REDZ SMART COMMUNICATION

abcZ

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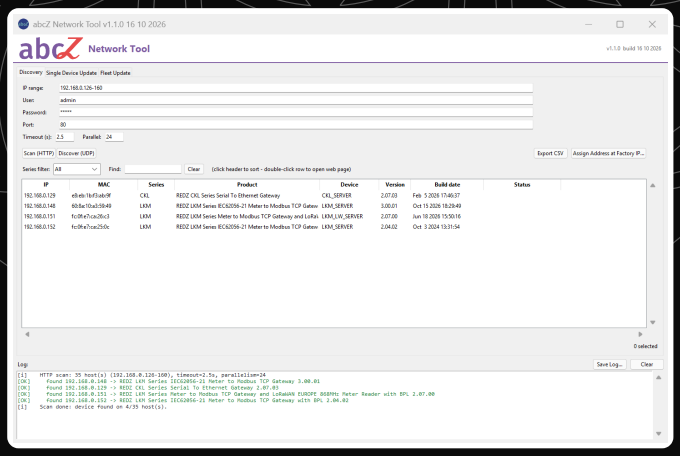
abcZ Network Tool for REDZ Devices

Discovery: scan an address range, also behind routers.

Firmware update of one device or a whole list, with an optional pilot device that goes first.

A new address for a device waiting at its factory address 192.168.1.1.

A Windows PC. No installation: one program file, abcZ_Network_Tool.exe.



abcZ Network Tool finds REDZ devices on your network and shows the product, firmware version and build date of each one.

Six Functions

1. **Discovery:**
   Scan (HTTP) tries every address of a range and also finds devices behind a router, as long as the PC can reach those addresses.

2. **Single device update:**
   The Single Device Update tab updates the firmware of one device.

3. **Fleet update:**
   The Fleet Update tab updates a list of devices.

4. **Device actions:**
   restart, restore the factory configuration, set a fixed IP address.

5. **Factory address:**
   give a device waiting at its factory address 192.168.1.1 a new address from a PC on another network.

6. **Command line:**
   command line mode with exit codes, for scripts.

Key Figures

6 families
TLM-LM, TLM-LW, HUR, STG, CKL and LKM

v2 and v3
generation 2 and 3 firmware

One file
no installation

Port 80
HTTP, port 80 unless you choose another

Sent once
the bank switch, never repeated blindly

4 at a time
devices updated in parallel, unless you change it

Main Features

Discovery

- Scan (HTTP) tries every address of a range and also finds devices behind a router, as long as the PC can reach those addresses.
- Find filters while you type: only rows that contain the text in any column stay visible, for example part of an address, a MAC address, a product name or a version.
- Export CSV writes the selected rows to a device list file.

Updates

- With a pilot, the tool first updates that device alone while the others wait.
- The devices without a pilot, or after a successful pilot, are updated Parallelism (jobs) at a time; as one finishes, the next starts.
- Tick Force (flash even if version matches) to write the image anyway, for example a newer build with the same version number.
- With Factory reset after update ticked, the tool restores the device's factory configuration, but only after the new firmware is confirmed.

Safety checks

- The expected product name, the image variant against the device, the checksum from the firmware package's release file.
- A stop at any of the first five steps leaves the device untouched.
- The bank switch is sent once and never repeated blindly; the result is the version and build date read back from the device.

Results

- Every device of an update ends with one result.
- At the end the log shows a summary: one line per device with its address, its versions before and after (the after version as in the After column), its time and its result, and a total of the devices that are done or skipped and of those with a problem.
- When Write report CSV is ticked, the tool writes a report file after the run and names it in the log.

Assign Address at Factory IP

- Give a device waiting at its factory address 192.168.1.1 a new address from a PC on another network.
- The tool adds the temporary address, gives the device its new address, and removes the temporary address again; if that clean-up cannot be confirmed, the log says so and the tool offers the clean-up again at the next start.
- That is why it shows you the product, version and MAC address in the Confirm device question, with the new address, before it writes.
- Administrator rights only for assigning an address at the factory IP.

Good to know

- The program file is not digitally signed; if SmartScreen stops it, choose More info and then Run anyway.
- The user name and password travel with every request over plain HTTP, as a web browser does.

