# Noctua NF-A8 PWM Premium Fan



The NF-A8 is a highly optimised, premium quality quiet 80mm fan. Featuring Noctua's AAO (Advanced Acoustic Optimisation) frame as well as sophisticated aerodynamic design measures such as Flow Acceleration Channels, the NF-A8 further improves the renowned quiet cooling performance of the award-winning NF-R8. The PWM version sports Noctua's custom designed NE-FD1 IC for fully automatic speed control via 4-pin fan headers and comes with a Low-Noise-Adaptor to reduce the maximum speed during PWM control from 2200 to 1750rpm. Its superb running smoothness, reference-class SSO2 bearing and Noctua's trusted premium quality make it an elite choice for the highest demands.

#### Succeeding the award-winning NF-R8

Noctua's NF-R8 fan has become a default-choice among PC enthusiasts looking for a premium quality quiet 80mm fan. Thanks to its thoroughgoing aerodynamic optimisations, the NF-A8 provides higher static pressure and an even better airflow/noise ratio than its much acclaimed predecessor.

# Flow Acceleration Channels

The NF-A8 impeller features suction side Flow Acceleration Channels. By speeding up the airflow at the crucial outer blade regions, this measure reduces suction side flow separation and thus leads to better efficiency and lower vortex noise.

#### AAO Frame

Noctua's AAO (Advanced Acoustic Optimisation) frames feature integrated anti-vibration pads as well as Noctua's proprietary Stepped Inlet Design and Inner Surface Microstructures, both of which further refine the fan's performance/noise efficiency.

# Stepped Inlet Design

Noctua's Stepped Inlet Design adds turbulence to the influx in order to facilitate the transition from laminar flow to turbulent flow, which reduces tonal intake noise, improves flow attachment and increases suction capacity, especially in space restricted environments.

#### Innner Surface Microstructures

With the tips of the fan blades ploughing through the boundary layer created by the Inner Surface Microstructures, flow separation from the suction side of the blades is significantly suppressed, which results in reduced blade passing noise and improved airflow and pressure efficiency.

#### Low-Noise Adaptor

The NF-A8 PWM is supplied with a Low-Noise Adaptor (L.N.A.) that reduces the maximum fan speed from 2200 to 1750rpm. The L.N.A can be used either to run the fan at a fixed speed of 1750rpm or to cap the maximum speed when using automatic PWM control.

#### SSO2 Bearing

The NF-A8 features the further optimised second generation of Noctua's renowned, time-tested SSO bearing. With SSO2, the rear magnet is placed closer to the axis to provide even better stabilisation, precision and durability.

#### Custom designed PWM IC with SCD

Supporting fully automatic PWM speed control, the NF-A8 PWM uses Noctua's custom designed NE-FD1 PWM IC that integrates Smooth Commutation Drive (SCD) technology. By providing smoother torque impulses, SCD suppresses PWM switching noises and thus makes the fan quieter at low speeds.

# Extensive cabling options

The fan's short 20cm primary cable minimises cable clutter in typical applications while the supplied 30cm extension provides extended reach when necessary. Both cables are fully sleeved and a 4-pin y-cable allows to connect a second fan to the same PWM fan header for automatic control.

### 6 years manufacturer's warranty

Noctua fans are renowned for their impeccable quality and outstanding longevity. Like all Noctua fans, the NF-A8 PWM features an MTTF rating of more than 150,000 hours and comes with a full 6 years manufacturer's warranty.

#### SCOPE OF DELIVERY

Packaging dimensions / unit (HxWxD)

390 x 370 x 360 mm

Weight incl. packaging / unit

**LOGISTIC DATA** 

4716123315476

842431014436

Weight incl. packaging **245** g

Warranty

6 vears

Packaging unit

11.30 kg

Packaging dimensions (HxWxD) 210x150x34 mm

Product name
Noctua NF-A8 PWM

FΔN

NF-A8 PWM premium fan
Low-Noise Adaptor (L.N.A.)
4-pin y-cable
30cm extension cable
4x anti-vibration mounts
4x fan screws





# SPECIFICATIONS

| Dimensions                 | 80x80x25 mm                       |  |
|----------------------------|-----------------------------------|--|
| Bearing                    | SS02                              |  |
| Blade geometry             | Optimized Seven Blade Design with |  |
| Max. input power / voltage | 0.96 W / 12 V                     |  |
| MTTF                       | > 150,000 h                       |  |

| NF-A8 PWM                           | w/o adaptor             | with L.N.A.             |
|-------------------------------------|-------------------------|-------------------------|
| Max. rotational speed ( $+/-10\%$ ) | 2200 RPM                | 1750 RPM                |
| Max. airflow                        | 55.5 m³/h               | 43.9 m³/h               |
| Max. acoustical noise               | 17.7 dB(A)              | 13.8 dB(A)              |
| Max. static pressure                | 2.37 mmH <sub>2</sub> 0 | 1.54 mmH <sub>2</sub> 0 |