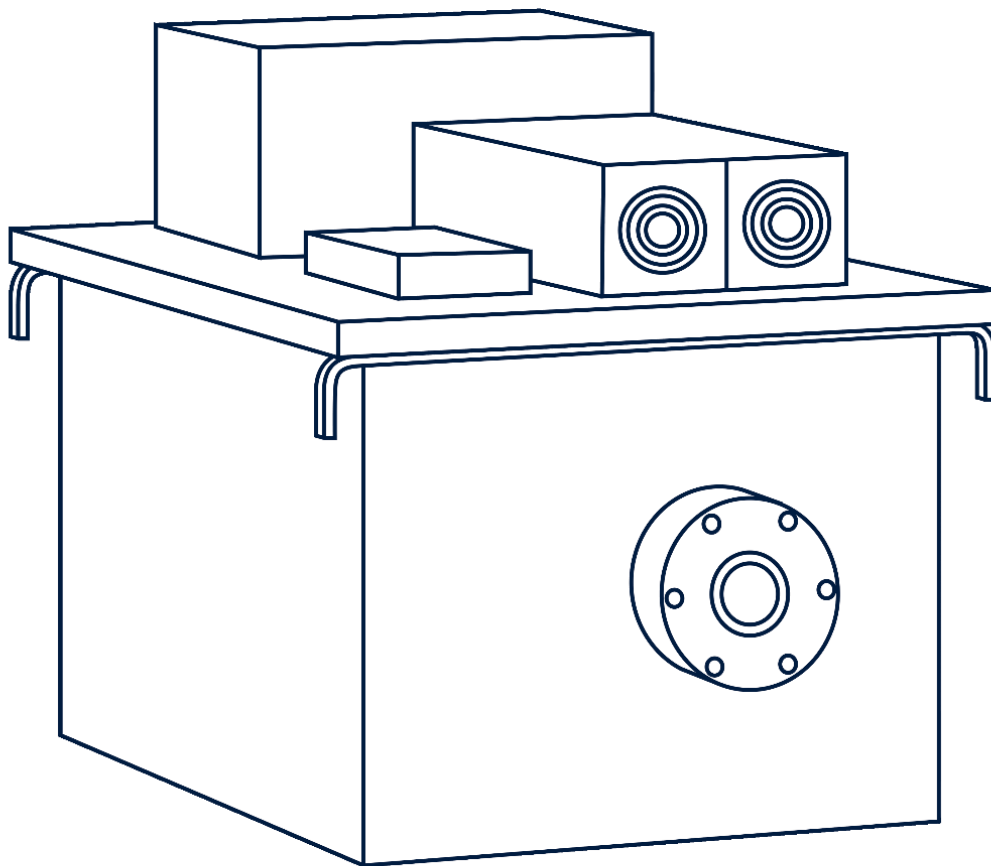


Integrator manual

# T3 Status LED

**Details of status signaling through  
LED**



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# Content

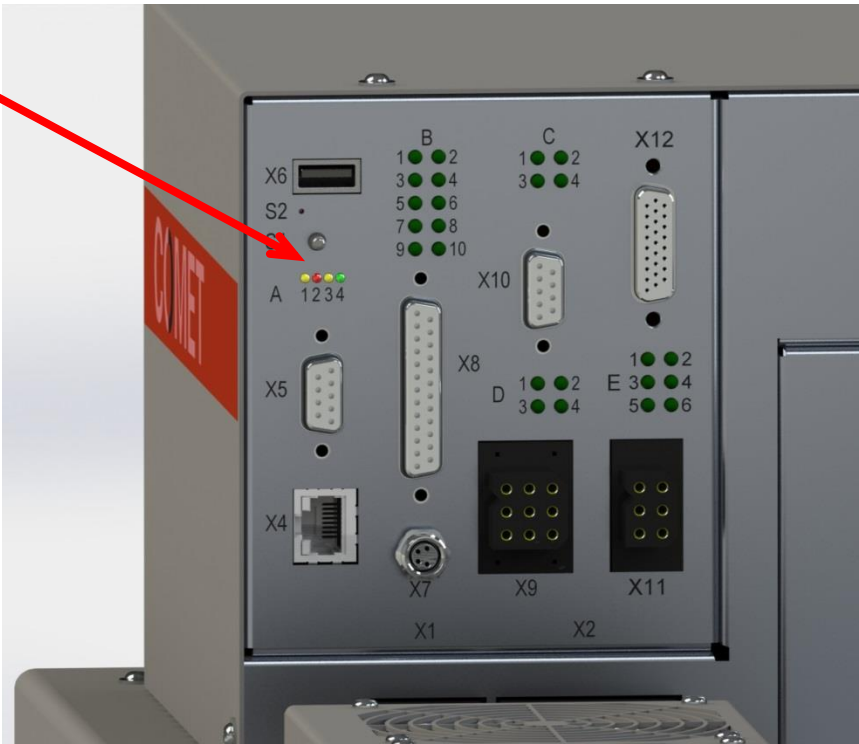
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# 1 Introduction

