DIGITAL TELEVISION SYSTEMS AND INFOCOMMUNICATION DEVICES

CW-4000

CW-4301 Alloy Series QAM Gateway
8 QAM modulators with 60 IP inputs

CW-4302 Alloy Series QAM Gateway
16 QAM modulators with 60 IP inputs

CW-4303 Alloy Series QAM Gateway
8 QAM modulators with 60 IP inputs and 4 loop-through ASI inputs

CW-4304 Alloy Series QAM Gateway
16 QAM modulators with 60 IP inputs and 4 loop-through ASI inputs

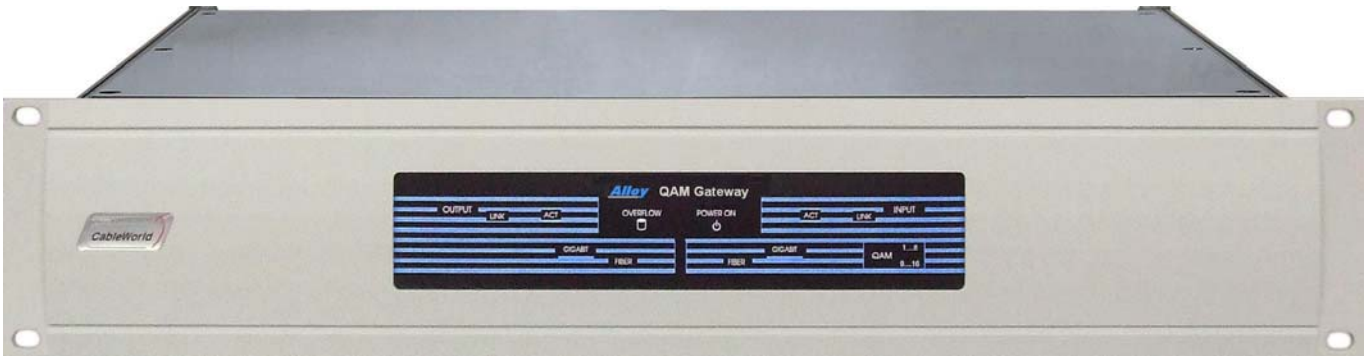
CW-4305 Alloy Series QAM Gateway
8 QAM modulators with 60 IP inputs, integrated 64-channel EPG remultiplexer

*Spreading of digital television systems requires more and more high reliability devices offering multiple functions and services. For fulfilling these requirements CableWorld developed its new **Alloy Series**, which alloys multiple functions in one device permitting this way also a favourable price. The devices of the **Alloy Series** are built in a 19" × 2 units high instrument case and they are equipped with redundant power supply for increased reliability.*

The Alloy Series QAM Gateway models comprise the 64-Channel Edge TS Remultiplexer and one or two QAM Modulator-8. The basic models have 60 IP inputs, the extended versions 60 IP inputs and additionally 4 loop-through ASI inputs.

The CW-4305 version is the basic CW-4301 model supplemented with a 64-channel EPG remultiplexer.

The Alloy Series QAM Gateway can advantageously be used in hotels, hospitals, residential quarters, smaller cities, where supplying the programs and the supervising of the system will be made over high speed IP network without the need of any local activity at running the system. In such systems reception and preparation of the program signals will be made in a central location, from where the programs will be supplied to multiple (several ten or hundred) local systems over IP lines. Running of the system will be made also from the centre. Expectably the QAM Gateway will become popular first among those Internet providers, who want to diversify their scope of activity by introducing television services.



- Complete digital headend with IP input and with 8 or 16 QAM output channels for supplying digital programs to small towns, residential areas, hotels, hospitals, education and other institutes
- IP input for advanced system building, QAM output for utilizing existing coaxial distribution networks
- Adding local programs through ASI and/or IP input
- EPG processing and insertion (CW-4305)
- The comprised 64 TS remultiplexers provide excellent flexibility permitting individual choice of programs configured by the particular devices
- Supply of the transport streams and control of the remultiplexers will be made over common IP network, without the need of building a second IP network for remote control and inspection
- Low power consumption (of 25 to 50 W depending on the particular version), high reliability, long life-time

CW-4301 ... CW-4305 Alloy Series QAM Gateway

The Alloy Series QAM Gateway is built of well proven CableWorld devices, the CW-4958 Edge TS Remultiplexer, the CW-4268 QAM Modulator-8 and the CW-4955 type 64-Channel EPG remultiplexer (CW-4305). The detailed technical data are given in the data sheets of the particular devices.

