Antik GX 5204/8
Multireceiver + Encoder / Transmodulator

GX-5204 integrates 4 DVB input Receiver on input and Transmodulator or Encoder as output in one 1U 19" chassis. It provides operators an ideal DTV headend setup solution by combining multi-channel receiving, descrambling, remultiplexing or encoding.

DVB QAM/COFDM modulation and TS over IP operations together in one single unit. Equipped with 4 independent tuner front end with various factory options for DVB-T/T2, DVB-S2/S, DVB-C, DTMB, ISDB-T and ATSC types, and industrial standard ASI and TS/IP inputs outputs, GX-5204 ensures the compatibility with all kind of transmission media.

High density real-time H.264 HD/SD Encoders use input from dedicated tuner frontent. The encoded streams can be then remultiplexed and output over its GbE IP and ASI ports.

All models support Time Base Correction (TBC) to ensure the audio and video synchronisation, the features necessary for the professional TV signal flow. The series provide two TS/IP operation modes. The first is "Full Duplex", which allows one MPTS or SPTS inputted over 1 multicast/unicast to make up a new MPTS with local encoders, then sends out the new one over 1 multicast/unicast.

Key Features

- **4 x Tuner Input, Supports variety of input options DVB-T2/T/S2/S/C/DTMB/ATSC/ISDB-T**
- **H.264/AVC HPOL 4.0 Encoder (GX5204SITH)**
- **Supports DVB-S2 Input Stream Identifier (ISI, optional) and DVB-T2 Multi PLP and SFN MIP pass through**
- **4 x DVB QAM/COFDM Modulation, 4 x RF Channel Output (Adjacent channel)**
- **Built-in TS re-multiplexer receives from ASI, CI Slot1 to CI Slot4 and TS/IP inputs**
- **4 x DVB-CI Slots, multi-program decryption, BISS-1 and BISS-E decryption**
- **4 x ASI output the transport stream from CI Slot1 to CI Slot4 or BISS decryption**
- **1xchannel full duplex TS over IP or 5xchannels IP out without IP input**
- **Remote Control and Supervision by SNMP v2, HTTP WEB and Proprietary HDMS software**
- **On Site software update through IP or USB**
- **RSSI, received signal strength, Eb/N0, C/N and BER monitoring**
- **Redundant power supply**

Function		GX5204SQ	GX5204SH	GX5204TQ	GX5204TH
Input	*Tuner*	*DVB-S2/S*	*DVB-S2/S*	*DVB-T2/T/C*	*DVB-T2/T/C*
	ASI (BNC)	*x1*	*x1*	*x1*	*x1*
	TS/IP (GbE, RJ45)	•	•	•	•
Output	*ASI x 4 (BNC)*	•	•	•	•
	TS/IP (GbE, RJ45)	•	•	•	•
	QAM Modulation	•		•	
	COFDM Modulation		•		•
	RF Monitor -20dB	•	•	•	•

Back Panel GX 5204/8 Multireceiver + Encoder / Transmodulator

Specification

Tuner

DVB-S/S2 Tuner Input (ISI Factory Optional)

- **Connector Type** 4×F type female 75Ω for Input
- **Input Frequency Range** 950~2150MHz
- **Input Level** -25~-65dBm
- **Symbol Rate** 2~45MBaud
- **Roll-off Factor**
  - DVB-S QPSK: 0.35
  - DVB-S2 8PSK: 0.35, 0.25, 0.2
- **FEC Code Rate**
  - DVB-S QPSK: 1/2, 2/3, 3/4, 5/6, 7/8
  - DVB-S2 QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
  - DVB-S2 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
- **LNB Polarity Selection Voltage** 0,13V,18V selectable, available for Tuner 1&2
- **LNB Band Selection Tone** 0/22KHz selectable, available for Tuner 1&2
- **Satellite Selection Command** DiSEqC 1.0
- **ISI ID** 1~255 user configurable

DVB-C Tuner Input

- **Connector Type** 4×F type female 75Ω for Input
- **Standard** EN 300 429, ITU J.83 Annex A, B, C
- **Input Frequency Range** 51~862MHz
- **Input Level**
  - 47~95dBμV 16QAM, SR=6.875Msps
  - 256QAM, SR=6.875Msps
- **Symbol Rate** 1~7MBaud (ITU J.83 Annex A)
- **Constellation** 16QAM, 32QAM, 64QAM, 128QAM, 256QAM
- **Bandwidth** 6MHz, 7MHz, 8MHz
- **Input Return Loss** 8dB (typ.)

