

Mikroprocesorski merno- informacioni sistemi 2

Vežbe 4

WiFi ESP click

- ❑ Sadrži ESP-WROOM-02 modul koji integriše ESP8266EX.
- ❑ Komunikacija sa mikrokontrolerom putem UART-a.
- ❑ Dodatni pinovi: RST i CS.
- ❑ Može da radi u AP (Access Point) modu ili u WiFi client modu.
- ❑ Podržava IPv4/TCP/UDP/HTTP/FTP protokole.
- ❑ Tensilica L106 32-bitni procesor.
- ❑ On-chip SRAM.



AT komande:

WiFi mode:

AT+CWMODE=<mode>

<mode> = 1 – station mod
2 – softAP mod
3 – softAP + station mod

Odgovor: OK ili ERROR

<error code> 1 connecting timeout
<error code> 2 wrong password
<error code> 3 can not found target AP
<error code> 4 connect fail

Connect to (AP) access point:

AT+CWJAP="ssid", "password"

Odgovor:

WIFI CONNECTED
WIFI GOT IP

OK

ili

+CWJAP=<error code>

FAIL

AT komande:

Establish TCP connection:

AT+CIPSTART="CON","IP",port

"CON" – tip konekcije (TCP)

"IP" – IP adresa (api.thingspeak.com)

"port" – broj porta (80)

Odgovor:CONNECT OK ,CLOSED ili ALREADY CONNECTED
ERROR

Send data:

AT+CIPSEND=<n>

<n> = broj bajtova za slanje

Odgovor:

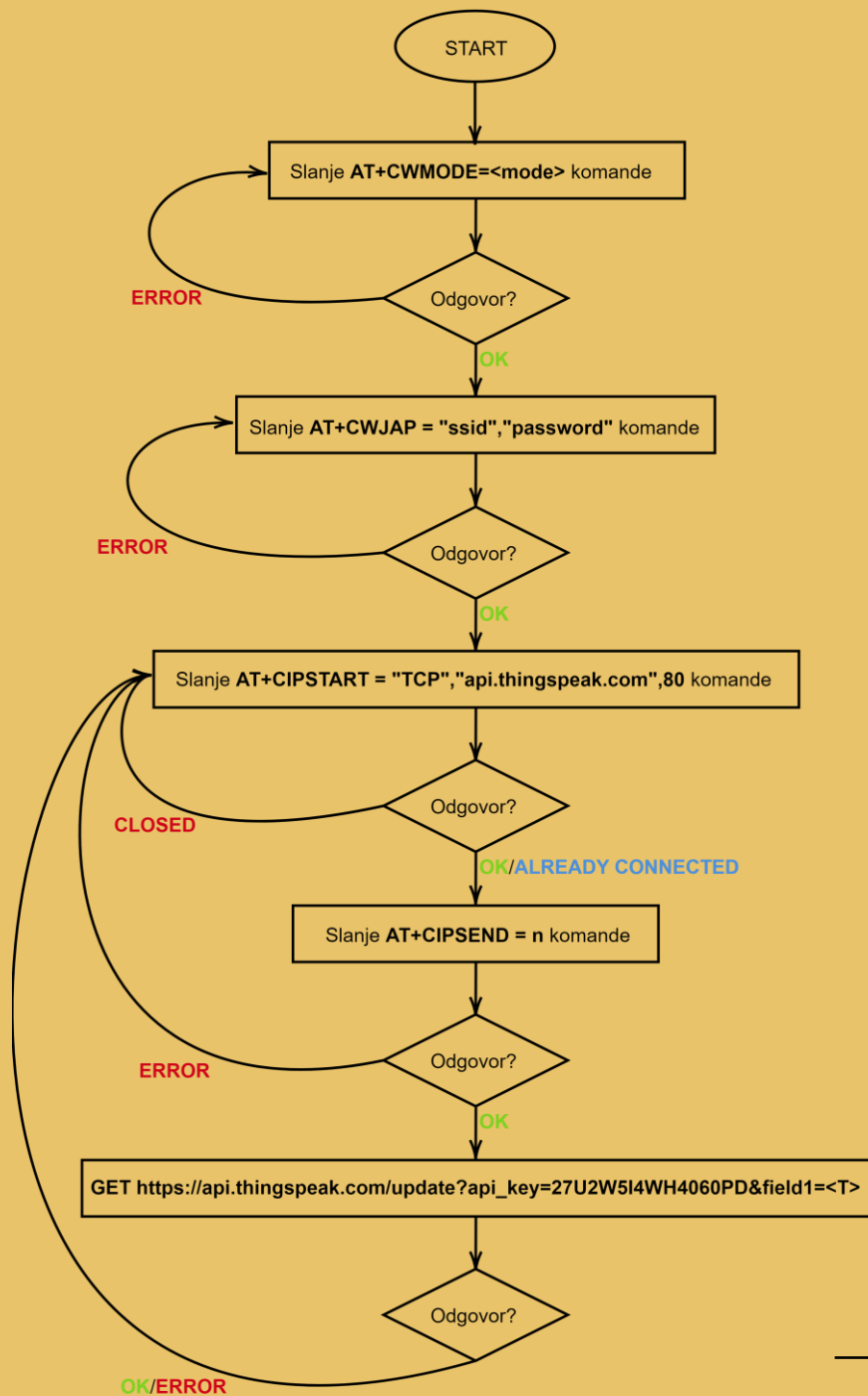
OK ili ERROR

>

ThingSpeak

- ❑ Nakon uspešno obrađene AT+CIPSEND komande potrebno je poslati *Write a Channel Feed* poruku sa odgovarajućim Write API Key podatkom i podatkom o temperaturi, koja je očitana sa MAX30100 senzora.

The screenshot shows the ThingSpeak interface for a channel named 'Test kanal'. The channel ID is 2076047, the author is mwa0000029619756, and the access is Public. The 'API Keys' tab is selected, and the 'Write a Channel Feed' button is highlighted with a black arrow. Below the button, a code editor shows a GET request: `GET https://api.thingspeak.com/update?api_key= Write API Key &field1 Temperatura`. The 'Write API Key' and 'Temperatura' parts of the URL are highlighted with black boxes.



Mašina stanja

- ❑ U svakom koraku potrebno je poslati AT komandu i sačekati odgovor ESP8266.
- ❑ Ukoliko je komanda uspešno obrađena može se preći na sledeći korak – slanje sledeće AT komande.
- ❑ Ukoliko je došlo do greške neophodno je vratiti se na neki od prethodnih koraka.
- ❑ Neuspešno obrađena komanda CIPSEND i slanje podataka zahtevaju ponovno otvaranje TCP konekcije.