Technical Data

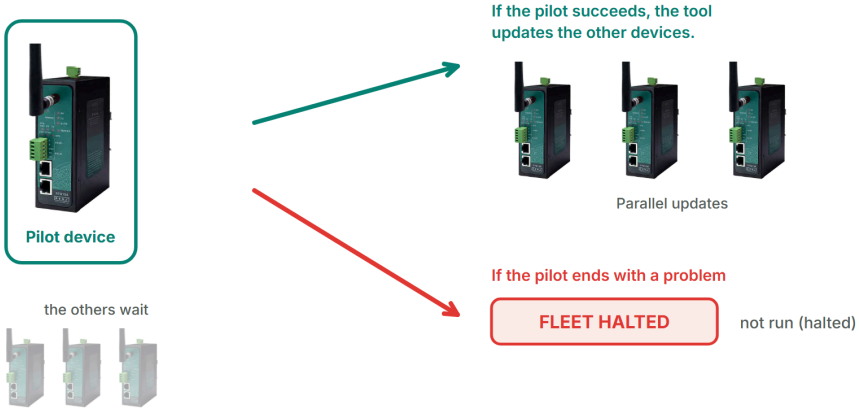
Computer	A Windows PC.
Installation	No installation: one program file, abcZ_Network_Tool.exe.
Connection	Network access from the PC to the devices' web servers (HTTP, port 80 unless you choose another).
Discover (UDP)	Discover (UDP) sends a broadcast to UDP port 30303 and listens for the answers.
	Discover (UDP) finds only devices in the PC's own subnet.
Device login	The user name and password of the devices' web interface.
Administrator rights	Only for assigning an address at the factory IP.
Scan	Parallel (default 24) is how many addresses the tool asks at the same time.
Fleet	How many devices are updated at the same time; 4 unless you change it.
Firmware	REDZ device families TLM-LM, TLM-LW, HUR, STG, CKL and LKM, generation 2 and 3 firmware.
Command line	When you update a list of devices (–csv), the tool ends with 0 if every device ended with exit code 0, and with 1 otherwise.

Supported Device Families

	 TLM-LM	 TLM-LW	 STG	 HUR	 CKL	 LKM
Known family: found, identified and updated	●	●	●	●	●	●
Declares its build variant from firmware 3 on	●	●	●			●
Compared by its product name				●	●	
Version 2 firmware: receives commands, gives no answer				●		
I/O modules read from the device				●		

