ZUM-HUB4

System dependencies and information

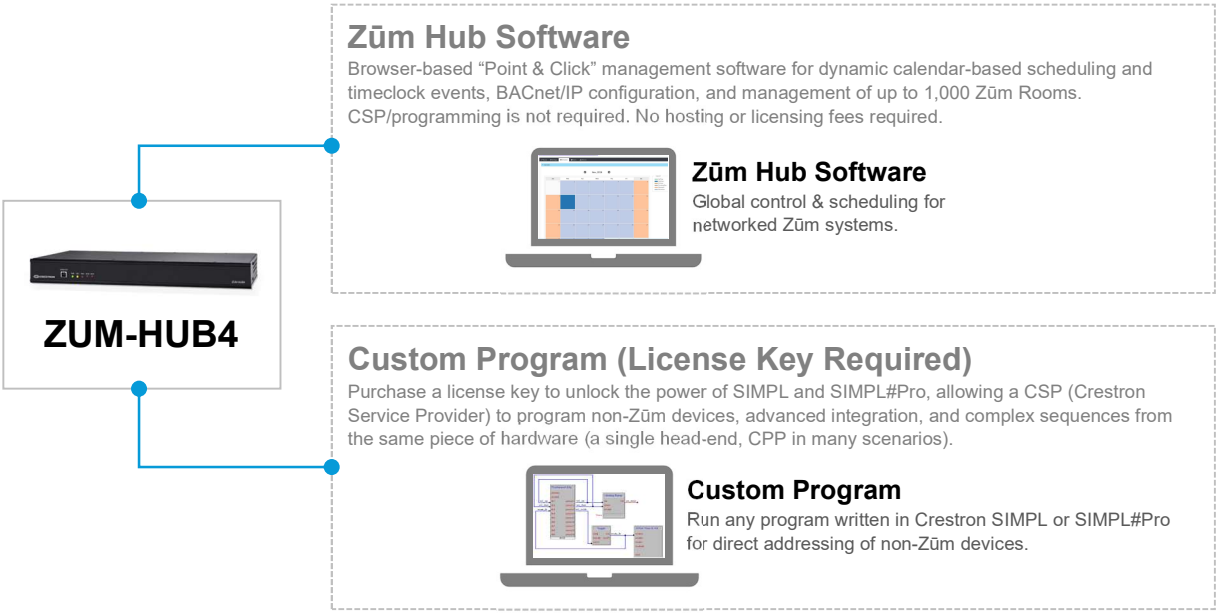
Product	Version
ZŪM-HUB4 Firmware	2.7100.000.16
ZŪM-HUB4 Software	2.005.387

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Notes and Recommendations

From a single piece of hardware, the ZUM-HUB4 head-end control processor now supports a Custom Program (written in Crestron® SIMPL or SIMPL#Pro) running simultaneously alongside the point-and-click, configurable Zūm® Hub Software. This allows a single ZUM-HUB4 processor (and associated ZUML processor panel/CPP assemblies) to address any Crestron non-Zum device directly via a Custom Program, in addition to global control, calendar events, and scene/status control of Zūm Rooms for App-configured Zūm devices attached downstream the ZUM-HUB4's physical subnet port. This enables touch screen control, advanced integration & network configuration, and complex sequences from the custom program, while maintaining the ability to manage up to 1000 Zum Rooms from the Zūm Hub Software's out-of-the-box browser-based user interface.



- All Zūm Wired and Zūm Wireless devices to be discovered and managed by the Zūm Hub software, without custom programming, for management of up to 1000 Zūm Rooms, ***must be:***
  - Connected to the ZŪM-HUB4's subnet port (downstream / under the physical subnet port).
  - Connected downstream a ZUMNET-JBOX-* controller (when Zūm Wired), or downstream a ZUMNET-GATEWAY & ZUMMESH-NETBRIDGE (when Zūm Wireless).
  - Configured in the space via the Zūm App.
- All devices directly addressed by the Custom Program fall under the typical maximum device count guidelines:
  - 100 maximum Ethernet devices across both the LAN and Control Subnet ports.
  - 200 maximum Cresnet (or *custom programmed* ZUMLINK devices) controlled/addressed from the Custom Program.
- Zūm Rooms should not be controlled by both programs (both the Zūm Hub Software and a Custom program).
- Devices cannot have conflicting / overlapping IP ID's.
- Devices cannot have conflicting CNET IDs on HUB4 CNET bus.
- The "Auto Assign" feature for associating bulk rooms with mirror modules is not supported.
- v3.0 of External Room and Mirror Room modules should be used.

