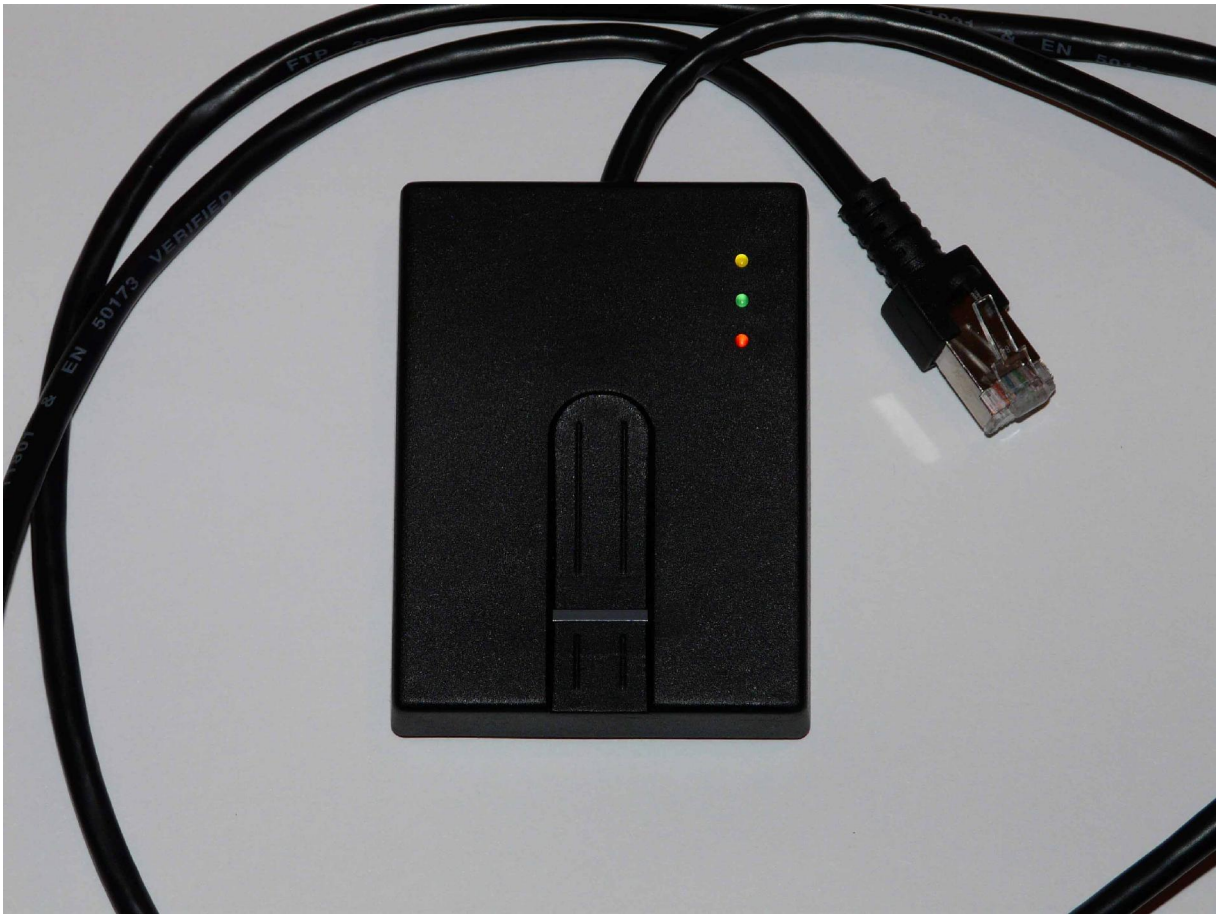
Ethernet fingerprint image scanner EFIS121

User's Manual



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1. Product Specifications

The EFIS121 is Ethernet fingerprint image scanner based on sweeping fingerprint sensor from Atmel. It is designed for easy integration into security and/or service systems.

