



CloudPower CP716D is a 16 channel, Class D amplifier, designed for immersive spaces and installations involving numerous separate zones.

CloudPower CP716D delivers 16 x 700W and can drive both low impedance and 70/100v speakers. The amplifier has sixteen networked audio input channels and four analogue inputs that can be configured as fallback signals. An internal streaming source contributes a further two channels from a device running Spotify or AirPlay. A 96kHz 16-input Dante audio networking module is fitted as standard.

CP716D can be remotely or locally configured and managed from any device* through the browser-based IntelliCloud WebUI. IntelliCloud provides control over the amplifier's onboard signal processing tools, including an input matrix, signal generators for setup, gain, PEQs, HP/LP filters, crossovers, limiters, and speaker preset management.

The amplifier is built on APEX's proprietary GlidePath direct drive architecture, which fully integrates DSP and amplifier circuits, employing DC coupling throughout the signal path to dramatically reduce time offsets and distortion. CloudPower's ultra-precise reproduction of high transients manages speaker cone excursion, minimizing distortion and prolonging speaker life by cutting mechanical wear.

* Requires an HTML5 compatible browser - Mac, iOS, Windows, Android.

FEATURES

- 16-input Dante audio networking
- 4x analogue backup inputs
- Remote management over the cloud
- Directly drive low impedance or 70/100v loudspeakers
- High-efficiency, low idle power
- IntelliCloud WebUI with built-in Wi-Fi hotspot
- Daylight viewable colour OLED display
- 16-channel platform
- 700 Watts per channel
- Unique internal streaming source supporting Spotify® or AirPlay®
- Source matrix



Operating conditions

| | |
|---------------------|--|
| Temperature | 0° to 50° C, 10 to 60 % non-condensing |
| Storage temperature | -20° to 70° C |
| Safety / Compliance | CE Certificate |

Amplification and power supply

| | |
|---------------------|--|
| Amplification class | Class D GlidePath technology |
| Power supply model | Universal switch mode power supplies with active PFC |
| Power Factor | > 0,9 above 1/2 P |
| Mains Rating | 100 - 240V @ 50-60 Hz |
| Operating Voltage | 90 - 260V |
| AC Mains connector | Powercon 32A |

Max. average power consumption (1/8)

| | |
|-------------|------|
| Watts (W) | 700W |
| Amps @ 230V | 3,1 |
| Amps @ 120V | 5,9 |

Audio Specifications

| | |
|--------------------------------------|---|
| Frequency response | 1Hz - 22kHz |
| Distortion THD+N | 0,05% @ P/2 , 20Hz- 20 kHz, 22 kHz BW |
| Noise level (20 Hz - 20 kHz @ 8 ohm) | < 100 uV (A) |
| Latency | 1 mS |
| Phase response | ±10 deg 3 Hz - 20 kHz |
| S/N (20 Hz - 20 kHz @ 8 ohm) | 118 dB (A) |
| Damping factor | 4000@8ohm <1Khz |
| Input sensitivity | Settable in speaker preset. By default analog in to amplifier output = 26dB |

DSP

| | |
|--------------------------|-------------------------|
| Digital Signal Processor | 64 bit fixed point |
| I/O Routing | Flexible routing matrix |

Dante™ Audio Networking

| |
|--|
| 16 Dante input channels with adjustable gain in the amplifier channel mixer |
| Supports 48/96kHz Dante networks |
| Two Gigabit network ports for the Dante network, configurable in switched or redundant mode |
| Supports AES67 |
| Locate function (from Dante Controller, locate mode can be switched on to make the network port LEDs flash to locate them) |

User processing functions per channel

| | |
|----------------|---|
| Gain: | -80 to +15dB, 0,1dB steps |
| Polarity: | Normal / inverted |
| Delay: | 0 to 250 ms (Shared between User and Group settings) |
| PEQ: | 12 x PEQ. Each PEQ can be set to a choice of 16 filter types (1) |
| HP/LP filters: | Bessel , Butterworth and Linkwitz Riley with slopes from 6 to 48 dB/oct |
| Limiter: | Peak voltage, RMS voltage |

