

TCP3

AUTHENTICATION / RELEASE STATION



**From secure printing to kiosks and industrial robotics,
TCP3 enables user authentication and access control security for devices that lack a USB port.**

ELATEC's RFID readers enable organizations to extend the use of their employee identification badge to authenticate for applications beyond physical access. This includes most multi-function printers and some single-function printers. Unfortunately, not all printers and devices have support for the direct connection of a USB proximity card reader, such as those with no USB port. In these situations, the ELATEC TCP3 authentication / release station extends ID card-based capabilities such as authentication and pull printing to any printing device regardless of the manufacturer, make or model.

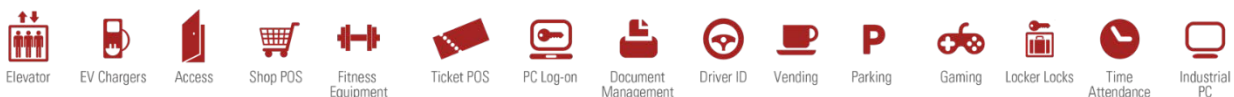
HOW IT WORKS

TCP3 was designed to minimize information technology support costs associated with additional IP or MAC addresses while consuming only one network drop from its Host port. TCP3 has two Ethernet connectors designated as Host and Device. The Device port enables connection of a printer or other peripheral without requiring a second network drop. It is configurable to behave as a network router where the converter and connected device consume only one network address. Much like your home router, anything connected to the device port gets its own internal IP address and communicates through TCP3.

TCP3 was designed around ever-increasing network performance requirements for high speed graphic printers and

engineering plotters allowing simultaneous communication of print data and printer status at gigabit speeds. This design also considers the frequent challenge of finding an open power source in the often-cluttered print room and is optionally available with Power over Ethernet as the source of power.

Up to two USB readers can be connected and their data independently communicated to an authentication server over Ethernet via UDP or HTTPS using either client or server communication modes. This is useful in situations where customers have more than one ID card technology deployed and need to support a mix of RFID, magnetic stripe or optical bar-coded cards.



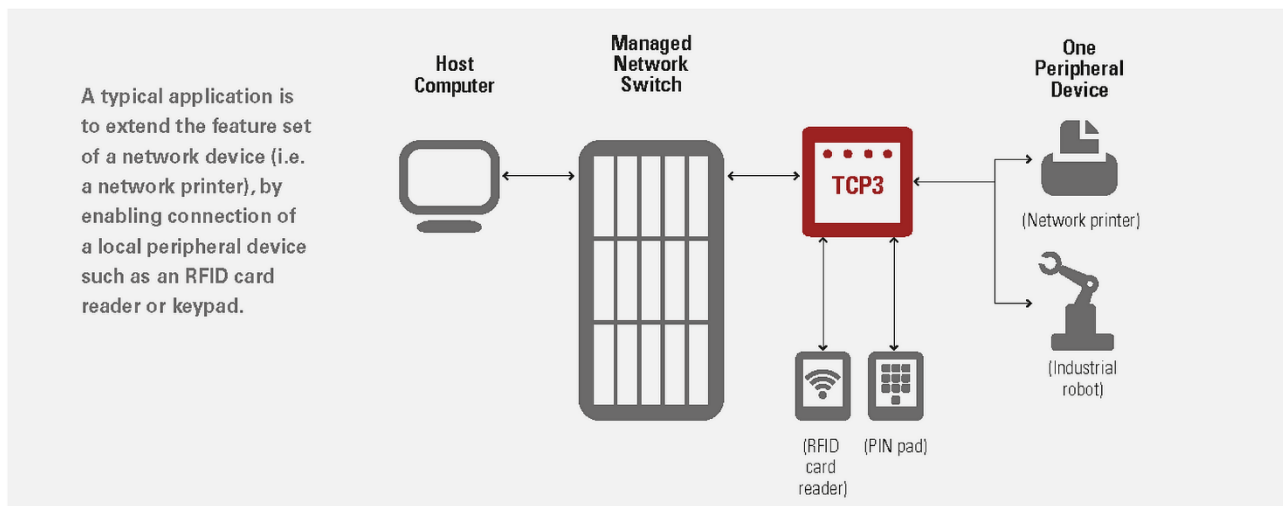
MULTIPLE APPLICATIONS

While primarily designed for the secure printing market, TCP3 can also be used to control access to devices which require special operator training and certification such as

sophisticated manufacturing equipment. TCP3 would communicate RFID card data to the authenticator responsible to unlock such equipment.

TCP3 AUTHENTICATION / RELEASE STATION SUPPORTS USB 3.0 & GIGABIT ETHERNET NETWORKS

Whichever the application, TCP3 provides unmatched security, performance, device management and flexibility – welcome benefits for any IT network and networked devices.



