Status 1

The `Status 1` LED is available on all 52/XC, 52/XD and 52/XS Cores, 52/XC Concentrators, and on all I/O modules. The following states are possible:

Color	Status	Description
yellow	on	Device is powered.
green	on	Device booted correctly. This is the normal operating state.

Status 2

The `Status 2` LED is available on all 52/XC, 52/XD and 52/XS Cores, 52/XC Concentrators, 52/SX control modules and on all I/O modules.

On Core devices and concentrators, the `Status 2` LED is labeled.

On 52/SX control modules the LEDs below the APC port (RJ45 connector) are both used for the Status 2 signalisation. The left LED below the connector shows the yellow states, the right LED below the connector shows the green states.

Status 2
(yellow states)

Status 2
(green states)
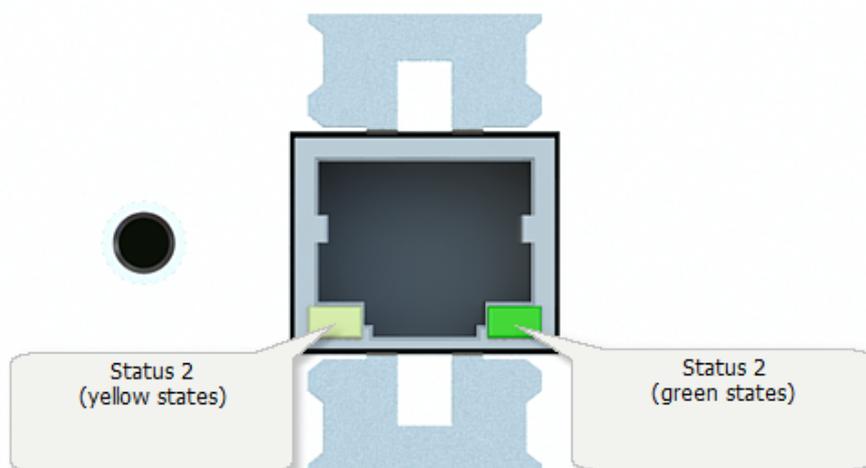
Positions of Status 2 LED at the rear site of 52/SX control modules (52-1010, 52-1020, 52-1024)

XC I/O modules have labeled `Status 2` LEDs on the rear, next to the APC port (RJ45 connector). The I/O modules 52-7111, 52-7222, 52-7223, 52-7230, 52-7258 have an additional unlabelled `Status 2` LED on the front panel. It is situated lower left to the first (left) XLR connector.


Status 2 - LED   APC Lock - LED

Positions of Status 2 LED and APC Lock LED on 52/XC I/O module front panels.
Shown example: 52-7111

Status 2 - standard operation states

A core device or a device already connected to a system shows the pattern shown in the following picture (LED color: green). This is the normal operating state.

seconds	0,0 0,1 0,2 0,3 0,4 0,5 0,6 0,7 0,8 0,9	1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9	2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7 2,8 2,9	3,0 3,1 3,2 3,3 3,4 3,5 3,6 3,7 3,8 3,9	4,0 4,1 4,2 4,3 4,4 4,5 4,6 4,7 4,8 4,9
connection established					
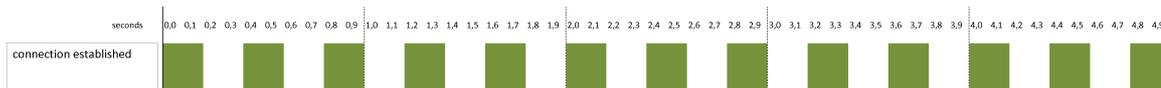
When connecting a device to a system the following patterns will be shown (LED color: green):