Group processing functions

Six global processing group overlays which can link any amplifier channel in the network

| | |
|-----------|--|
| Gain: | -80 to +15dB, 0,1dB steps |
| Polarity: | Normal / inverted |
| Delay: | 0 to 250 ms (Shared between User and Group settings) |
| PEQ: | 12 x PEQ. Each PEQ can be set to a choice of 16 filter types (1) |

Speaker processing functions

| | |
|-------------------|--|
| Gain: | -80 to +15dB, 0,1dB steps |
| Polarity: | Normal / inverted |
| Delay: | 0 to 250 ms (Shared between User and Group settings) |
| PEQ: | 12 x PEQ. Each PEQ can be set to a choice of 16 filter types (1) |
| HP/LP filters: | Bessel , Butterworth and Linkwitz Riley with slopes from 6 to 48 dB/oct |
| Limiter: | Peak voltage, RMS voltage |
| FIR filters: | 768 taps per channel |
| (1) Filter types: | Bell-Sym,Bell-Asym, Notch, Low-Shelf 6dB or 12dB, High-Shelf 6dB or 12dB All-Pass 90° or 180°, High-Pass 6dB, or 12dB, High-Pass VariQ 12dB, Low-Pass 6dB or 12dB, Low-Pass Vari-Q 12dB, Band-Pass |

Circuit protection

| | |
|------------------------|--|
| Mains and power supply | Under, over voltage, over current protection |
| Power outputs | DC, Overtemp, Overcurrent limiter, VHF |
| Cooling | Cooling fans with signal control speed |

Inputs

| | |
|---------------------------|--|
| Analog | 4 balanced analog line inputs 4x 3-pin Phoenix |
| A/D conversion | 32 bit |
| Input impedance | 10 kOhm |
| Max. input level | 21 dBu |
| Digital | 16 x 16 Dante digital network card |
| Internal Streaming source | Two channel internal streaming source supporting Spotify and AirPlay |

Remote control and monitoring

| | |
|------------------------------|--|
| Network connection | Single port Ethernet interface |
| Apex remote control software | IntelliCloud WebUI with built-in webserver |

Front panel indicators

| | |
|---------------------------------------|--|
| Daylight viewable colour OLED display | Real time level , limit and fault indicators |
|---------------------------------------|--|

| Amplifier model | CP716D |
|---|--------|
| Total burst power (all channels driven) | 11200 |
| 2 ohms (with correct limiter setup**) | 700 |
| 4 ohms | 700 |
| 8 ohms | 500 |
| 16 ohms | 250 |
| Hi-Z 70V | 280 |
| Hi-Z 100V | NA |
| Peak output voltage per channel | 90Vpk |
| Max output voltage per channel | 14Arms |

** For best performance in 2 ohm, current clip should be avoided by lowering the Voltage Peak Limiter Value. Use APEX IntelliDrive built-in Peak Limiter Calculation tool to define the right value.

Max Output Power bridged mode

| | |
|-----------|------|
| 4 ohms | 1200 |
| 8 ohms | 1400 |
| 16 ohms | 1000 |
| Hi-Z 70V | 1000 |
| Hi-Z 100V | 1000 |

Power and Thermal 115V

| | |
|--------------------------------|------------|
| Standby power consumption | 29W |
| Idle Power | 120W |
| Idle Current Draw | 1.2A |
| Idle Thermal loss | 408 BTU/h |
| 1/8 Power @ 4 Ohm Power | 1600W |
| 1/8 Power @ 4 Ohm Current Draw | 14A |
| 1/8 Power @ 4 Ohm Thermal loss | 2729 BTU/h |

Power and Thermal 230V

| | |
|--------------------------------|-----------|
| Standby power consumption | 29W |
| Idle Power | 120W |
| Idle Current Draw | 0.6A |
| Idle Thermal loss | 408 BTU/h |
| 1/8 Power @ 4 Ohm Power | 1600W |
| 1/8 Power @ 4 Ohm Current Draw | 7A |

Physical

| | |
|---------------------|---------------------|
| Unit Dimensions | 483 x 44.5 x 415 mm |
| Shipping Dimensions | 560 x 120 x 610mm |
| Unit Weight | 10 kg - 22 Lbs |
| Shipping weight | 11.5 Kg - 25 Lbs |



In the interest of continuous product improvement all values specified are subject to change without notice.
Please refer to the online datasheet for the latest version. It can be found on the download section of our website: <https://apex-audio.be/downloadcenter/>