

# NF-A4x20 PWM

## Noctua NF-A4x20 PWM Premium Fan



Featuring advanced aerodynamic design measures such as Flow Acceleration Channels and Noctua's AAO frame, the NF-A4x20 PWM is a highly optimised, premium-quality quiet fan in size 40x20mm. 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 as well as an OmniJoin™ Adaptor Set for easy connection to proprietary fan headers. Its superb running smoothness, reference-class SS02 bearing and Noctua's trusted premium quality make it an elite choice for the highest demands.

### 40x20mm size

Compared to Noctua's award-winning NF-A4x10, the NF-A4x20 is twice as thick, which allows for increased static pressure performance and makes the NF-A4x20 ideal for demanding applications with high flow resistance.

### Flow Acceleration Channels

The NF-A4x20 PWM 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.

### Inner 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.

### 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.

### Custom designed PWM IC with SCD

Supporting fully automatic PWM speed control, the NF-A4x20 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.

### SS02 Bearing

The NF-A4x20 PWM features the further optimised second generation of Noctua's renowned, time-tested SS0 bearing. With SS02, the rear magnet is placed closer to the axis to provide even better stabilisation, precision and durability.

### Integrated Anti-Vibration Pads

Integrated Anti-Vibration Pads made from extra-soft silicone minimise the transmission of minute vibrations while maintaining full compatibility with all standard mounting systems and fan clips used on heatsinks.

### OmniJoin Adaptor Set

Many devices featuring 40mm fans use proprietary fan headers, so the NF-A4x20 PWM comes with Noctua's OmniJoin Adaptor Set. Just cut the original fan's cable, fix it to the adaptor using the supplied cable connectors and you can plug the NF-A4x20 PWM to proprietary fan headers!

### 6-year manufacturer's warranty

Noctua fans are renowned for their impeccable quality and outstanding longevity. Like all Noctua fans, the NF-A4x20 PWM features an MTTF of more than 150,000 hours rating and comes with a full 6-year manufacturer's warranty.

### LOGISTIC DATA

|                                     |                     |
|-------------------------------------|---------------------|
| Product name                        | Noctua NF-A4x20 PWM |
| EAN                                 | 9010018100105       |
| UPC                                 | 841500110109        |
| Packaging dimensions (HxWxD)        | 23x140x110 mm       |
| Weight incl. packaging              | 86 g                |
| Warranty                            | 6 years             |
| Packaging unit                      | 36 pcs              |
| Packaging dimensions / unit (HxWxD) | 170x450x240 mm      |
| Weight incl. packaging / unit       | 3.50 kg             |

### SCOPE OF DELIVERY

|                            |
|----------------------------|
| NF-A4x20 PWM premium fan   |
| Low-Noise-Adaptor (L.N.A.) |
| OmniJoin Adaptor           |
| 4-pin y-cable              |
| 30cm extension cable       |
| 4x anti-vibration mounts   |
| 4x fan screws              |



### SPECIFICATIONS

|                            |                                          |
|----------------------------|------------------------------------------|
| Dimensions                 | 40x40x20 mm                              |
| Bearing                    | SS02                                     |
| Connector                  | 4-pin                                    |
| Blade geometry             | A-Series with Flow Acceleration Channels |
| Max. input power / voltage | 0.6 W / 12 V                             |
| MTTF                       | > 150,000 h                              |

| NF-A4x20 PWM                   | w/o adaptor             | with L.N.A.             |
|--------------------------------|-------------------------|-------------------------|
| Max. rotational speed (+/-10%) | 5000 RPM                | 4400 RPM                |
| Max. airflow                   | 9.4 m³/h                | 8.3 m³/h                |
| Max. acoustical noise          | 14.9 dB(A)              | 12.2 dB(A)              |
| Max. static pressure           | 2.26 mmH <sub>2</sub> O | 1.75 mmH <sub>2</sub> O |