seconds	0,0 0,1 0,2 0,3 0,4 0,5 0,6 0,7 0,8 0,9	1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9	2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7 2,8 2,9	3,0 3,1 3,2 3,3 3,4 3,5 3,6 3,7 3,8 3,9	4,0 4,1 4,2 4,3 4,4 4,5 4,6 4,7 4,8 4,9
no host, waiting on broadcast					
host found, no ID received (assumption: APC port not configured)					
host found, ID received, establishing connection					
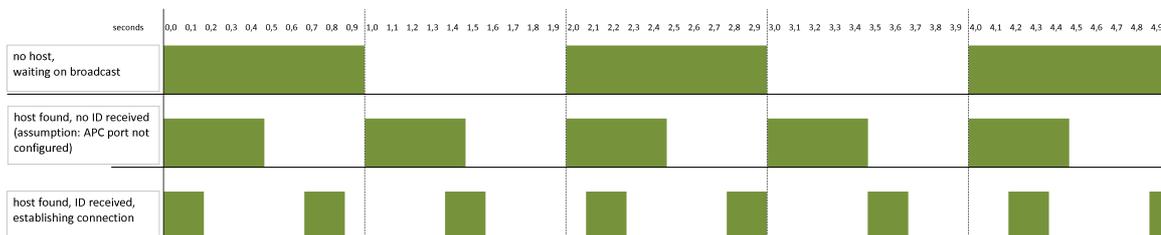
Status 2 - update states

In case of a firmware update the following patterns will be shown:

seconds	0,0 0,1 0,2 0,3 0,4 0,5 0,6 0,7 0,8 0,9	1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9	2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7 2,8 2,9	3,0 3,1 3,2 3,3 3,4 3,5 3,6 3,7 3,8 3,9	4,0 4,1 4,2 4,3 4,4 4,5 4,6 4,7 4,8 4,9
waiting for firmware update					
retrieving firmware file from host; firmware update status codes follow at the end of update procedure					
retrieving XILINX update					
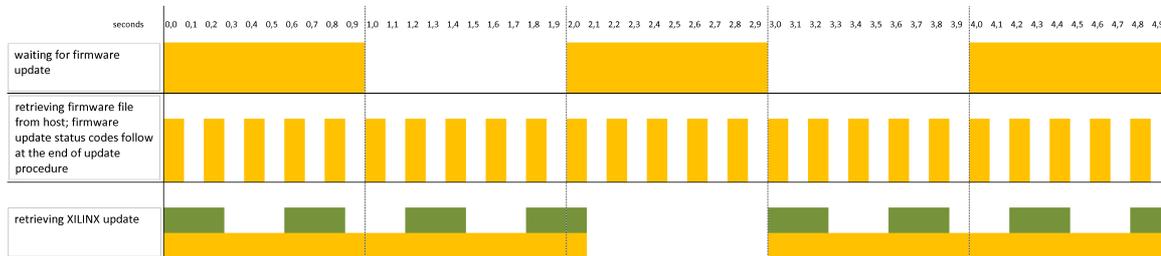
> **! Important**
>
> Do not switch off until yellow flashing is finished!

At the end of the update procedure a status code (see the following table) will be shown. It will be repeated five times with a break of two seconds between the repetitions:

number of pulses	LED color	description
1	yellow	update finished correctly - restart follows
2	yellow	server unavailable
3	yellow	file not available on server

number of pulses	LED color	description
4	yellow	error while deleting flash memory
5	yellow	error while writing to the flash memory
6	yellow	error during file transfer
7	yellow	server not found

Status 2 - debug states

For debugging a device, please also check the following patterns (LED color: green):
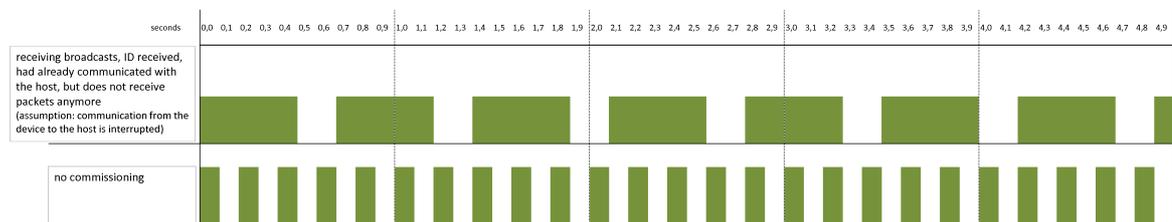
Status 3

The `Status 3` LED is available on all 52/XD Cores.