System Requirements and Dependencies for Custom Program Running on ZUM-HUB4

Licensing (Custom Program)

- ***SW-HUB4-PROG*** license unlocks Custom Program slot of the ZUM-HUB4.
    - Using the latest PUF, HUB4's will have a system key which will be used to generate a license key unique to that Hub.
- The following can be used on the Program Slot:
    - Custom SIMPL program
    - Custom SIMPL#Pro program
- User is allowed to run a program with Zum External Room Modules and Mirror Room Modules.
    - The connection modules can use the control systems LAN IP address or Control Subnet IP Address to establish a connection
- Any panel or Xpanel pointing to the ZUM-HUB4 will require SSL authentication and prompt the user to login.

Licensing Restrictions (Custom Program)

- **Custom UI Projects:**
    - CH Projects
        - User will need to enter the full path of a CH5 project.
        - User will be taken to a User Login page separate from the default Zum login page
        - Custom user groups and users created via Toolbox can be used for CH project access
        - Zum Hub admin can access the CH5 project as well
        - XPanel and Mobility projects are supported
    - Flash based X-Panel/Xpanel conversion tool is not supported
- **Auto Update Limitations**
    - User can manually set AU manifest using 'aumanifesturl' command and/or the S# AutoUpdate class.
    - Custom manifest URL will revert to Zum Hub Program's manifest should the user reboot the ZUM-HUB4, changes AU mode, or check for updates from Zum Hub Program
- **External Services:**
    - Xio Cloud - Does not program/project load

    - myCrestron in the cloud is not supported
    - Fusion in the cloud is not supported
- **Initial setup Limitations:**
    - Installer must fully configure ZUM-HUB4 prior to loading Program Slot
- **Date/Time limitations:**
    - Modifying date and time outside of Zum Hub Program will affect scheduling
- **BACnet Limitations:**
    - BACnet cannot be shared between Zum Hub Program and Program Slot
- **IPID Limitations**
    - Should Program Slot consume all available 8-bit IPIDs, Zum Hub Program will notify the user that there aren't any available IDs
    - This does not affect Zum Wired devices
- **Cresnet ID Limitations**
    - Zum Hub Program reserves CNET ID C0
- **Port limitations:**
    - Port 49201 is used by Zum Hub Program. User cannot use this port for Program Slot

General ZUM-HUB4 Operational Instructions

Setup

For the ZUM-HUB4 to discover rooms, ZUMNET-JBOXs must be in Primary mode using the following commands:

1. Zwmode ZUMNET (requires reboot)
2. Zwms primary (requires reboot)

ZUM-HUB4 will not discover Zum Wired rooms unless they have been upgraded to Zūm Wired PUF version 1.01.20 or higher.

ZUM-HUB4 Web UI has first time user registration when first accessed

Note: First time user creation can be done from Toolbox. If this is done, the WebUI will present the user with a default login page and not a first-time user creation page.

L1 support of ZUM Floor hub (ZUM-HUB4) with XIO is given in this release

- Enable **"Cloud configuration services"** flag under Settings->Services of ZUM Floor Hub Web UI

Setup limitations:

- Max number of ZUMNET-GATEWAY's (GWEXERs) on a ZUM-HUB4: **28**

- Max number of ZUMMESH Rooms on a single ZUMNET-GATEWAY (GWEXER): **40**
- Max number of rooms on a ZUM-HUB4: **1000**
    - This is a combination of all Zum Wireless rooms and Zūm Wired rooms
    - Devices directly addressed from the custom program slot would follow typical processor device max guidelines (200 CN and 100 EN max).

BACnet Notes

Maximum BACnet object creation limit is expanded from 2K to 10K.

Any and all rooms can have BACnet enabled. The follow 9 properties are available for BACnet support:

1. RoomOnline
2. RoomOn
3. RoomOccupied
4. DaylightingActive
5. DeviceBatteryIsLow
6. PlugLoadsEnabled
7. OccupancySensorEnabled
8. CurrentDaylightingLevel
9. Active Scene

Scene Editing

Scene levels and occupancy settings can be configured for Zūm Wired Rooms via configure action icon of ZŪM-HUB4 Web UI. However, this is not supported for ZUMMESH devices. This must be done from the corresponding App configuration.

