

Release Notes For DXD-16

March 2025

DXD-16 - FirmwareVersion 4.01

IMPORTANT NOTE

Updating from a version earlier than 2.00 must be done via the **UPLOADER MODE**
(reboot unit while holding the [DOWN] and the [SET UP] keys).

We are pleased to announce the release of **firmware version 4.01** for the DXD-16.

Updating to 4.01 is **recommended for all DXD-16**.

Bug fix

- Firmware 4.01 fixes a memory leak in the network driver that could occur some time after power up if nothing had been connected to the Ethernet ports.

Please refer to the new DXD-16 manual for complete instructions.

(See next pages for details on previous releases)

For more information, contact:

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Release Notes For DXD-16

Mar 2025

DXD-16 - FirmwareVersion 4.00

IMPORTANT NOTE

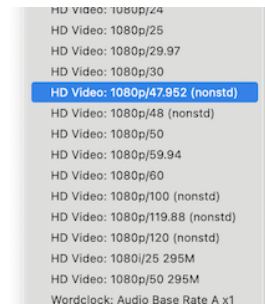
Updating from a version earlier than 2.00 must be done via the **UPLOADER MODE**
(reboot unit while holding the [DOWN] and the [SET UP] keys).

We are pleased to announce the release of **firmware version 4.00** for the DXD-16.

This firmware is a major release and is **highly recommended for all DXD-16 users**.

New functions:

- **RTOS:** The Real Time Operating System (RTOS) has been replaced to optimize reliability. The RTOS is the central component of the DXD managing all tasks and ensuring timely response in time-sensitive operations. With the new RTOS, the DXD is much more stable and responsive.
- **Tri-Level Sync rates:** Tri-level sync double rates have been added including 48, 100 and 120. These new rates have been requested for video wall applications but since no standard currently exists for those rates the words 'Non Standard' have been added next to them. They conform to rate-doubling methods already employed by the existing standards.
- **LTC Offset:** When generating Time-of-Day time code, an offset can now be entered in hours, minutes, seconds, frames and sub-frames. A new menu was added in TCG Operations on the display and on the web page. This function allows 2 time code feeds to be generated simultaneously for 2 different time zones or to make fine adjustments. If a ToD generator is running with an offset, the box identifying that output group turns red (front panel Output page and web Home page).



Bug fix

- **NTP Server:** Issues with the NTP server have been fixed.
- **LTC Generator:** Issues with the LTC generator causing repeated frames and other issues have been fixed.
- **DHCP:** In earlier versions, if the DXD was not connected to the DHCP server during power up, it would not get an IP address and the operator had to manually restart the acquisition process by pressing the ENTER key. With this new release, it happens automatically.

(See next pages for details on previous releases)

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BRAINSTORM ELECTRONICS INC.

Sync Solutions for Recording, Post, Broadcast and Live applications

Release Notes For DXD-16

Feb 2024

DXD-16 - FirmwareVersion 3.01

IMPORTANT NOTE

Updating from a version earlier than 2.00 must be done via the **UPLOADER MODE**
(reboot unit while holding the [DOWN] and the [SET UP] keys).

We are pleased to announce the release of **firmware version 3.01** for the DXD-16.

Updating to 3.01 is **recommended for all DXD-16..**

Improved functions:

- **PTP slave frequency and position servo updates**
- **Faster front panel display (DMA)**

Please refer to the new DXD-16 manual for complete instructions.

(See next pages for details on previous releases)

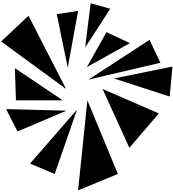
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Release Notes For DXD-16

June 2023

DXD-16 - FirmwareVersion 3.00

IMPORTANT NOTE

Updating from a version earlier than 2.00 must be done via the **UPLOADER MODE**
(reboot unit while holding the [DOWN] and the [SET UP] keys).

We are pleased to announce the release of **firmware version 3.00** for the DXD-16.

New functions:

- **Remote Control:** Firmware 3.00 brings Remote Control functionality to the DXD Universal Clocks via embedded web pages. This new GUI allows an operator to control and monitor the DXD from a standard web browser by pointing to the IP address of the device.
 - A home page provides an overview of the main DXD settings
 - A header at the top of each page displays critical information such as the lock status
 - Set up pages give access to all the parameters for editing
 - Multiple pages can be opened simultaneously to view different groups of settings
 - 3 modes are available: Full Access / Status Only / Status + Preset Recall
- **IGMP v3:** The DXD-16 is now compatible with IGMP v3.

Menus changes:

- **Menu 12.2: Control Lockout:** This menu adds restrictions for the web pages.

Please refer to the new DXD-16 manual for complete instructions.

(See next pages for details on previous releases)

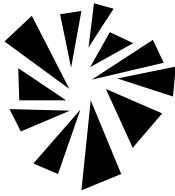
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BRAINSTORM ELECTRONICS INC.