It is reserved for future use.

Status 4

The `Status 4` LED is available on all 52/XD Cores.

It is reserved for future use.

Sync

Sync 1 / 2 on Core devices

LED name	Color	Status	Description
Sync 1	green	on	Lock on configured sync source, sync input is active and syncing the core. This is the normal operating state.
	yellow	flashing once a second	No lock on defined external sync source.

LED name	Color	Status	Description
Sync 2	green	on	Lock on configured sync source, sync input is active and syncing the core.
	yellow	on	Lock on defined external sync source, sync input is active.
	yellow	flashing once a second	No lock on defined external sync source.

> **Note**
>
> If `Sync 1` and `Sync 2` LEDs are both flashing once a second, the core can not sync to any of the configured external sync sources.
>
> The core is currently synced to the internal clock.

Sync on Concentrators

LED name	Color	Status	Description
Sync	green	on	Synchronised to the Core. This is the normal operating state.
	green / yellow	flashing	Not synchronised to the Core - no ID received.

Power 1 / 2

LED name	Color	Status	Description
Power 1	green	on	Power is connected to "48V in 1". This is the normal operating state.
	yellow (only on core devices)	on	Device is in standby mode, connected devices are off.
Power 2	green	on	Power is connected to "48V in 2".
	yellow (only on core devices)	on	Device is in standby mode, connected devices are off.

Controller

Controller - standard operation states

The `Controller` LED flashes once a second (green) to indicate that the firmware is running:

seconds	0,0 0,1 0,2 0,3 0,4 0,5 0,6 0,7 0,8 0,9	1,0 1,1 1,2 1,3 1,4 1,5 1,6 1,7 1,8 1,9	2,0 2,1 2,2 2,3 2,4 2,5 2,6 2,7 2,8 2,9	3,0 3,1 3,2 3,3 3,4 3,5 3,6 3,7 3,8 3,9	4,0 4,1 4,2 4,3 4,4 4,5 4,6 4,7 4,8 4,9
firmware running					
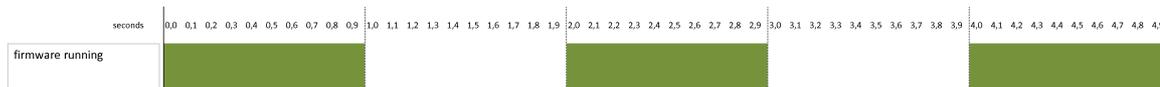
Controller - debug states

For debugging a controller startup, please check the following sequence:

1. central controller is in reset state	LED is on (green)
2. bootloader is running	LED is off
3. operating system is running	LED is on (green)
4. firmware is running	LED flashing once a second (green)

DSP 1 / 2 / 3 / 4

The green `DSP` LED shows the DSP load.

The brighter the LED, the higher is the DSP load.

In case of a 52/XD core, four `DSP` LEDs exist (`DSP 1`, `DSP 2`, `DSP 3`, `DSP 4`). Each LED shows the DSP load of the corresponding DSP module.

APC Lock / Lock

XC I/O modules have an `APC Lock` LED on the front panel. At a 52-1330 it is labeled with `Lock`.

On the I/O modules 52-7111, 52-7222, 52-7223, 52-7230, 52-7258 the `APC Lock` LED is not labeled on the front panel. It is situated lower left to the third XLR connector.

