QG-1U4 Datasheet

Lecture capture integrated host, 7 in / 2 out, 4 SDI, VGA and 2 HDMI with built-in audio DSP

Overview

The QG-1U4 is a 1U lecture capture integrated host that carries high quality AV over a Gigabit IP network at low bit rate and very low latency. Four 3G-SDI, one VGA and two HDMI inputs take four camera positions and PC sources; one 4K60 HDMI and one VGA output feed the main screen and a backup display. A built-in audio DSP handles echo cancellation, feedback suppression and noise suppression. Seven in, two out, three microphone and six line inputs, two encoders and four decoders, 1 TB on board.

Key Features and Benefits

Four SDI plus VGA and HDMI

Four 3G-SDI inputs cover stage, audience, board and a spare position, joined by one VGA and two HDMI inputs, one at 4K30. Seven in, two out.

Built-in audio DSP

Echo cancellation, feedback suppression and noise suppression run inside the chassis. Four 3.5 mm stereo outputs feed the amplifier, and recording and reinforcement share one mix.

Three mics, six line inputs

Three microphone inputs with 48 V phantom power and six line inputs for wireless receivers, PCs and players, each with its own gain.

4K60 output

One HDMI output drives the auditorium main screen at 3840x2160P60, with a VGA output as backup display. Switching between them does not interrupt recording.

Voice-activated camera switch

A microphone opening triggers the camera switch in the signal layer. No director needed, and the switch completes within 200 ms.

Two encoders, four decoders, 1 TB

Two channels encode and four network streams decode. 1 TB on board, replaceable to 8 TB, with meeting and class sessions recorded as separate tasks.

Specifications

Enclosure and structure	
·	1U chassis, 483 x 44 x 450 mm, approx. 7 kg, fixed in a 19-inch rack
·	All ports on board: 4 SDI, 1 VGA and 2 HDMI in; 1 HDMI 4K60 and 1 VGA out
·	Front panel with a 1.5-inch LCD and six function keys for address, layout and input preview
·	Full load under 150 W, single supply with over-voltage, over-current and surge protection
·	72-hour powered burn-in before dispatch, log shipped with the unit
Paths and capacity	
·	Four 3G-SDI inputs, up to 1920x1080P60 and all standard formats below
·	One VGA and two HDMI inputs, one HDMI at 3840x2160P30
·	One HDMI output at 3840x2160P60, one VGA output as backup display
·	Seven inputs and two outputs, plus four IP streams decoded

·	Format and resolution detected automatically; switching is clean with no black frame
·	4:4:4 chroma sampling and 10-bit colour depth through the video path
Audio processing	
·	Three microphone inputs, one 3.5 mm and two terminal block, 48 V phantom per channel
·	Six line inputs for wireless receivers, PCs and players
·	Four 3.5 mm stereo outputs and one terminal block stereo output
·	AEC, AFC and ANS inside the chassis, settings stored with the scene
·	Ten-band parametric EQ, four mix buses, channel delay 0 to 500 ms
·	Microphone activation switches the picture, trigger within 200 ms
·	Recording and reinforcement share one mix; AV offset within 40 ms
Picture processing	
·	One composition engine, output up to 3840x2160
·	Layouts with 2, 4 and 6-way split and picture-in-picture, plus free-form regions
·	Captions, station logo and time stamp as three independent layers
·	Mosaic privacy masking, draggable and scalable, written into the recording
·	At least 32 layout presets, recalled by one action or a control command
Encoding and recording	
·	H.265 and H.264 encoding, two channels at full frame rate
·	Resolution 720x576 to 3840x2160, frame rate 1 to 60 fps, bit rate 512 kbps to 16 Mbps
·	Four IP streams decoded, RTSP and ONVIF cameras connect directly
·	1 TB on board, field replaceable to 8 TB
·	MP4 packaging, H.264 or H.265, multi-task segmented recording
·	Recording starts manually, on schedule, on boot, on motion or from a control command
·	Index rebuilt after power loss; damaged files repaired without losing the whole session
·	FTP upload, search and download, and playback from a local output
Transport and management	
·	H.323, SIP, RTSP, RTMP, RTP, HTTP and ONVIF supported
·	H.323 and SIP run on the internal stack, registering to an upstream MCU with no gateway
·	Built-in four-party 1080P30 conference with address book and multi-party calling
·	Streaming to live platforms, four destinations, viewer QR code generated on the unit
·	Browser, client software and local GUI share one account and permission model
·	One RS-232, one RS-485/422, two USB ports, one Gigabit LAN port
·	At least 32 scenes stored and recalled in one action

In the Box

Host unit: 1, aged and self-tested before packing

Power cord: 1 standard cord; adapter models ship with one external adapter

Rack hardware: One pair of ears; portable models ship with the handle fitted

Quick start: 1, wiring and first power-on steps

Certificate: 1, printed with the serial number

Storage drive: 1, already fitted, capacity in the specifications

Installation Environment

Operating temperature: 0 C to 40 C

Operating humidity: 10% to 90%, non-condensing

Storage temperature: -20 C to 60 C

Altitude: up to 3000 m

Clearance: 100 mm at intake and exhaust, unobstructed in the rack

Grounding: Rack ground resistance 4 ohm or less, conductor 1.5 mm2 or larger

Ordering Information

Model	Description
QG-1U4	Lecture capture integrated host, 7 x in, 2 x out, 4 SDI, 1 VGA and 2 HDMI inputs, built-in audio DSP

Company Information

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