NISSAN

immo emulator, for
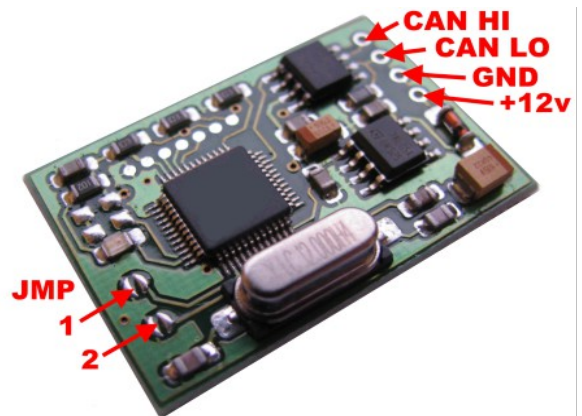
NATS 6 system

Description:

For Nissan cars equipped with NATS 6 system. Supports 500 kb CAN speed.

Installation:

Connect device directly to CAN, attach ground wire and power supply (terminal "15", hot when ignition switched on).

Alignment with ECU:

- Common method – re-learn ECU using diagnostic tool, use PIN code **5523**.
- Another method is to write synchro bytes (MAC) into ECU, default MAC is **3A4F**.
- You can update emulator with data you wish. MAC must match one already stored into ECU, PIN is up to you – any numeric value is good enough.

How to update PIN / MAC into emulator using CAN logger:

- emulator must be in configuration mode - <u>JMP 1 shorted</u>.
- Request actually stored PIN and MAC - `770 5 AA 00 00 00 00` , emulator must respond with `771 5 AC pp pp mm mm` , where pp are 2 bytes of PIN, mm are 2 bytes of MAC...
- Store PIN and MAC into emulator - `770 5 AB pp pp mm mm` , emulator must respond as previously, with actual PIN and MAC: `771 5 AC pp pp mm mm` - response must match the request.
- Remove solder joint - <u>JMP 1 must be open</u> for normal operation.

How to use configurator (using MBcan):

Read or Write emulator:

- emulator must be in configuration mode - <u>JMP 1 shorted</u>.
- on success, background will change color to green. If no success it goes red (must repeat procedure). <u>Emulator must be in configuration mode!</u>
- Remove solder joint - <u>JMP 1 must be open</u> for normal operation.

Some additional notes:

- If NATS-6 unit and emulator both are connected to ECU and their MAC bytes are different, collision possible. Emulator is designed to be as fast as possible (to be faster than NATS-6), theoretically it must answer first (before NATS-6), but anyway.
- If MAC stored into emulator is the same as in NATS-6, everything must be ok. It is reasonable to use this method when need to solve intermittent problems related with wrong or no authorization.

LED on emulator:

- One short blink – 1) on power-up 2) message received.
- Series of short blinks: ECU not authorized (wrong MAC ?).
- Long blink (LED is ON for 1 second): MAC is accepted by ECU, engine start is allowed.