EFIS121 supports

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

1.1 External Dimensions

Length: 80 mm
Width: 60 mm
Height: 15 mm

1.2 Biometric sensor

Sweeping fingerprint sensor from Atmel
image size: 280x440 sensor array
image resolution: 508 dpi

1.3 Interface

10/100 Mbps Ethernet interface

1.4 Power supply

The range of supply voltage: VDC 9-35V
via Power over Ethernet cable (not 100% compatible with IEEE 802.3af)
typical operating current: 110mA, 12V (100Mbps)

1.5 Other

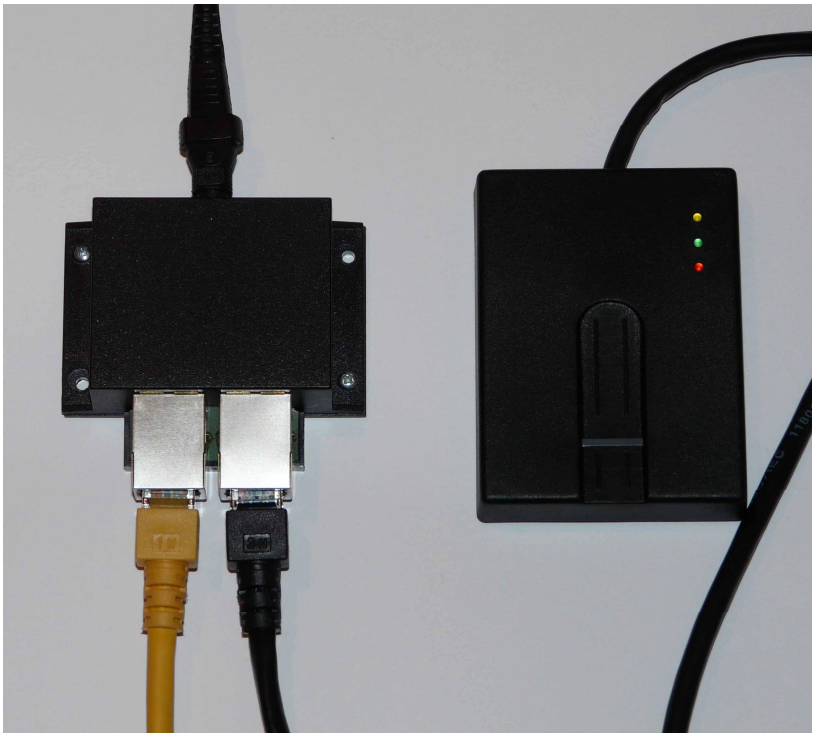
operating temperature: -20 to +85 Celcius
surface discharge: 10 kV aerial discharge
surface resistance: 1.2 million times

1.6 Software

User's Manual
EFISC SDK - Software Development Kit

2. Hardware Installation

2.1 Connectors description



EFIS121 Fingerprint Scanner is powered over the Ethernet cable (Figure 1). Black box with 2 Ethernet inputs provides DC power to the scanner (black cable on the picture) and at the same time connects EFIS121 to the network (yellow cable on the picture). It's possible to use 2 types of passive PoE adapter.

The range of supply voltage: VDC 9-35V
Typical supply DC voltage is 12V.

