3U Quantum

Prodys

Modular IP Audio Multicodecs with AES67

Quantum 3U front view

Quantum 3U: up to **14 st/28 mono** IP audio codecs in a 3U chassis.

Quantum One: up to **4 st/8 mono** IP audio codecs in a 1U chassis.
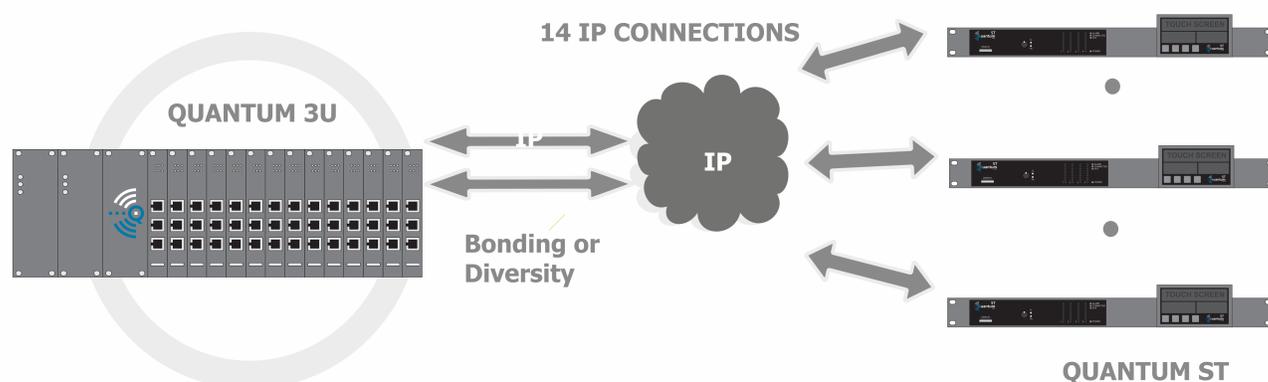
Quantum multicodecs offer the possibility of extending the number of audio signals provided by a single Quantum codec, inheriting all its key features such as its widest range of audio compression modes, stability, flexibility and easiness to use.

Each Quantum module has **two Ethernet ports** allowing bandwidth aggregation (**Bonding**) and redundant transmission (**Diversity**). A third Ehernet port is used to support **individual remote control** of each audio module via embedded web server or centralized management via **ProdysControlPlus**.

Optional **Dante/AES67** or **Ravenna/AES67** module is available to provide an interface for uncompressed digital audio in a single Ethernet cable replacing all the individual audio inputs and outputs.

Operation Features

- ✔ **BRAVE**: highly resilient streaming protocol for contribution and distribution.
- ✔ **Configurable and scalable system** : Up to 14 IP modules (up to 4 for Quantum One). Cards can be hot-swapped for servicing.
- ✔ **Bonding and Diversity** enables streaming of STL-grade audio quality over inexpensive links.
- ✔ Each module can be **controlled remotely** from its Web Page or from ProdysControlPlus.
- ✔ **Automatic detection** of the encoding mode used by the remote unit.
- ✔ **Independent encoding/decoding** operation.
- ✔ **Additional LAN Management port** to split audio and control data flows.
- ✔ Call facilities: **Auto-redial**, **1-click call** and **log systems**.
- ✔ **User Access Control** to define different access restrictions in a per user basis.
- ✔ **Configuration presets** to define different configurations for all or some specific parameters.
- ✔ Optional **Dante/AES67** or **Ravenna/AES67** modules to provide an interface for uncompressed digital audio in a single Ethernet cable.
- ✔ **One user configurable general purpose input-outputs (GPIO)**. Inputs can be set up to control audio inputs or reset alarms, and outputs can be configured to monitor different parameters.
- ✔ **Alarms**: Real Time alarms management through **SNMP traps, GPO and e-mails**
- ✔ AC or DC power supply with an **option for AC or DC redundant power supply.**
- ✔ **ProntoNet Family Compatible** with SIP and V4 protocol (optional).

QUANTUM 3U

14 IP CONNECTIONS

IP

Bonding or Diversity

QUANTUM ST

Quantum One front view

Audio Features

✔ Analog and Digital Stereo Audio in a single module

✔ **Analog Audio**
- 24 bits A/D and D/A converters.
- 15 way D type connector electronically balanced.

✔ **Digital Audio**
- AES/EBU. Up to 24 bits. Automatic rate adaptation.
- 9 way D type connector
- External clock input.

✔ **Audio Compression Algorithms**
- OPUS
- MPEG 1,2 Layer II
- Enhanced and Standard apt-X™
- G722 and G711 A/µ Law
- MPEG AAC LC, LD, HE & ELD
- PCM (16,20 & 24 bits)

✔ **Dante/AES67** or **Ravenna/AES67** (optional)

IP Communications Features

✔ **Dual operation over IP**: Program and Talkback lines.
✔ **IP**
- 10/100/1000BaseTx Ethernet ports, **2 x RJ45 connectors per module**.
- Fully **TCP/UDP/IP** connectivity.
- **IP Multicast, Unicast** and **Multi-Unicast** audio streaming transmission/reception
- **IP Compatibility**: SIP/SDP/RTP/STUN according to **N/ACIP EBU Tech 3326**.
- Prodys **NAT Traversal** Streaming Protocol permits router firewall pass-through.
- **FEC** (Forward Error Correction) **and Active Packet Recovery** to deal with packet losses.
- 2 Ethernet interfaces for **Bonding** or **Diversity** with BRAVE protocol by Prodys
- **SIP Diversity** according **N/ACIP EBU Tech 3368**
- **Automatic Jitter buffer** to avoid audio dropouts, compensating for up to 20 seconds of jitter in the IP connection.

✔ **1 x Ethernet switch** to concentrate all the management traffic in a single port.

✔ **Auxiliary data** on RS232 port from 300 to 115200.

✔ **GPIO**: 1 input/output per module. User configurable. Remote contact closures.

✔ **Local or remotely (TCP/IP) upgrading** of one or several units at once using the same utility.

✔ Factory software upgrades can be downloaded.

	Width	Height	Depth	Chassis
Quantum 3U	483 mm	133.4 mm	363 mm	3U
Quantum One	483 mm	43.4 mm	363 mm	1U

Quantum 3U rear view