Sync Solutions for Recording, Post, Broadcast and Live applications

Release Notes For DXD-16

Oct 2022

DXD-16 - FirmwareVersion 2.18

IMPORTANT NOTE

Updating from a version earlier than 2.00 must be done via the **UPLOADER MODE**
(reboot unit while holding the [DOWN] and the [SET UP] keys).

We are pleased to announce the release of **firmware version 2.18** for the DXD-16.

Updating to 2.18 is **recommended for all DXD-16**.

New functions:

- **GPIO Presets Recall:** this function enables presets to be recalled using GPIO's.

Bug fix

- **IGMP:** Firmware version 2.18 fixes some issues that were observed with IGMP.

(See next pages for details on previous releases)

Please refer to the new DXD-16 manual for complete instructions.

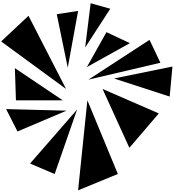
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BRAINSTORM ELECTRONICS INC.

Sync Solutions for Recording, Post, Broadcast and Live applications

Release Notes For DXD-16

May 2022

DXD-16 - FirmwareVersion 2.17

IMPORTANT NOTE

Updating from a version earlier than 2.00 must be done via the **UPLOADER MODE**
(reboot unit while holding the [DOWN] and the [SET UP] keys).

We are pleased to announce the release of **firmware version 2.17** bringing new features to the DXD-16.

Firmware 2.17 also includes efficiency improvements to some internal functions and for that reason should be considered as an ESSENTIAL UPDATE for all users.

New functions:

- **NTP Server Mode:** this function enables the DXD to send its System Time (Time-of-Day) to NTP clients. This mode can be enabled on each of the DXD-16 ports.
- **NTP Client Mode:** this function enables the DXD to receive Time-of-Day data from an external NTP server and supports manual transfer to its System Time. The user can select any of the 4 ports as the NTP client.

Menus changes:

- Menu 6: NTP: This menu includes all the NTP sub-menus:
 - Menu 6.1: Server Mode
 - Menu 6.2: Pseudo Client Mode
 - Menu 6.3: Ext Server Name A
 - Menu 6.4: Ext Server Name B
 - Menu 6.5: Poll Timing

Display pages changes:

- TIME & DATE - *Main Rotation page*: the time from the external NTP server can be displayed
- NTP PORT STATUS - *Status page*: a new status page is available for each of the DXD-16 ports

Please refer to the new DXD-16 manual for complete instructions.

(See next pages for details on previous releases)

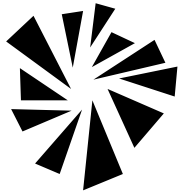
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Release Notes For DXD-16

Dec 2021

DXD-16 - FirmwareVersion 2.16

IMPORTANT NOTE

Updating from a version earlier than 2.00 must be done via the **UPLOADER MODE**
(reboot unit while holding the [DOWN] and the [SET UP] keys).

Firmware version 2.16 does not bring any new feature but includes a minor bug fix.

Updating to 2.16 is recommended for all DXD-16.

With video sync set as the reference, if the source is unstable, in rare occasions the front panel could become unresponsive. Version 2.16 corrects that.

(See next pages for details on previous releases)

Please refer to the new DXD-16 manual for complete instructions.

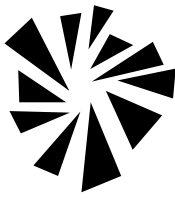
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Release Notes For DXD-16

Oct 2021

DXD-16 - FirmwareVersion 2.15

IMPORTANT NOTE

Updating from a version earlier than 2.00 must be done via the **UPLOADER MODE**
(reboot unit while holding the [DOWN] and the [SET UP] keys).

We are pleased to announce the release of **firmware version 2.15** bringing the following to the DXD-16.

New functions:

- Support for **AVB 2011 & 2020** (requires AVB option, purchased separately)
- Support for **PTP v2.1**
- Support for **Layer 2 PTP (v2.0 & 2.1)**
- New system **LOCATION** (Menu 11.7 and UNIT INFO status)
- New **Status pages** (see below)
- **DHCP Acquisition Process** can be restarted from the front panel without rebooting the unit
- A minor **Time Jam** problem was fixed
- When connecting a **GPS antenna** through a splitter box blocking DC, the GPS receiver no longer interprets that as a disconnected antenna and therefore proceeds normally.

Menus changes:

- **Port Controls Menus** (5.3.1, 5.4.1, 5.5.1, 5.6.1): PTP Version and Profile have now been placed in 2 separate fields. Choices for PTP Versions are (* requires a Feature Key):
 - PTP Version 1*
 - PTP 2.0
 - PTP 2.1
 - PTP (Layer 2) 2.0
 - PTP (Layer 2) 2.1
 - AVB 2011*
 - AVB 2020*
- Menu 11.7 (Utility): Location

New Status Pages:

- **Grandmaster ID:** includes Primary Clocks, Grandmaster credentials and Path Trace information
- **PTP Port Status (4 pages):** info on each port + message counters (Announce, Sync, Delay Request & Response, PDelay Request & Response) + Mean Path Delay
- **WC Out Termination:** displays a measurement in ohms for each BNC output set to Word Clock.