Security

- + Send card data via UDP / SSL / TLS1.2 or HTTP / HTTPS
- + Unique factory-programmed password for each device
- + Built on Linux 4.14 platform with latest security updates
- + Security updates available quarterly

Flexibility

- + Built on Linux platform
- + Private labeling available
- + Tailored to customer needs
 - Able to install customer applications
 - Offered as a base platform for customers to build their own product
 - Ability to custom tailor memory footprint (up to 2 TB)

Performance

- + Gigabit Ethernet (GbE) or 1 GigE
- + Faster CPU (64-bit ARM Cortex CPU with v8 core)
- + Memory
 - RAM: 2 GB
 - Flash: 8 GB
 - SD expansion: up to 2 TB (SDXC)
- + Improved cross subnet device discovery

Device Management

- + Printer on DHCP or Static IP
- + Remote TCP3 firmware upgrade of the converter
- + Enhanced TCP3Config Windows discovery and configuration tool
- + Remote configuration of attached TWN4 reader (available with firmware version STD3.0.1.0 and later)

With its feature set developed directly from ELATEC customer input, TCP3 is ready to connect any device, regardless of make or model, onto the network for user authentication and access control.

Software

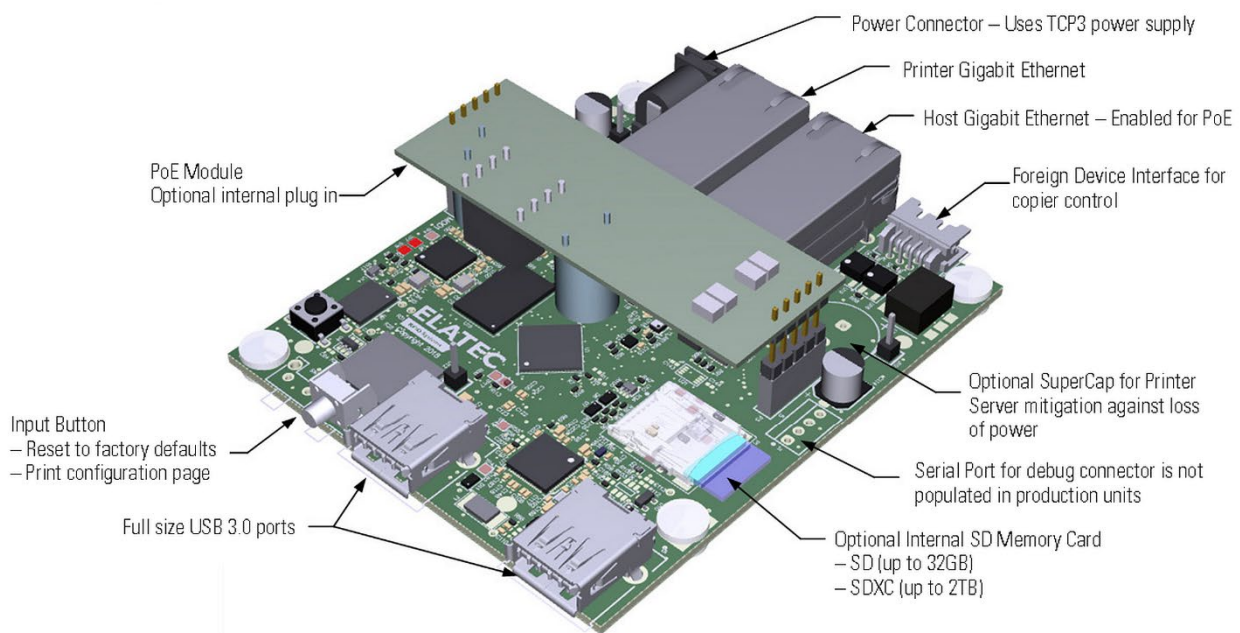
- + Software hooks to use the converter as a print server
- + USB whitelist for approved devices
- + TCP, UDP, HTTP, HTTPS, IPV4, DHCP, SSL/TLS1.2, Syslog
- + Extensive status logging
- + 2 GB SDRAM, 8 GB Flash – up from 1 GB SDRAM, 4 GB Flash
- + Optically Isolated Input and Outputs (Foreign Interface Connection)
- + 4 LEDs which use multi-color to indicate Power, Ready, Busy and Status
- + JTAG, Tag-Connect and serial port for debug

Hardware

- + Host and printer ports support Gigabit Ethernet (GbE)
- + Supports two (2) 3.0 USB ports
- + Input button triggered features
- + Reset to factory defaults
- + Print TCP3 configuration page

OPTIONAL

- + Power over Ethernet (PoE) Module
- + Internal SD memory card for print server (SDHC up to 32 GB, SDXC up to 2 TB)
- + Supercapacitor (SC) to manage power interruptions



QUICK AND EASY CONFIGURATION

The configuration of the converter can be accomplished using either the converter's web pages or using the Windows-based configuration tool TCP3Config. This tool was designed with fleet management in mind and can discover all converters on a given subnet. It can also search specific subnets to discover additional converters. Once a configuration has been created and saved, it can be distributed to all selected converters at once.

FREQUENTLY ASKED QUESTIONS

Q: Is TCP3 a simple plug-and-play device or do I need to configure any settings before use?

A: TCP3 is default configured to operate on a network with a DHCP server and with a printer that is configured for DHCP. If there is a preference to operate with static IP addresses, there may be a need to change some configuration settings.

Q: Is there an easy way to find the TCP3 IP address if I cannot connect my PC to the network?