This document describes the status LEDs in the system. There are four LEDs on the Interface-Controller and four LEDs on each Powercell to show the actual state on the components.




## 2 Interface Controller (IFC)

LED A1 ... A4



### 2.1 LED A1: Power Status

















The LED A1 cannot be changed has it is connected to Supply Voltage.

Description				
A				<b>Power</b> The green LED shows that the IFC is powered.
	1	2	3	

## 2.2 LED A2: User Space Status

The purpose of this LED is to show the status of the applications and indicates to the user if the applications could be started correctly or not.

















**NOTE:** This LED is an RGB-LED and may show different states at the same time.

Description				
A				
	1	2	3	4
	<b>Booting in Normal Operation</b> When the system is booting in normal operation, the LED A2 blinks green.			
A				
	1	2	3	4
	<b>Booting Special Mode</b> When the system is booting in special mode (initial-setup / update), the LED A2 blinks blue.			
A				
	1	2	3	4
	<b>Boot Failed / Severe Error</b> When the system couldn't boot correctly or at a detected severe operating error:			
	<ul style="list-style-type: none"><li>the LED A2 blinks red (5Hz @ boot error of the basics)</li><li>the LED A2 blinks red (2Hz @ general boot error)</li><li>the LED A2 blinks red (1Hz @ severe error present)</li></ul>			
A				
	1	2	3	4
	<b>Boot Success</b> When the system could boot correctly, the LED A2 is turned green.			

## 2.3 LED A3: User Feedback

The purpose of this LED is to give a feedback to the user when he requests an operation to be done on the IFC e.g. by using the buttons S1 or S2 or other triggers.













**NOTE:** This LED is an RGB-LED and may show different states at the same time, e.g. WebUi is started and T3 update = steady green and blinking blue.

Description				
A				
	1	2	3	4
	<b>T3 update</b> The LED blinks blue when an update is being performed.			
A				
	1	2	3	4
	<b>T3 update / Report creation failed</b> The LED blinks red when an update or report creation failed.			
A				
	1	2	3	4
	<b>Report creation</b> The LED blinks green when a report is being created.			
A				
	1	2	3	4
	<b>WebUI is started</b> The LED is steady state green if the WebUI is started up.			