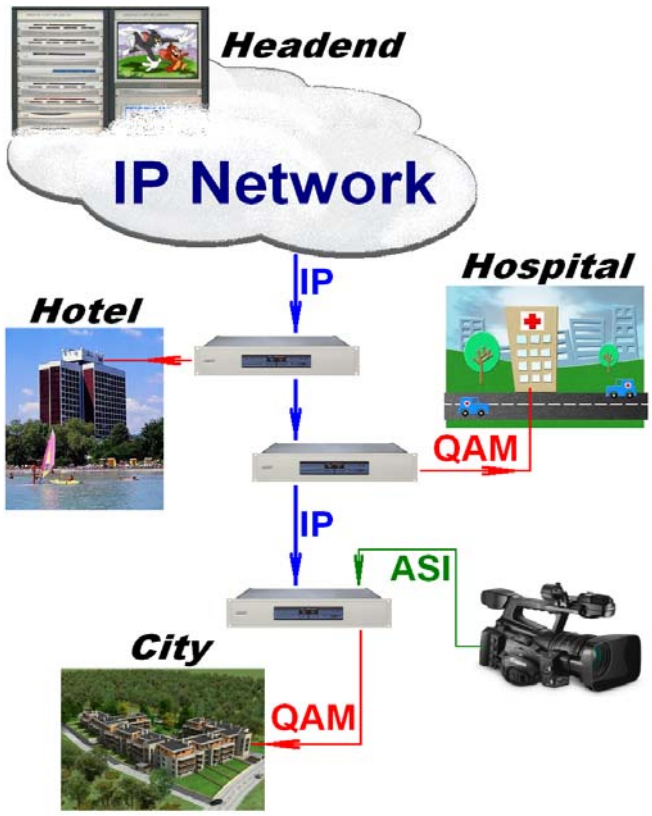
Application samples:

The basic CW-4301 model is excellently suitable for supplying 50 to 100 MPEG-2 and MPEG-4 encoded SD/HD quality television programs in 8 QAM channels in hotels, hospitals and similar institutions. Beside the TV programs any kind of further services (radio programs, EPG etc.) can be built.

The CW-4305 version is the basic CW-4301 model supplemented with a 64-channel EPG remultiplexer that retrieves the EPG data streams of the input programs and assembles new EPG data streams for the QAM channels.

The CW-4303 can receive transport streams beyond the 60 IP inputs also at further 4 loop-through ASI inputs. These ASI inputs can be very useful for adding the signals of local TV signal sources (cameras, studios, etc.) e.g. in sport facilities and schools.

The CW-4302 model is capable of delivering 16 QAM channels, thus doubling the number of the transmitted programs. The 100 to 200 TV programs cover the need of residential quarters and smaller to larger settlements.



The four ASI inputs of the CW-4304 provide possibility for including beyond the 100 to 200 TV programs also the pictures of the local studio, the local videotheque and the video security system.

In larger cities the demand for even higher number of TV programs can be satisfied by using two or more Alloy Series QAM Gateway devices combined. For combining the channel groups of typically 8 QAM channels at large systems, CableWorld offers the new CW-080x QAM Filters. These QAM Filters of 64 MHz bandwidth permit adding the channels without adding the noise out of the channels thus preventing the decrease of the signal to noise ratio.

The QAM modulators of the QAM Gateway use the most advanced DDS (Direct Digital Synthesis) technique. The output signal in QAM channel groups of four can be put to any place of the VHF-UHF band. When using the 64 MHz QAM Filters, the 8 QAM channels are to be set to neighbouring channels.

For encoding the analogue (PAL, S-video etc.) or digital (SDI, HDMI) output signals of local studios CableWorld recommends the MPEG-2 and MPEG-4 Encoder series.

The models of the QAM Gateway series are directly suitable for receiving optical fibre over SFP module. CableWorld's system implies the outstanding advantage of sending over the 1000 Base-T or 1000Base-X line along with the transport streams carrying the program signals also the device control commands, thus spares building a second IP network for the remote control and supervising system.

Running digital systems becomes economic if a central headend supplies multiple, even several dozen QAM Gateways simultaneously. For building such central headends CableWorld's CW-4000 series offers all necessary units (satellite receivers, terrestrial receivers, IP and ASI converters, encoders etc.).

In locations,, where the coaxial system is requested to be relieved,, instead of using QAM Gateways,, IPTV service can be introduced using the CW-4956 type 64-Channel IPTV Remultiplexer.

The devices are based on FPGA circuits, which feature low power consumption, and along with the redundant power supply provide a long and trouble-free lifetime.

Technical data

Remultiplexer	see in the CW-4958 Edge TS Remultiplexer data sheet
EPG remultiplexer	see at the CW-4955 type 64-Channel EPG Remultiplexer
QAM Modulator	see in the CW-4268 QAM Modulator-8 data sheet

General data

Mass	approx. 5 kg
Physical dimensions Width × Height × Depth	19" × 2 HU 483 × 43.6 × 473 mm
Service period	continuous
Power requirement	90 … 264 V, 47 … 440 Hz
Power consumption	max. 25 ... 50 W
Operational temperature Relative humidity	+5 … +40 °C max. 80 %
Storage temperature Relative humidity	-25 ... +45 °C max. 95 %, non-condensing

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