Positions of Status 2 LED and APC Lock LED on 52/XC I/O module front panels.
Shown example: 52-7111

LED name	Color	Status	Description
APC Lock / Lock	green	on	Valid Audio Data are currently received and device is correctly synchronised to the system. This is the normal operating state.
	yellow	on	Valid Audio Data are currently received. Waiting for synchronisation.

Unlabelled LEDs

LEDs at APC ports

Each APC port on a 52/XC, 52/XD and 52/XS Core has a green and a yellow LED. In the following table the different LED states are shown:

LED type	Status	Description
green LED	on	link established
	flashing	link activity
yellow LED	on	Power over Ethernet (PoE) is active

LEDs at GA ports

Each `GA` port on a 52/XC, 52/XD and 52/XS Core has a green and a yellow LED. In the following table the different LED states are shown:

LED type	Status	Description
green LED	on	link established
	flashing	link activity
yellow LED	on	network and audio data active (GA port is used to connect a concentrator)
	flashing	audio data active (GA port is used for an audio connection to another core, 52-7391/52-7395 module inserted)

Tip

The GA ports on a 52/XD Core have LEDs in the shape of an arrow. The direction of the arrow shows the corresponding GA port.

LEDs at ETH ports

Each `ETH 1` and `ETH 2` port on a 52/XC, 52/XD and 52/XS Core has two green LEDs. Only one of the LEDs is used. In the following table the different LED states are shown:

LED type	Status	Description
green LED	on	link established
	flashing	link activity

LEDs at C13 port

Each `C13` port on a 52/XC Concentrator has two green LEDs. Only one of the LEDs is used. In the following table the different LED states are shown:

LED type	Status	Description
green LED	on	link established
	flashing	link activity

LEDs on 52/SX control modules

On 52/SX control modules (52-1010, 52-1020, 52-1024) the LEDs below the APC port (RJ45 connector) are both used for the Status 2 signalisation. The left LED below the connector shows the yellow states, the right LED below the connector shows the green states.
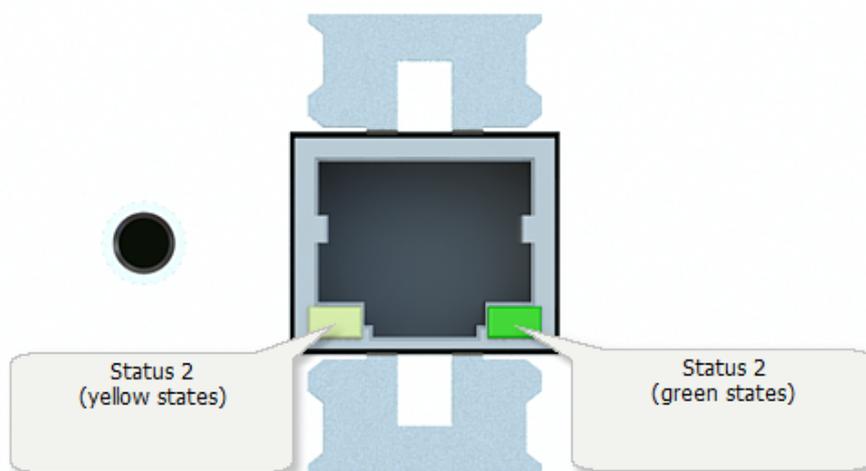
Positions of Status 2 LED at the rear site of 52/SX control modules (52-1010, 52-1020, 52-1024)

> **Note**
>
> For information about the corresponding LED states, please see the Status 2 section.

LEDs on 52/XC I/O modules

On the I/O modules 52-7111, 52-7222, 52-7223, 52-7230, 52-7258 there are two unlabelled LEDs on the front panel. They are situated lower left to the first and third XLR connector (counted from left). The first is the `Status 2` LED the second is the `APC Lock` LED.

Positions of Status 2 - LED and APC Lock - LED on 52/XC I/O module front
panels. Shown example: 52-7111

> **Note**
>
> For information about the corresponding LED states, please see the Status 2 and APC Lock / Lock sections.