## 2.4 LED A4: Linux Kernel Status

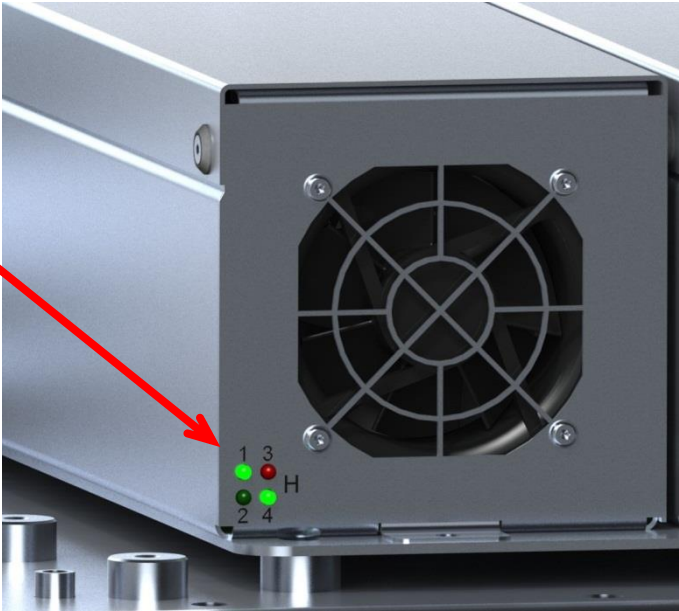
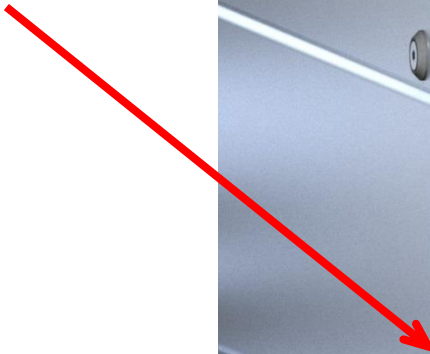
The purpose of this LED is to show the kernel status.

**NOTE:** This LED is an RGB-LED and may show different states at the same time.

Description				
A				
	1	2	3	4
<b>CPU Supervision</b> The LED blinks blue when the CPU is woken up.				
A				
	1	2	3	4
<b>Kernel Heartbeat</b> The LED blinks green to show the kernel heartbeat. Faster it blinks, more the CPU is loaded.				
A				
	1	2	3	4
<b>Invalid date time</b> When the system date and time is invalid, the LED blinks red (at 10Hz).				

# 3 Powercell (POC)

LED H1 ... H4



## 3.1 LED H1: CAN Run Status

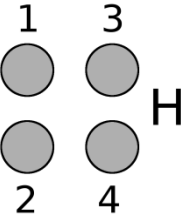
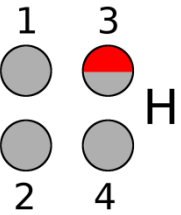
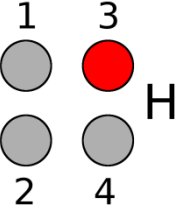
Description	
<div><div><div>1</div><div>2</div></div><div><div>3</div><div>4</div></div></div> <div>H</div>	<div><b>Stopped / Pre-Operational / Firmware Download</b><ul style="list-style-type: none"><li>CAN Communication State Stopped: LED is only flashing from time to time.</li><li>CAN Communication State Pre-Operational: LED is blinking.</li><li>Firmware download: LED is blinking.</li></ul></div>
<div><div><div>1</div><div>2</div></div><div><div>3</div><div>4</div></div></div> <div>H</div>	<div><b>Operational</b><p>The LED is on if CAN communication is operational.</p></div>

3.2 LED H2: Configuration Status

Description	
<div><div><div>1</div><div>3</div><div>2</div><div>4</div></div><div>H</div></div>	<div><div>No Configuration</div><div>POC has no configuration.</div></div>
<div><div><div>1</div><div>3</div><div>2</div><div>4</div></div><div>H</div></div>	<div><div>Invalid Configuration</div><div>POC has an invalid configuration.</div></div>
<div><div><div>1</div><div>3</div><div>2</div><div>4</div></div><div>H</div></div>	<div><div>Configuration Ok</div><div>POC has a valid configuration. Is ready for running.</div></div>

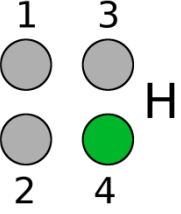


3.3 LED H3: CAN Error Status

Description	
	<b>CAN Ok</b> CAN communication is okay.
	<b>CAN Error</b> CAN communication does have an error. Note: LED is blinking also during the start-up of system a short while as long as IFC is booting. This is a normal behavior.
	<b>CAN Bus Off</b> The LED is on if CAN bus is off.

3.4 LED H4: Power Status

Software cannot change LED H4 as it is connected to auxiliary Power.

Description	
	<b>Power</b> The LED shows that POC has power.

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