1 LED status indicator and blinking behavior



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Contents of this document

This document describes the lighting and blinking behavior of the LED diodes installed in mGuard devices (FL/TC MGUARD RS2000/RS4000).

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1.1 Description of LEDs

With the help of built-in LED diodes, mGuard devices indicate different system states. This can be status, alarm or error messages.

The states are indicated by permanent or temporary lighting or blinking of the LEDs. The displayed LED pattern can also represent a combination of different system states.



NOTE: Since several system states are indicated by the LEDs not clearly, only temporarily or in combination with other system states, the log files of the mGuard device must also be checked!

LED diodes of FL/TC MGUARD (RS200x/RS400x) devices:

P1	Stat	Mod	Info2 (Sig)
•	•	•	•
•			•
P2	Err	Fault	Info1

P1 / P2

LEDs *P1* and *P2* indicate which of the two power supplies is connected (devices of the FL/TC MGUARD RS2000 series: only *P1* is available).

Info 2 / Info 1 (the LED Sig is not in use)

Active VPN connections or (as of Version 8.1) active firewall rule records can be indicated via the LEDs *Info2* and *Info1*. The activation of the LEDs by a certain VPN connection or a certain firewall rule record is configured on the mGuard interface in the menu item **Management >> Service Contacts**.

The following states will be indicated:

ON	The VPN connection is established / the firewall rule record is set.
Blink	The VPN connection will be established or released or has been stopped/disabled by the remote peer.
OFF	The VPN connection is stopped/disabled on both peers.

Stat / Mod / Err / Fault

The LEDs *Stat*, *Mod*, *Err* and *Fault* indicate system states (status, alarm or error messages) (see Table 1-3).

In addition to the alarm messages, an illuminated **Fault LED** generally also indicates that the device is currently not in operation mode.

LAN / WAN

The LAN/WAN LEDs are located in the LAN/WAN sockets (10/100 and duplex LED).

The LEDs Indicate the ethernet status of the LAN or WAN port. As soon as the device is connected to the relevant network, a continuous light indicates that there is a connection to the network partner in the LAN or WAN. When data packets are transmitted, the LED goes out briefly.

If all LAN/WAN LEDs are illuminated, the system is booting.

Bar graph and SIM1/2 (Mobile)

LED	State and Meaning					
Bar	LED 3	Тор	Off	Off	Off	Green
graph	LED 2 Middle LED 1 Bottom		Off	Off	Green	Green
			Off	Yellow	Yellow	Yellow
	Signal stre	ngth (dBm)	–113 111	–109 89	-87 67	-65 51
	Network re	ception	Very poor to none	Sufficient	Good	Very good
SIM 1	Green On Blinking		SIM card 1 active No PIN or incorrect one entered			
SIM 2	Green	On Blinking	SIM card 2 ac No PIN or inc	ctive orrect one ente	ered	

Table 1-1 LEDs on TC MGUARD RS4000 3G and TC MGUARD RS2000 3G

1.2 LED lighting and blinking behavior

 Table 1-2
 Description of the lighting and blinking behavior of the LED diodes

Heartbeat	The blinking behavior is similar to a heartbeat, in which two strokes are performed in quick succession, followed by a short break.
Running light	Three lights form a continuously repeating running light from left to right and back again.
Blink 50/1500	Flashing with 1500 ms break (50 ms on, then 1500 ms off)
Blink 50/800	Flashing with 800 ms break (50 ms on, then 800 ms off)
Blink 50/100	Flashing with 100 ms break (50 ms on, then 100 ms off)
Blink 500/500	Constant blinking (500 ms on / 500 ms off)
Morse code	The blinking behavior shows the Morse code 'SOS', in which the blink-
()	ing behavior "3x short, 3x long, 3x short" is repeated continuously.
ON	The diode lights up permanently.
ON (n sec)	The diode lights up permanently for the indicated time (in seconds n)

1.3 Representation of system states

The system states (status, alarm or error messages), which are displayed by the LED's lighting and blinking behavior, are shown in Table 1-3.

Table 1-3	System states of FL/TC MGUARD devices re	presented by lighting a	and blinking behavior of the LEDs
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STAT	MOD	Info 2 (Sig)	ERR	FAULT	Description of the system state
Heart- beat					The system status is OK.
			ON		A severe error has happened.
ON (12 sec)	ON (3 sec)		ON (12 sec)	ON (12 sec)	The system is booting.
Morse code					The license to operate this firmware is missing.
Morse code			Morse code		Bootloader replacement failed due to hardware error.
				ON	A power failure was detected.
				ON	No connectivity on WAN interface (link supervision configurable on device)
				ON	No connectivity on LAN interface (link supervision configurable on device)
				ON	No connectivity on LAN 1–4 interface (link supervision configurable on device)
				ON	No connectivity on DMZ interface (link supervision configurable on device)
				ON	Power supply 1 or 2 failed (alarm configurable on device)
				ON	Temperature too high / low (alarm configurable on device)
				ON	(Redundancy) Connectivity check failed (alarm configurable on device)
				ON	(Modem) Connectivity check failed (alarm configurable on the device)
			ON (3 sec)		ECS: The ECS is incompatible.
			ON (3 sec)		ECS: The capacity of the ECS is exhausted.

mGuard

Table 1-3	System states of FL/TC MGUARD devices represented by lighting and blinking behavior of the LEDs
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STAT	MOD	Info 2 (Sig)	ERR	FAULT	Description of the system state
			ON (3 sec)		ECS: The root password from the ECS does not match.
			ON (3 sec)		ECS: Failed to load the configuration from the ECS.
			ON (3 sec)		ECS: Failed to save the configuration to the ECS.
	ON				PPPD: The internal modem got a connect (set by pppd).
	Blink 50/1500				PPPD: The internal modem is armed and expecting a dial in.
	Blink 500/500				PPPD: The internal modem is dialing.
			ON (2 sec)		RECOVERY: The recovery procedure failed.
ON (2 sec)					RECOVERY: The recovery procedure succeeded.
ON				ON	FLASH PROCEDURE: The flash procedure has been started. Please wait.
Running light	Running light	Running light		ON	FLASH PROCEDURE: The flash procedure is currently executed.
Blink 50/800	Blink 50/800	Blink 50/800		ON	FLASH PROCEDURE: The flash procedure succeeded.
	ON		ON		FLASH PROCEDURE: The flash/production procedure failed.
			Blink 50/100 (5 sec)		FLASH PROCEDURE WARNING: Replacing the rescue system. Do not power off. When the blinking stops, the replacement of the rescue system is over.
			ON		FLASH PROCEDURE: The DHCP/BOOTP requests failed.
			ON		FLASH PROCEDURE: Mounting the data storage device failed.
			ON		FLASH PROCEDURE: The flash procedure failed.
			ON		FLASH PROCEDURE: Erasing the file system partition failed.
			ON		FLASH PROCEDURE: Failed to load the firmware image.
			ON		FLASH PROCEDURE: The signature of the firmware image is not valid.
			ON		FLASH PROCEDURE: Failed to load the install script.
			ON		FLASH PROCEDURE: The signature of the install script is not valid.
			ON		FLASH PROCEDURE: The rollout script failed.