
Ethernet fingerprint image scanner EFIS321

User's Manual



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1. Product Specifications

The EFIS321 is Ethernet fingerprint image scanner based on capacitive solid-state MBF200 sensor from Fujitsu. It is designed for easy integration into security and/or service systems.

EFIS321 supports

- 10/100 Mbps Ethernet interface
- 2 access modes, TCP client and TCP server
- finger auto detect
- 3 leds, 2 leds are software-programmable
- power supply over ethernet cable
- default IP address switch (default IP address: 192.168.100.10 port 5000)
- DHCP

1.1 External Dimensions

Length: 80 mm

Width: 60 mm

Height: 15 mm

1.2 Biometric sensor

MBF200 fingerprint capacitive solid-state sensor from Fujitsu

image size: 256x300 sensor array

image resolution: 500 dpi

1.3 Interface

10/100 Mbps Ethernet interface

1.4 Power supply

The range of supply voltage: VDC 8-27V

via Power over Ethernet cable (not 100% compatible with PoE)

typical operating current: 80mA, 12V (100Mbps) and 50mA, 12V (10Mbps)

1.5 Other

operating temperature: -20 to +85 Celcius

surface discharge: 10 kV aerial discharge

surface pressure strength: 1.2 million times

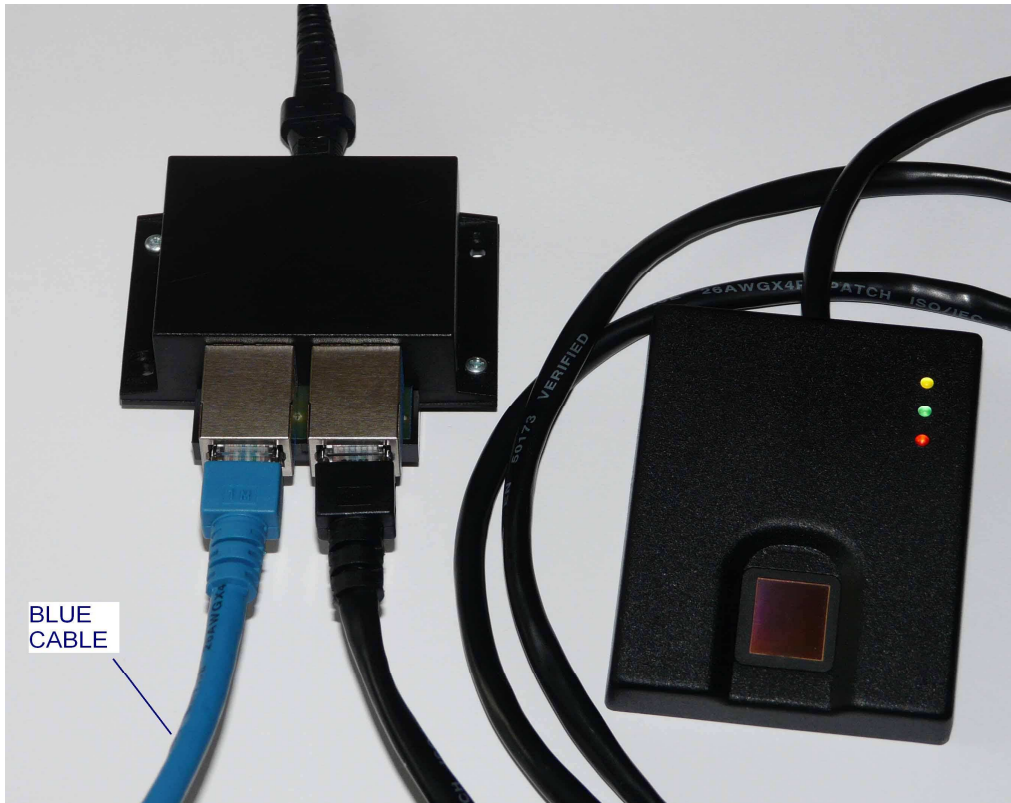
1.6 Software

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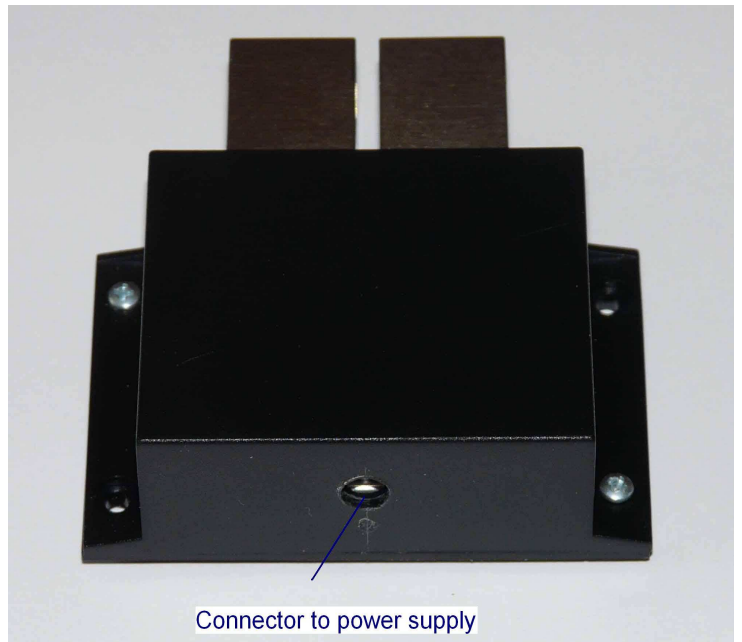
EFISC SDK - Software Development Kit

2. Hardware Installation

2.1 Connectors description



The EFIS321 scanner has Ethernet cable Cat.5E. The cable is used for Ethernet connection and for power supply of device. It uses the special adapter in order to support the power supply over Ethernet cable. The connector with blue cable is connected to Ethernet switch or Ethernet socket in PC. The connector with black cable is used with EFIS321 scanner.



The range of supply voltage: VDC 8-27V
Typical supply DC voltage is 12V.

2.2 Default IP address switch

The EFIS321 scanner has a capability to change the IP address. The winconefis321.exe utility lets to modify the specific parameters. If the IP address of EFIS321 is forgotten, it's possible to set the default IP address by button. The default IP address is 192.168.100.10 port 5000



In order to set default IP address, press the button via hole and keep of it for 2-3 seconds. The EFIS321 scanner must be connected to power line in this time.

