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Link do produktu: https://www.nobshop.pl/matek-gps-gnss-m9n-g4-3100-ap-periph-dronecan-msp-p-4758.html



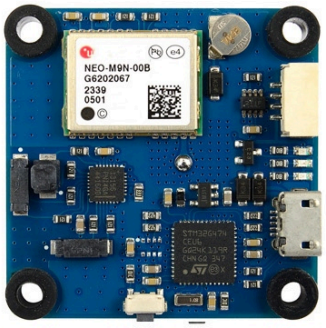
Matek GPS GNSS M9N-G4-3100 AP_Periph DroneCAN MSP

Cena brutto	**399,00 zł**
Cena netto	**324,39 zł**
Dostępność	**Aktualnie niedostępny**
Czas wysyłki	**1 - 3 dni**
Kod producenta	**GNSS M9N-G4-3100**
Producent	**Matek Systems**

Opis produktu

Matek GPS GNSS M9N-G4-3100 AP_Periph DroneCAN MSP





MATEKSYS GNSS M9N-G4-3100

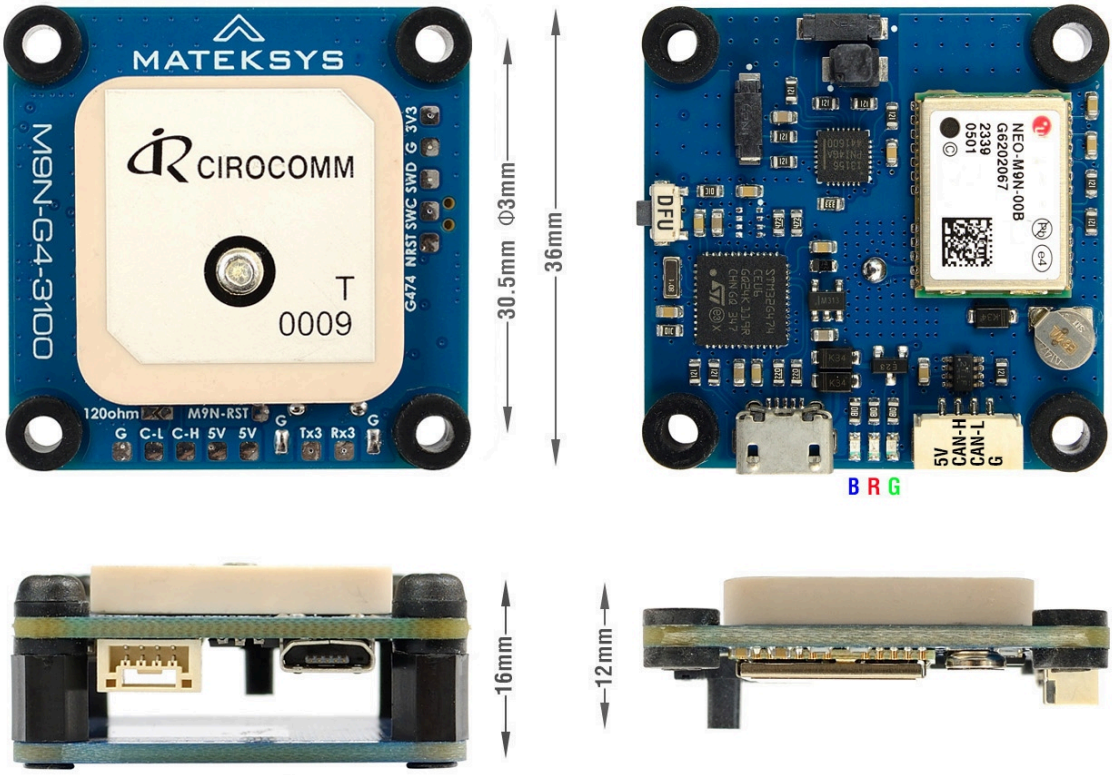
* GNSS NEO-M9N
* Compass RM3100
* Patch Antenna 25*25*4mm
* MCU STM32G474CE, 170 MHz

* CAN, DRONECAN Protocol
* Compatible with CAN FD(5 Mbps) & CAN 2.0(1 Mbps)
* UART3, MSP Protocol

* CAN bootloader LED, Blue
* GPS PPS LED, Green
* 3.3V indicator, Red

* 36*36*12mm

** Firmware: AP_Periph MatekG474-GPS
** Firmware can be updated via G474 DFU mode


MATEKSYS
M9N-G4-3100
CIROCOMM
T
0009
G474 NRST SWC SWD G 3V3
120ohm
M9N-RST
G C-L C-H 5V 5V G Tx3 Rx3 G
30.5mm
Φ3mm
36mm
DFU
NEO-M9N-00B
G6202067
2339
0501
5V CAN-H CAN-L G
B R G
16mm
12mm