Template Workflow

Templates can be deployed to a room or several rooms from the ZUM-HUB4 by doing the following:

1. Access Commissioning in the Settings View. Use the Commissioning tab to manage, map, and deploy, room templates.
2. Browse and Upload the template from Commissioning -> Template Management
3. From the Select a template drop-down menu, choose the desired template.
4. Click Apply Template. When the template is successfully applied, the template is now pending.

5. Click Deploy Selected to deploy the template to the rooms or Clear Pending to remove the template from the rooms.

WARNING: Applying a template to a room that does not have an identical device layout is not supported. Doing so may corrupt a room's configuration resulting in it being in accessible from the Zum App. Only known recovery is to restore that room. ZUMWD-750.

Note 1: Templates can only be created from the Zum app and need to be uploaded to the ZUM-HUB4

Note 2: Template zdf files should be selected when pushing templated to rooms. Using a configuration.zdf will not include the mapfile json data needed to fully configure a room

Note 3: User will be unable to navigate the WebUI while the Hub4 is deploying templates to rooms

ZŪM-HUB4 External Controls (External Room Modules & Mirror Room Modules)

ZUM-HUB4 supports two version of External Controls:

1. v2 (Legacy) of External Room Modules & Mirror Room Modules
2. v3 of External Room Modules & Mirror Room Modules

Key differences added to the External Controls v3 are as follows:

1. v3 Modules support secure web socket connections for LAN and Control Subnet setups
2. External user needs to be created on the ZUM-HUB4. This user must also be entered on the new v3 connection module

Note 1: If a ZUM-HUB4 is restored, the external program needs to be restarted to re-connect to the ZUM-HUB4

Note 2: Web socket connection between the HUB4 and external program will fail when changing the hostname of the hub. The Hub will need to be rebooted a second time in order to connect

Note 3: In the event a room is offline or deleted under the Room Mirroring configuration, the WebUI will display a warning. Removing the unknown reference will resolve the warning.

Performance

External Module Performance numbers:

- 4-series control systems with Control Subnets are limited to 400 external modules. (E.G. PRO4, CP4n)
- 4-series control systems without Control Subnets support 1000 external modules (E.G. CP4)

Auto Update performance limitations and timing:

- Issuing the command 'auchecknow' from console and cancelling it from the Hub will results discovery not working
    - Rebooting the control system will get the system out of this state
- In large systems containing 500+ rooms, due to network Auto-update fails to update roughly 10% of systems containing 500+ rooms.

    - Rerunning auto update will correct the failed upgrades
- Each ZUMLINK or ZUMNET-JBOX takes approximately 4 minutes to upgrade.

General UI performance limitations:

- BACnet configuration takes up to an additional 15 minutes after a hub reboot to be accessible
- Bulk changes to rooms may take up to 10 minutes. This results in areas such as the left panel being inaccessible while changes are being saved and pushed.
- Large scale commissioning (at least 150 rooms at once) causes sluggish WebUI performance for up to 2 minutes
- Associating max number of rooms with a category will cause sluggish WebUI performance for up to 30 seconds.
- WebUI will take a minute to clear the alert list
- Active scenes on rooms accordion can take a few seconds to minute to update
- Active actions : upgrade, delete room, delete gateway, discovery, BACNET and move room are interlocked, cannot be triggered in parallel.

Existing Limitations from Previous Release:

- Revised to: ZUMNET-GATEWAYs (GWEXERs) should not be connected directly to the SUBNET port. They should be connected downstream from the HUB4's SUBNET port via a PoE Switch.
- Category name and next event will not be updated for serial output of external rooms if V2 modules are offline. To avoid this console command "ReSyncValues" can be used to force categories down to all external rooms
- V2 External room module do not support daylight saving trigger from ZUM Floor Hub
- Systems with more than 64 connection modules is not supported
    - When more than 64 Connection Managers are used on a single Zūm system, the system stalls
- Noisy RF conditions can lead to in-room devices missing scene/demand response information for wireless in rooms.

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