The IP address of device is on the label. The label is placed on the box cover.

To read the configuration of Ethernet device you can by winconfefis321.exe utility.

The screenshot shows the 'Configuration utility for EFIS321' window. It contains several sections for configuring the device's network and sensor settings.

- Connect to IP:** 192 . 168 . 100 . 10
- Port:** 5000
- MAC:** 0:1:2a:68:a:2b
- IP address:** 192 . 168 . 100 . 43
- Port:** 5000
- Gateway:** 192 . 168 . 100 . 1
- Mask:** 255 . 255 . 255 . 0
- IP Server:** 192 . 168 . 100 . 101
- Port of server:** 3000
- Device mode:** Passive mode (Server) Active mode (Client)
- Ethernet operation:** 10Mbps 100Mbps
- DHCP:** Yes No
- Version of firmware:** ver:15062009/3/1/0003
- Properties of image:**
 - Image width: 256
 - Image height: 360
- Registers of sensor:**
 - DCR: 4
 - DTR: 24
 - PGC: 15
- Fingerprint detection level:** 3000
- Properties of device:**
 - Turn on of green LED: 2
 - Turn on of red LED: 1
 - Device ID: 1001

Buttons: Read, Write, Reboot, Exit.

Input the default address and press button "Read". When you get the device configuration, you can press button "Reboot". The device will be rebooted and takes the network configuration from flash memory of device.

Note: You must be sure, that the other network devices haven't IP address 192.168.100.10 in your network.

3. Functionality

The EFIS321 scanner provides to get the fingerprint images using Ethernet interface. EFISC Scanner control SDK lets have to simple interface to device.

The scanner supports two modes of work

- active mode (scanner works as TCP client)
- passive mode (scanner works as TCP server)

In active mode the scanner waits the finger on the sensor. When the finger is detected, scanner will try to establish the connection with TCP server. The EFIS321 has TCP server address in current configuration of device in flash memory. TCP server provides the connection and takes the fingerprint image for processing.

In passive mode the scanner works as TCP server and waits a connection from TCP client. If TCP client has the connection from EFIS321 the client application can get the fingerprint image and control other feature of device by SDK.

If your network has DHCP server you can switch on DHCP service in EFIS321.

Note: Better to use the DHCP service in active mode.

4. Contact

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