- M9N-G4-3100 is based on ArudPilots' AP_Periph firmware, It is a GNSS+COMPASS peripheral with CAN/DroneCAN and UART/MSP interfaces.
- M9N-G4-3100 uses multi-constellation GNSS powered by M9 series , It is a concurrent GNSS receiver which can receive and track multiple GNSS systems. Owing to the multi-band RF front-end architecture all four major GNSS constellations, GPS,Galileo, GLONASS and BeiDou can be received concurrently.
- M9N-G4-3100 integrates an industrial-grade compass PNI RM3100 which provides high resolution, low power consumption, no hysteresis, large dynamic range, and high sampling rates.
- G474 CAN node is compatible with CAN FD(5 Mbps) & CAN 2.0 (1 Mbps)

Specifications:

- GNSS M9N series (GPS, GLONASS, Galileo and BeiDou)
- Magnetic Compass RM3100
- Patch GNSS Antenna 25*25*4mm
- MCU STMG474CE, 170MHz

- No barometer integrated

- UART2, onboard M9N GNSS module

- UART3(TX3), MSP Protocol

- CAN, DroneCAN Protocol

- CAN bootloader LED, Blue

- Fast blinking, Booting
- Slow blinking, working

- GNSS PPS LED, Green

- Green LED OFF after powering on
- blinking(1Hz) when GNSS has 3D fixed
- 3.3V LED, Red
- **Input voltage range: 4~6V (5V pad/pin)**
- Power consumption: 100mA

- Operating Temperatures: -20~80 °C

- 36mm*36mm*12mm

- 16g

- M9N-G4-3100_step.zip

Firmwares:

- ArduPilot AP_Periph: **MatekG474-GPS or MatekG474-Periph**

- Update via DroneCAN GUI Tool or Mission Planner–DroneCAN Tab, load **AP_Periph.bin**

- Update in G474 DFU mode via USB & STM32CubeProgrammer, load **AP_Periph_with_bl.hex**

Includes:

- 1x M9N-G4-3100

- 1x JST-GH-4P to JST-GH-4P 20cm silicon wire

- Mounting base (1x PCB plate, 4x silicon grommets, 4x Nylon standoffs M3x7, 4x Nylon screws M3*8)

Tips and Notes:

- **on M9N-G4-3100, The 3 magnetic coils have little solder paste to avoid the excess to “tilt” them, resulting in some reading inaccuracies of the compass. Any strong impacts will definitely separate them, especially the “tall coil” Sen-Z-f. Pls use this precision module with care.**
- Start with ubx GNSS FW3.01, timepulse is aligned with UTC time and that time is set valid only after leap second is downloaded. That could take up to 12.5 min. Probably PPS LED will not blink immediately after GPS has 3D fixed.
- The M9N-G4-3100 provides the ability to reset the receiver. Bridging “**M9N-RST**” pad to Ground for at least 100 ms will trigger a cold start. RESET will delete all information and trigger a cold start. It should only be used as a recovery option.

- No barometer integrated.

CAN (UAVCAN protocol) Connection:

- **M9N-G4-3100 5V — FC 4V ~ 6V**
- **M9N-G4-3100 CAN-H — FC CAN High**
- **M9N-G4-3100 CAN-L — FC CAN Low**
- **M9N-G4-3100 G — FC G/GND**

FC UAVCAN Parameters(ArduPilot):

- CAN_D1_PROTOCOL -> 1
- CAN_P1_DRIVER -> 1
- GPS_TYPE -> 9 (DroneCAN)
- COMPASS_TYPEMASK -> 0 (make sure DroneCAN Unchecked)

UART (MSP protocol) Connection:

- **M9N-G4-3100 5V   — FC 4V ~ 6V**
- **M9N-G4-3100 TX3 — FC spare UART_RX**
- **M9N-G4-3100 G   — FC G/GND**

ArduPilot (since 4.1.x) FC Parameters:

- *Serialx_PROTOCOL = 32 (MSP) where x is the SERIAL port used for connection on autopilot.*
- *Serialx_BAUD = 115   where x is the SERIAL port used for connection on autopilot.*
- *GPS TYPE = 19 (MSP)*
- *COMPASS_TYPEMASK 0   (or make sure MSP bit is not checked)*

INAV (since 2.6) FC Parameters:

- M9N-G4-3100 is compatible with any flight controller supported by INAV over a spare UART.
- In ports tab, Enable MSP on corresponding UART that M9N-G4-3100 connected, DO NOT enable “GPS” on that UART.   select **Baudrate 115200**.

- *feature GPS*
- *set gps_provider = MSP*
- *set mag_hardware = MSP*
- *set align_mag = CW90, if compass is mounted flat with arrow facing forward, and flight controller arrow is facing forward also.*