0/6,0 MHz                                                    |
| audiomodulation                                 | audio FM or AM                                                     |
| Output frequency range                          | 48...855 MHz                                                       |
| Output level                                    | dBµV max. 111 dBµV (1 channel); max. 108 dBµV (2 channels)         |
| Video S/N weighted                              | >65 dB                                                             |
| C/N, broadband                                  | >70 dB (65 dB typical at adjacent channel)                         |
| NICAM standard                                  | NICAM 728 (EN 300 163)                                             |
| Spurious suppression                            | >60 dBc                                                            |
| <b>FM- modulation radio</b>                     |                                                                    |
| Number of output channel                        | 8 pcs.                                                             |
| audio decoding                                  | MPEG-1 Layer I/II                                                  |
| Audio format                                    | Mono, Stereo, Joint Stereo                                         |
| Modulation type                                 | FM (Referenz ITU-R BS.450-3)                                       |
| FM-modulation depth limit                       | Yes                                                                |
| RDS generator, dynamic / static                 | Yes (Reference EN50067)                                            |
| Output frequency range                          | 85...108 MHz (100 kHz step size)                                   |
| Output level                                    | 92 dBµV (max.)                                                     |
| Audio-S/N                                       | dB >60 dB (mono); >55 dB (stereo)                                  |
| C/N, broadband                                  | 65 dB (typ.)                                                       |
| Spurious suppression                            | dB typ. 60 dBc (FM band 87.5...108 MHz); >50 dBc (outside FM band) |
| <b>CI and decryption</b>                        |                                                                    |
| Number of CI slots                              | 2 pcs. (accessible from rear)                                      |
| Bit rate                                        | 55/62/72 Mbps                                                      |
| Multichannel decryption                         | Yes                                                                |
| Service level decryption                        | Yes                                                                |
| PID level decryption                            | Yes                                                                |
| Compliance                                      | EN 50221                                                           |
| <b>DVB SCA-Scrambler / Symulcrypt Interface</b> |                                                                    |
| DVB-Compliance                                  | DVB-Symulcrypt (ETSI TS 103 197)                                   |
| Interface                                       | IP                                                                 |
| Number of encrypted PIDs                        | 64 PIDs per output                                                 |
| Scrambable outputs                              | DVB-C, J.83AnnexB/C, DVB-T, DTMB, ASI                              |
| <b>Connectors</b>                               |                                                                    |
| BNC-socket                                      | 2 pcs. (ASI in/out, SDI out)                                       |
| RJ45                                            | 2 pcs. (IPTV in/out, control)                                      |
| Common Interface                                | 2 pcs.                                                             |
| F-socket HF- output                             | 2 pcs.                                                             |

| Technical data                    |                                                   |
|-----------------------------------|---------------------------------------------------|
| SGMII socket                      | 2 pcs. (Data- and management interface for GN 50) |
| <b>General data</b>               |                                                   |
| Operating voltage DC              | 12 V DC                                           |
| Power consumption                 | 16 W (typ.)                                       |
| Packaging data                    |                                                   |
| Sales unit                        | 1 pcs.                                            |
| Dimensions (WxHxD) sales unit     | 290 x 165 x 50 mm                                 |
| Packaging volume sales unit       | dm³                                               |
| Gross weight sales unit           | 0.860 kg                                          |
| Shipping unit                     | pcs.                                              |
| Dimensions (WxHxD) shipping unit  | mm                                                |
| Packaging volume shipping package | 2.4 dm³                                           |
| Gross weight shipping unit        | 0.46 kg                                           |
| EAN                               | 4010056724115                                     |
| Article number                    | 72411                                             |
| Customs tariff number             | 85437090                                          |