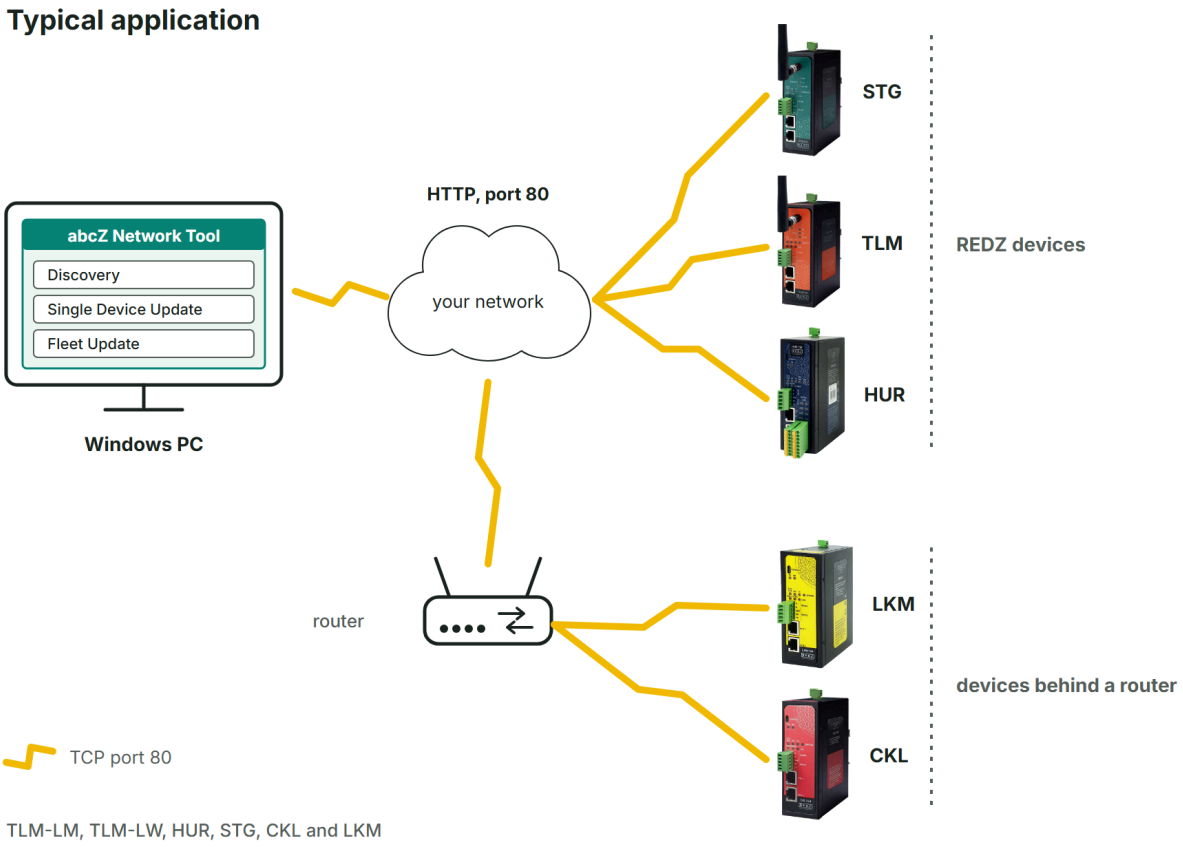
TLM-LM and TLM-LW share the name "REDZ TLM Series" but are different firmware families.

Fleet Update: Pilot device



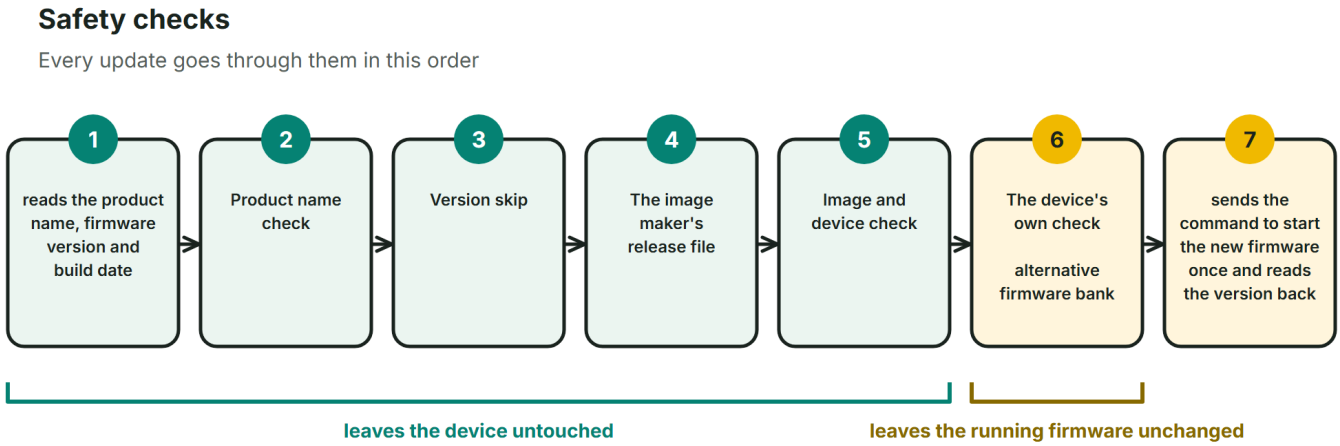
If the pilot succeeds, the tool updates the other devices.

Typical Application



The tool runs on a Windows PC and reaches the REDZ devices over your network, also devices behind a router, as long as the PC can reach their addresses.

The Update Steps



Before abcZ Network Tool writes anything to a device, it runs several checks.

Download. Version 1.1.1 as abcZ_Network_Tool-1.1.1.zip (one program file, not signed) on https://redzsoftware.com/abcz-network-tool/, with the user manual.