PoE connector is for EFIS121
LAN connector is for network

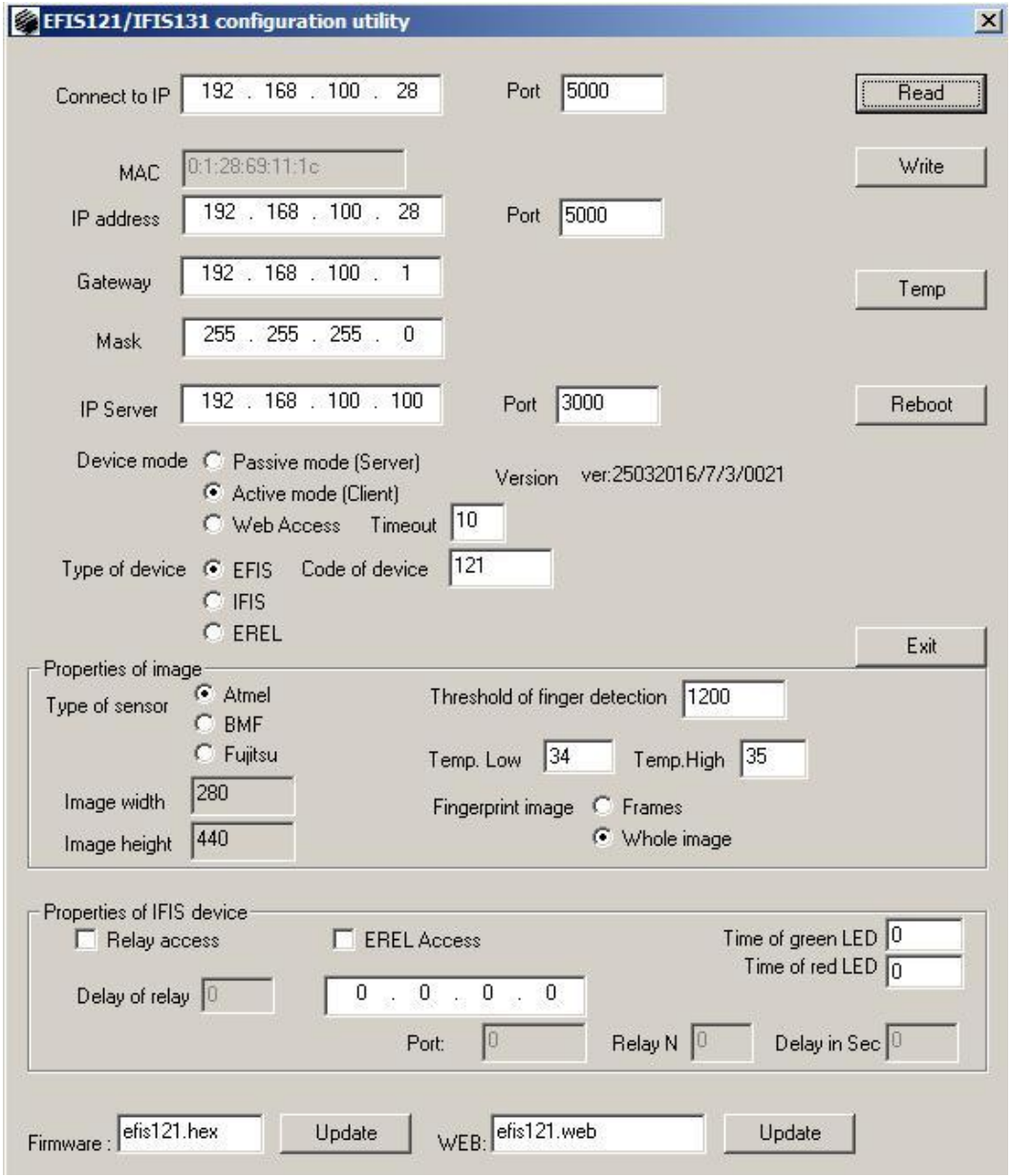
2.2 Default IP address switch

The EFIS121scanner has a capability to change the IP address. The winconefis121.exe utility lets to modify the specific parameters. If the IP address of EFIS121 is forgotten, it's possible to set the default IP address by slide switch. The default IP address is 192.168.100.2 port 5000

In order to set default IP address, to turn switch to right position and then you must apply the power supply.

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 winconefis121.exe utility.



Input the default address (192.168.100.2 port 5000) 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 192.168.100.2 in your network.

3. Functionality

The EFIS121 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 EFIS121 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 EFIS121 the client application can get the fingerprint image and control other feature of device by SDK.

WEB access provide us to get fingerprint image using http request .

Configuration for WEB access (use the utility for configuration)

Device mode: WEB access (x) Timeout [30] seconds.
Fingerprint image: Whole image [x]

(Remark: You can set the timeout to 10 or 20. It's time of access to last image of finger. if you input 0, you can take current fingerprint image only once.)

1. The access to fingerprint image by WEB service

http://192.168.100.168/cgi-bin/getimage.cgi?filename=finger.bmp&tmp=xxxx
where xxx - any number

2. To get the quality of last fingerprint
http://192.168.100.168/cgi-bin/getimage.cgi?quality

3. To get access to homepage

http://192.168.100.168/
or
http://192.168.100.168/index.html

4. Service functions

- switch on the green led
http://192.168.100.168/cgi-bin/control.cgi?led=green,on

- switch off the green led
http://192.168.100.168/cgi-bin/control.cgi?led=green,off

- switch on the red led
http://192.168.100.168/cgi-bin/control.cgi?led=red,on

- switch off the red led
http://192.168.100.168/cgi-bin/control.cgi?led=red,off

If your network has DHCP server you can switch on DHCP service in EFIS121 (**optional**). Note: Better to use the DHCP service in active mode.

4. Contact

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