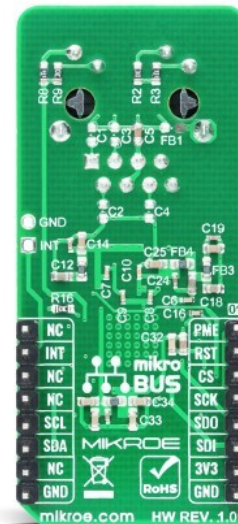


## ETH 3 Click



PID: MIKROE-2850

**ETH 3 Click** is a compact add-on board that contains Ethernet Controller & PHY for embedded applications. This board features the [LAN9250](#), a fully featured 10/100 Ethernet controller that provides performance, flexibility, ease of integration, and system cost control from [Microchip Technology](#). It complies with the IEEE802.3 (Full/Half-Duplex 10BASE-T and 100BASE-TX) Ethernet protocol, IEEE 802.3az Energy Efficient Ethernet (EEE)(100Mbps only), and the IEEE 1588v2 precision time protocol. It also includes an integrated Ethernet MAC and PHY with a high-performance SRAM-like slave interface and large transmit and receive data FIFOs to accommodate high latency applications. This Click board™ is suitable for industrial automation systems, cable, satellite, and IP set-top boxes, VoIP/Video phone systems, home gateways, test and measurement equipment, and more.

ETH 3 Click is supported by a [mikroSDK](#) compliant library, which includes functions that simplify software development. This [Click board™](#) comes as a fully tested product, ready to be used on a system equipped with the [mikroBUS™](#) socket.

**NOTE:** The software support is provided in MPLABX by the Microchip company.

### How does it work?

ETH 3 Click as its foundation uses the LAN9250, a fully-featured high-performance 10/100 Ethernet controller designed for embedded applications, where performance and flexibility are required, from Microchip Technology. It complies with the IEEE 802.3 (Full/Half-duplex 10BASE-T and 100BASE-TX) Ethernet protocol, IEEE 802.3az Energy Efficient Ethernet (100Mbps only), and the IEEE 1588v2 precision time protocol. It also includes an integrated Ethernet MAC and PHY with a high-performance SRAM-like slave interface. The integrated checksum offload

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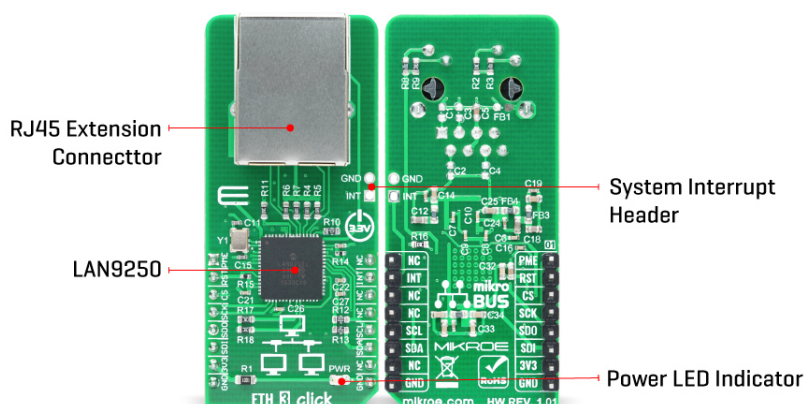


ISO 27001: 2013 certification of informational security management system.  
ISO 14001: 2015 certification of environmental management system.  
OHSAS 18001: 2008 certification of occupational health and safety management system.



ISO 9001: 2015 certification of quality management system (QMS).


engines enable the automatic generation of the 16-bit checksum for received and transmitted Ethernet frames, offloading the CPU task.



On-board modules	LAN9250 - fully-featured high-performance 10/100 Ethernet controller designed for embedded applications, where performance and flexibility are required, from Microchip Technology
Key Features	16-bit 10/100 industrial Ethernet controller & PHY, high performance, compliant with energy efficient Ethernet, Wake on LAN (WoL) support, SPI/SQI/I2C interface support, and more.
Interface	I2C,SPI
Feature	No ClickID
Compatibility	mikroBUS™
Click board size	L (57.15 x 25.4 mm)
Input Voltage	3.3V

## Pinout diagram

This table shows how the pinout on ETH 3 Click corresponds to the pinout on the mikroBUS™ socket (the latter shown in the two middle columns).

Notes	Pin					Pin	Notes
Wake-up Detection	<b>PME</b>	1	AN	PWM	16	NC	
Reset	<b>RST</b>	2	RST	INT	15	<b>INT</b>	Interrupt
SPI Chip Select	<b>CS</b>	3	CS	RX	14	NC	
SPI Clock	<b>SCK</b>	4	SCK	TX	13	NC	
SPI Data OUT	<b>SDO</b>	5	MISO	SCL	12	<b>SCL</b>	I2C Clock
SPI Data IN	<b>SDI</b>	6	MOSI	SDA	11	<b>SDA</b>	I2C Data
Power Supply	<b>3.3V</b>	7	3.3V	5V	10	NC	
Ground	<b>GND</b>	8	GND	GND	9	<b>GND</b>	Ground

## Onboard settings and indicators

Label	Name	Default	Description
LD1	PWR	-	Power LED Indicator
J1	-	Unpopulated	System Interrupt Header

## ETH 3 Click electrical specifications

Description	Min	Typ	Max	Unit
Receiver inputs voltage range	-	3.3	-	V
Ethernet Bandwidth	-	10/100	-	Mbps
Operating Temperature Range	-40	+25	+105	°C

## Software Support

MikroElektronika does not provide software support for this Click board™ in the form of

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libraries, functions, or example code at this moment. The software support is provided in MPLABX by the Microchip company.

- The Quick Start Guide for the ETH 3 Click with the link to the software libraries is available on the [Microchip product page](#).
- For Technical support questions, the customers can submit a support case to Microchip by following the procedure in this [link](#).

## Resources

[mikroBUS™](#)

[mikroSDK](#)

[Click board™ Catalog](#)

[Click boards™](#)

## Downloads

[ETH 3 click 2D and 3D files](#)

[LAN9250 datasheet](#)

[ETH 3 click schematic](#)

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