DVB-T/T2 Tuner Input

- **Connector Type** 4×F type female 75Ω for Input
- **Standard**
  - EN 300 744(DVB-T)
  - EN 302 755 (DVB-T2)
- **Input Frequency** 104 ~ 862MHz (VHF/UHF)
- **Input Level** -20 ~ -70dBm
- **Constellation**
  - DVB-T: QPSK, 16QAM, 64QAM
  - DVB-T2: QPSK, 16QAM, 64QAM, 256QAM
- **Bandwidth** 6MHz, 7MHz, 8MHz
- **FFT Mode**
  - DVB-T: 2K, 8K
  - DVB-T2: 1K, 2K, 4K, 8K, 16K, 32K
- **Guarding Interval**
  - DVB-T: 1/4, 1/8, 1/16, 1/32
  - DVB-T2: 1/4, 5/32, 1/8, 5/64, 1/16, 1/32, 1/64, 1/128
- **FEC Code Rate**
  - DVB-T: 1/2, 2/3, 3/4, 5/6, 7/8
  - DVB-T2: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6
- **Input Return Loss** 7dB (typ.)

Encoder

Video input & compression

- **Number of input ports** HDMI x 4/8 or HD-SDI x 4/8
- **Compression Standard** H.264/AVC HP@L4.0
- **Video Sampling Format** 4:2:0, 8-bit, YCbCr
- **Video Encoding Bit Rate** 2~30Mbps for each channel
- **Video Resolution & Recommended Bit Rate**
  - 1080p (1920×1080) @ 59.94 Hz,50Hz: SMPTE296M: 6~30Mb/s
  - 1080 (1920×1080) @25Hz,29.97Hz,30Hz:SMPTE274M: 6~24Mb/s
  - 1080i (1440×1080) @25Hz,29.97Hz, 30Hz:SMPTE274M: 5~24Mb/s
  - 720p (1280×720) @50Hz,59.94Hz, 60Hz:SMPTE296M: 4~24Mb/s
  - 480i (720×480) @29.97Hz:SMPTE656M: 2~10Mb/s
  - 576i (720×576) @25Hz: SMPTE656M: 2~10Mb/s
- **Other Video Resolution** Free resolution downscale at same frame rate
- **Aspect Ratio** 4:3/16:9 Selectable

Gigabit TS_over_IP (Full Duplex Mode)

- **Standard** IEEE 802.3, 10/100/1000 Base-T, Full Duplex
- **Max. Effective Bit Rate** 80Mb/s
- **Data Protocol** UDP or RTP, SPTS or MPTS
- **Control Protocol** ICMP, ARP, IGMPv2

Audio Input & compression

- **Input** HDMI or SDI Embedded audio
- **Audio Compression** MPEG1 Layer II, MPEG2 AAC-LC, MPEG4 AAC-LC (option)
- **Sampling Rate** 48KHz
- **Compression Bit Rate** 32~192Kbps(-Mono), 64~384Kbps (Stereo), 128~512Kbps(AAC LC)

Transmodulator

QAM Modulation

- **Standard of System** ETSI EN300 492, ITU J.83, Annex A/C: 16/32/64/128/256QAM
- **Symbol Rate** 2.5~6.99 Bauds
- **Constellation** 16QAM, 32QAM, 64QAM, 128QAM, 256QAM
- **I/Q Amplitude Error** ≤ 0.1%
- **I/Q Phase Error** ≤ 0.1%
- **Phase Jitter** < 0.5°RMS
- **MER** 36dB min., 42dB typ. (with tester equalizer “off ”)

COFDM Modulation

- **Standard of System** ETSI EN 300 744
- **Constellation** QPSK/16QAM/64QAM
- **Bandwidth** 5/6/7/8MHz
- **FTT carrier number** 2K, 8K
- **Guard Interval** 1/4, 1/8, 1/16, 1/32
- **FEC rate** 1/2, 2/3, 3/4, 5/6, 7/8
- **MER** 36dB min., 40dB typ.

RF Output

- **Interface** 1x F-type Female, 1x F-type Female(-20dB), 75Ω
- **Carrier Central Frequency** 48~996MHz adjustable, step by 1 KHz
- **Output Level**
  - 92-109dBμV@1 RF output enabled,
  - 88-105dBμV@ 2 RF output enabled
  - 85-102dBμV@3 RF output enabled,
  - 83-100dBμV@ 4RF output enabled step by 1dB
- **Spurious** ≥55dBc typ.
- **Return Loss** ≥12dB typ.