# DVB-T
# channel processor
# OTX 0200



## Product information



### OTX 0200

The OTX 0200 is a part of the OXM-system.

The OXM-system receives, handles, decodes, remuxes and remodulates any digital TV source to most other digital or analogue output format.

The OTX 0200 is a digital terrestrial receiver and processor that handles input signals in DVB-T in MPEG-2 and MPEG-4 formats.

**Features:**

• Complete DVB-T receiver
• ASI input and output 1)
• Decryption of services via CI connection
• Embedded remultiplexer for creating your own output multiplexes 1)
• QAM (DVB-C), COFDM (DVB-T) or Analogue VSB–AM modulator output. 1)

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# OTX 0200

- IPTV output 1)
- Embedded web server for all controls and settings via the Ethernet connection
- Extremely compact design and low power consumption
- Extremely high flexibility and reliability for use in all sizes and types of networks

- Software upgrades and options for adding new functionality now and in the future
- Designed for environmentally friendly manufacturing and operation

1) Depending on selected software options

## Connectors and Interfaces

| | |
|---|---|
| Control and IP out connector | RJ-45 (10/100 BaseT) |
| RF input connector | F female, 75 Ω |
| RF output connector | F female, 75 Ω |
| ASI input connector | BNC female, 75 Ω |
| ASI output connector | BNC female, 75 Ω |
| CAM connector | PCMCIA (5 VDC) |
| LED Indicator lights | Power on, QPSK/8PSK/Rx error TX/Access error |
| Remote management | RJ-45, 10/100 BaseT |
| Audio/Video out connector, | 3,5 mm, 4-pole |

## COFDM Terrestrial Receiver

| | |
|---|---|
| Input frequency | 50 - 858 MHz (centre freq.) |
| Input freq step size | 250 kHz |
| Input level range | -60 to -30 dBm *) |
| Input impedance | 75 Ω |
| Input return loss | 12 dB |
| C/N limit | 18 dB *) |
| Bandwidth | 6/7/8 MHz |
| DVB compliance | DVB-T |
| Co/adj channel PAL | Compliant to Nordig 2 PAL |
| Automatic mode changerecovery | Yes |
| Echo performance | Compliant to Nordig 2 unified |

*) QEF reception with test signal: 8k, 64QAM, 1/8 guard interval, 2/3 FEC

## MPEG Decoder - Audio

| | |
|---|---|
| Supported formats | MPEG 1 layer II, AAC HE, selection of Dual mono in |
| Output | Stereo or Mono |
| Impedance | < 100 Ω |
| Output level | 0 dBu |
| Attenuation | 0 to -12dB |

## MPEG Decoder - Video

| | |
|---|---|
| Supported formats | MPEG2 MP@ML, MPEG4 H.264 AVC |
| Output standards | PAL, SECAM or NTSC |
| Impedance | 75 Ω |
| Output level | 1 Vpp @ 75 Ω |
| Aspect Ratio | Letterbox, Pan/Scan, or conversion Combined (14:9) programmable, WSS |
| Teletext | Insertion in VBI |
| Subtitling | Teletext or DVB subtitling |
| Decryption | Common Interface (PCMCIA 5 VDC) |

## RF Modulation (analogue)

| | |
|---|---|
| Standards | B/G, I, D/K, L, M/N |
| Sound | Mono, NICAM stereo, A2/A2* stereo |
| Modulation video | VSB AM, neg. or pos. |
| Modulation mono | Audio FM or AM |
| Output frequency | 47 – 862 MHz |
| Output level | > 110 dBuV (47-470 MHz) > 105 dBuV (470-862 MHz) |
| S/N, weighted | > 57 dB |
| C/N, broadband | > 70 dB |
| NICAM standards | NICAM 728 (EN 300 163) |
| Power ratio (Vision/NICAM carrier) | B/G -20dB, I -24dB, D/K -24dB, L -27dB |
| Tolerance | +/- 1dB |
| Impedance | 75 Ω |

