Press RELEASES

PR-No. 20 – 26. February 2024

3-Phase BLDC Motor Controller IC

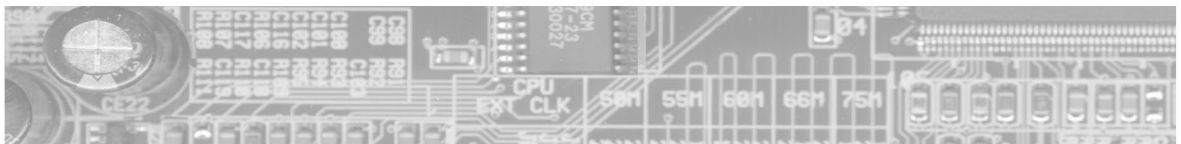
Tokyo, Japan, December 19th, 2023 – Nisshinbo Micro Devices Inc. has launched the NA7200BE series 3-Phase BLDC Motor Controller IC intended for general purposes such as fan and other small BLDC motors.

The versatile NA7200BE offers a range of functions to design a feature-rich circuit to drive BLDC motors. A wide operating voltage range from 6.3 to 36 V makes using any battery-powered and various other motor applications possible. External MOSFETs are required to drive the motor to complete the circuit. Additional Hall sensors or sensor ICs determine the rotor position to set the controller outputs to the next appropriate commutation position.

The rotational speed is controlled by applying a DC voltage or PWM signal to the VERR input. In addition, the speed can be measured with the FG output provided for this purpose. Another FR input is present to set the intended rotation direction to forward or reverse.

As for safety features, a lock protection is activated when the motor shaft is blocked for a certain time; this protection is automatically released after a certain period and is specified by an external capacitor. The quick start function enables resetting the lock protection manually and quickly returning to the initial state, which is controlled by keeping the VERR input low. As for other protection circuits, the NA7200BE offers:

- Thermal shutdown, triggered when the die temperature exceeds 180 °C.
- Overcurrent detection, measured by an external sense resistor.
- Under Voltage Lockout, disables the chip when the operating voltage drops below 5.5 V.



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Specifications NA7200BE:

Supply Voltage: V_{CC}=6.3 to 36 V

Low Quiescent Current: I_{CC}=2.9 mA typ. (V_{CC}=12 V)

DC or PWM rotation speed control

Forward / Reverse Function

FG Output (RPM)

Lock Protection (with Auto Release)

Quick Start Function

Overcurrent Detection

Thermal Shutdown

Under Voltage Lockout

Operating Temperature: -40 to +105 °C

Package: SSOP-20-BE (L6.5 x W6.4 x H1.15 mm)

Datasheet NA7200BE: Consumer version.

Availability and Pricing

The NA7200BE is available in a space-saving SSOP-20-BE package suitable for small BLDC motors with a built-in electrical circuit. More Information about availability and pricing, please visit email: sales.europe@macnica.com.

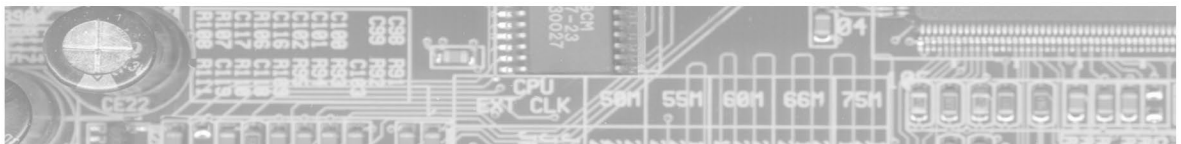
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About Nisshinbo Micro Devices Inc.:
Established in January 2022, Nisshinbo Micro Devices Inc. is a merger of the former companies Ricoh Electronic Devices Co, Ltd., and New Japan Radio Co, Ltd, both members of the Nisshinbo Group.



The history of the two companies goes back to 1959, resulting in more than 60 years of experience in the electronics industry. Today, it is one of the leading global suppliers of advanced analogue products. Its portfolio offers a comprehensive range of ICs for Power Management, Supervisory, Operational Amplifiers, Battery Management, RF, Audio & Video, Optoelectronic devices, Motor drivers to name a few. These products enable electronics engineers to design advanced applications for consumer, industrial and automotive markets.

The company is headquartered in Tokyo, Japan, and has development, sales, and manufacturing facilities across the country. In addition, it has regional sales and support offices in North America, Europe, and Asia.

For further information, please visit https://www.nisshinbo-microdevices.co.jp/en/.

About Macnica ATD Europe GmbH, (former Macnica GmbH)
Macnica's ATD Europe GmbH, (former Macnica GmbH), was originally established in the UK in 2006, and moved to Germany in July 2008, to increase efficacy of its service for European customers.

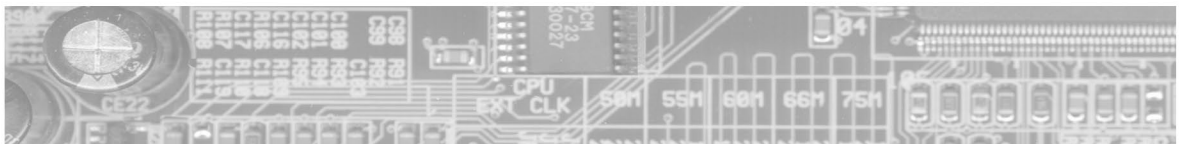
By it's acquisition of the Munich based company Scantec Mikroelektronik in 2014 Macnica Europe formed a powerful semiconductor distribution with headquarter in Ingolstadt and offices in Munich, Regensburg, Milton Keynes (UK) and Warsaw offering an attractive and competitive portfolio of highly sophisticated devices.

Macnica provides end to end support from design-in to production through its global service network to its customers, regardless of the final destination of the product shipment to customers' manufacturing locations.

About Macnica ATD Europe S.A.S.
Founded in 1990 as ATD Electronique, Macnica ATD Europe headquarter offers innovative components dedicated to imaging applications for the European market. Its product portfolio includes: image sensors (CCD, CMOS, InGaAs, Thermal etc.), optics, interface circuits, FPGA & IPs, imaging processors, cables and OLED microdisplays.

It also covers development tools and design services enabling fast and efficient realization of new high-performance camera systems for markets such as machine vision, medical, life sciences, surveillance, automotive and others. After the acquisition of the company by Macnica Inc. as of October 1, 2020 the company operates under the name Macnica ATD Europe.

About Macnica, Inc.
Macnica was established in 1972 as a semiconductor distribution company headquartered in Yokohama, Japan, and has over 85 sales offices worldwide in eastern Asia, Eu-



rope and the USA. Total number of employees is over 3,900 and its consolidated revenue for fiscal 2021 was approximately US$ 7.6 B.

Macnica is famous for having an excellent engineering team of more than 900 application support engineers, IC designers and software developers with strong focus on providing technical support for its customers including custom design services. Macnica is continuing to extend its presence globally by having successful partners in strategic areas in the electronics market.

More information about Macnica: https://www.macnica.com/global/en/home.html.