A: There are two possible ways to discover the TCP3 IP address on the network:

a) If a printer is connected, a TCP3 configuration page can be invoked by pressing and holding the input button near the USB ports. While the button is held, the busy LED will blink once per second. Release the input button after 3 blinks of the busy LED and a TCP3 configuration page will be released to the connected printer.

b) A PC can be connected to the printer port of TCP3. The PC must be configured for DHCP and then TCP3 will provide it with an IP address. From the PC, open a web browser and enter this IP address: 192.168.50.1:81. This will open the home page of TCP3. Enter "admin" as the user name. For firmware level STD3.0.0.0, enter "admin" as the password. For any other firmware version, use the last 8 characters of the Host MAC address entered all as uppercase with no spaces. The MAC address is printed on the back of the TCP3 enclosure. Navigate to the Network web page where the IP address will be displayed.

Q: Can I assign a static IP to the TCP3 instead of using DHCP?

A: Yes. Simply navigate to the Network page and select Static, then enter the static IP address, subnet mask. Also configure DNS, WINS and NTP as required. Select Apply, then reboot.

Q: Can I assign a static IP to the printer instead of using DHCP?

A: Yes. Simply navigate to the Network page and enter the printer's Static IP address in the Printer field. Select Apply, then reboot.

Q: How do I access the TCP3 web page?

A: The TCP3 web page is accessed using port 81. HTTP typically uses port 80 but TCP3 redirects all port 80 traffic to the connected printer. To reach the TCP3 web page, simply enter TCP3's IP address and follow it with colon 81. For example, 192.168.1.20:81. If HTTPS is enabled, port 442 is used instead so the example address becomes 192.168.1.20:442.

Q: How can I access the web page of the printer connected to TCP3?

A: As mentioned in the previous question, to reach the printer, simply enter the IP address of TCP3. TCP3 will forward all HTTP traffic directly to the printer.

Q: The connected printer is configured for static IP but TCP3 does not recognize it. How can I get it to connect to TCP3?

A: The usual issue here is that the printer is configured for Static IP but TCP3 is configured for DHCP and wants to provide the printer with a different IP address. Log on to the TCP3 Network page / Printer IP and enter that exact IP address the printer uses. Select Apply, then reboot and the printer should connect. Note: The printer IP address cannot belong to the same subnet as that of the TCP3 IP address.

Q: Can I still use SNMP to pull status information from the printer?

A: Yes. TCP3 only uses few port numbers for internal purposes. All other network traffic such as SNMP is redirected to the connected printer unaltered.

Q: I am not able to find the TCP3 device using the TC3PConfig tool. What am I doing wrong?

A: The most likely cause is that the PC running the TCP3Config tool is on a different subnet. If the subnet is known, a text file can be created which lists the subnet of the converter(s). That file can be uploaded to TCP3Config so it knows where to search and then the converter will be discovered. Refer to question #2 if the IP address of the converter is not known.

Q: What are the different LED conditions on TCP3? I see an orange light on the Status LED, what does that indicate?

A: There are 4 status LEDs on the front of TCP3:

- Power LED displays Green when power supply is connected and Orange if there is a power fault.
- Ready LED displays Green in normal operation. It will turn off during other conditions.
- Busy LED displays Red when the device is initializing. It will blink during a software upgrade or when the input button is pressed. It is off at other times.

- Status LED displays Green when all conditions are normal. I will display Red if there is a loss of the host network and Orange if it is not able to communicate with the printer.

Q: What is NTP? When do I need to configure the TCP3 for an NTP server?

A: NTP stands for Network Time Protocol which is an internet standard for time. The TCP3 status log timestamps each event based on which source of time is available. It is preferred to record events using local time but if no time source is available, it will record time starting from its first power up. Please configure NTP on the Network page and set the local time zone on the System page.

Q: How can I reset the TCP3 to default settings?

A: Factory default can be achieved in a few ways:

- Use the input button next to the USB ports. Press and hold the input button while counting the number of times the Busy LED blinks. Release after 8 blinks and TCP3 will reset back to factory default with the exception of the device password.
- Default can also be achieved by selecting Default on each of the TCP3's individual web pages. Select Apply, then reboot after all pages have been reset. The only way to reset an unknown device password is to reload firmware using either a USB drive or remotely from TCP3Config or from the device web page.

Q: Why doesn't my print job release when I swipe the card?

A: There are a number of possible causes:

- The card reader is not correctly configured for the card in question.
- The IP address or port number of the host server is not correctly configured in TCP3.
- TCP3 or the host server is offline.
- In such a situation, the issue can be resolved quickly by reaching out to the ELATEC support team at: support-rfid@elatec.com

Q: Can the firmware/configuration of multiple TCP3's be updated over the network?

A: Individual converters can be updated from either the TCP3 System web page or TCP3Config. Use TCP3Config to upgrade multiple TCP3 devices.

Q: Can the firmware/configuration of TWN4 card readers attached to multiple TCP3's be updated over the network?

A: Individual TWN4 readers can be updated from either the TCP3 System web page or TCP3Config. Use TCP3Config to upgrade multiple TWN4 devices.

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