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## QAM modulation (Option)

| | |
|---|---|
| QAM modes | 16, 32, 64, 128 or 256 QAM |
| Symbol rate | 4 – 7.2 Mbaud/s |
| MER (at RF out) | > 38 dB for 256-QAM |
| DVB compliance | DVB-C (EN 300 429) |
| QAM output frequency | 47 - 862 MHz (1 kHz step) |
| Output level | Min 105 dBuV (47-470 MHz) |
| | Min 100 dBuV (470-862 MHz) |
| PSI/SI management | Yes |
| Remultiplexing | Yes |

## COFDM modulation (Option)

| | |
|---|---|
| COFDM mode | 2K |
| Guard interval | 1/32 |
| FEC | 7/8 |
| MER | >34 dB |
| DVB compliance | DVB-T (EN 300 744) |
| Max output bit rate | 32 Mbit/s (8 MHz bandwidth) |
| Output frequency | 47 – 862 MHz (1 kHz step) |
| Output level | Min 100 dBuV (47-470 MHz) |
| | Min 95 dBuV (470-862 MHz) |
| PSI/SI management | Yes |
| Remultiplexing | Yes |

## IPTV out (Option)

| | |
|---|---|
| Max output bit rate | 55 Mbit/s   2) |
| Connector | RJ 45 (same as control) |
| Output protocol | UDP, Multicast and Unicast |
| PSI/SI management | Yes |
| Remultiplexing | Yes |
| | 2) With single TS to IP |

## Graphical User Interface (GUI)

Graphical User Interface for easy set up of complex systems.
Simple handling of remultiplexing and creation of new multiplexes from any input.
Default settings of PSI/SI tables to avoid clashes in the output multiplexes.
Simple menu structure for setting input, output and processing parameters.
Each OTX 0200 contains an embedded web server. Standard web browsers (Internet Explorer, Mozilla Firefox etc.) are supported

## ASI input (option) - output

| | |
|---|---|
| ASI bit rate | 270 Mbit/s |
| Max payload bit rates: | |
| Input bit rate | 55 Mbit/s 3) |
| Output bit rate | 55 Mbit/s 3) |
| PCR restamping | Yes |
| PSI/SI management | Yes |
| Remultiplexing | Yes |

3) The input, output and throughput bit rate is highly dependent on the type of application that is running in the unit.

## Remultiplexing

Each OTX 0200 contains a remultiplexer for 2 incoming transport streams. The transports streams can be received from cable and from the ASI input. All PSI/SI regeneration in a Head end system handled over IP.The following components can be remultiplexed:Audio, Video, Subtitling, PAT, PMT, NIT, EIT, CAT, SDT
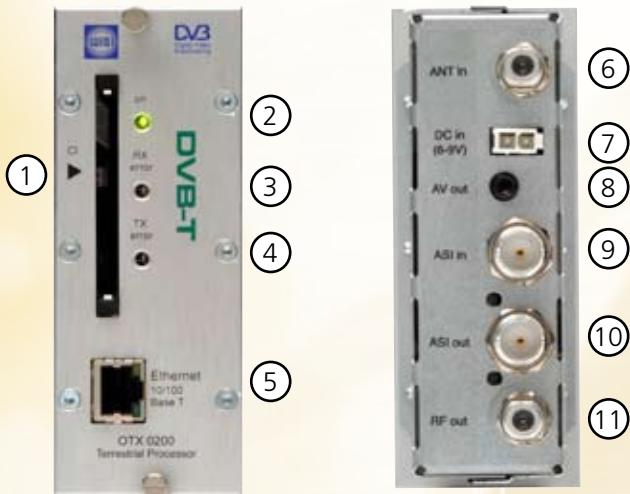
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# OTX 0200

## Connections and indications



1. Common Interface slot
2. "On" indicator
3. QPSK/8PSK error
4. Access or TX error
5. Ethernet connection
6. DVB-T input
7. Supply voltage
8. A/V output
9. ASI input
10. ASI output
11. RF output

## Miscellaneous

| | |
|---|---|
| Power supply | 7,5 VDC nom. (6-10 VDC) |
| Power consumption | Typ. 15 W |
| Dimensions | 165x105x37 mm (ex. connectors) |
| Weight | Approx. 390 g |
| Controller | Embedded web server |
| Operating temperature | -20 to +50°C, non-condensing |

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