(See next pages for details on previous releases)

Please refer to the new DXD-16 manual for complete descriptions and instructions.

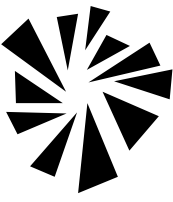
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Release Notes For DXD-16

April 2021

DXD-16 - Firmware Version 2.14

IMPORTANT NOTE

**Updating from a version earlier than 2.00 must be done via the UPLOADER MODE
(reboot unit while holding the [DOWN] and the [SET UP] keys).**

We are pleased to announce the release of **firmware version 2.14** bringing the following to the DXD-16.

New functions included:

- Support for **PTPv1** (option purchased separately)
 - PTP v1 can be selected for each port individually as a PTP Profile
 - Feature Key was added to enable PTP v1
- New system **NAME** (Menu and UNIT INFO status)
- Use higher priority **DSCP values** (original PTP: 46 and 0; new: 56 and 46)
- New **LOCK statuses**: PTP SYNC 0,1,2,3 (Main Rotation bottom line)
- Add **Network Filtering** to eliminate receipt of unwanted messages and reduce CPU loading
- **Buffer** and **queue** sizes in DRAM, used by software for network message reception, have been increased substantially.

Menus changes:

- Menus 5.3.1, 5.4.1, 5.5.1, 5.6.1 (Port Controls): PTP v1 (Profile & Version)
- Menu 11.5 (Utility): Feature Keys (PTP v1)
- Menu 11.6 (Utility): Name
- Menu 4.5.1: Advanced Networking: Internal VLAN ID's
- Menu 4.5.2: Advanced Networking: DSCP Transmit Values

(See next pages for details on previous releases)

Please refer to the new DXD-16 manual for complete descriptions and instructions.

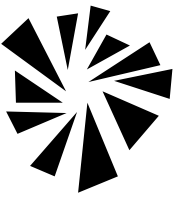
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Release Notes For DXD-16

January 2021

DXD-16 - Firmware Version 2.10

IMPORTANT NOTE

Updating from a version earlier than 2.00 must be done via the **UPLOADER MODE**
(reboot unit while holding the [DOWN] and the [SET UP] keys).

We are pleased to announce the release of **firmware version 2.10** bringing the following to the DXD-16.

New functions included:

- **Support for the DXD/LTC** optional time code generator firmware. It can generate 2 separate streams of time code simultaneously at different formats. Each stream can be set as a Time-Of-Day time code generator or as a traditional Run/Stop/Cue generator locked to the selected reference.
- BNC Outputs **delay/advance adjustment**. Available for WC, AES and Video Sync.
- **TIME JAM** mode, allows the DXD-16 to jam time information from an external source such as PTP or GPS (optional) when using a reference without time such as video sync, AES or word clock (see ch. 8.2 in manual).

Menus changes:

- Menu 1.2: Sync Parameters (Time Jam)
- Menus 3.1-3.6: BNC Outputs (supports Time Code and includes delay/advance adjustments)
- Menu 5.1: PTP Port Modes (Time Jam)
- Menu 5.X.4: PTP Port - Time Jam domain (Time Jam)
- Menu 7.3: Time & Date Display (supports TC Gen)
- Menu 8.1: SMPTE 2059 Set Up (Time Code)
- Menu 8.2: TC Generator 1 (Time Code)
- Menu 8.3: TC Generator 2 (Time Code)
- Menus 9.1-9.2: GPIO (Time Code)

Display pages changes:

- PTP PORTS - *Main rotation*: includes Time Jam modes and states
- TIME & DATE - *Main rotation*: can display both TC Generators outputs and commands
- OUTPUTS - *Main Rotation*: indicates a delay/advance adjustment was applied
- TIMES - *Status mode*: includes TOD/GM Offset. Also includes TCG 1 & 2, Previous & Next Daily Jam

Please refer to the new DXD-16 and the DXD/LTC manuals for complete descriptions and instructions.

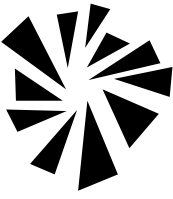
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Release Notes For DXD-16

December 2020

DXD-16 - Firmware Version 2.00

IMPORTANT NOTE

Updating to firmware 2.00 must be done via the UPLOADER MODE
(reboot unit while holding the [DOWN] and the [SET UP] keys).

We are pleased to announce the release of firmware version 2.00, a major firmware update bringing many new functions to the DXD-16.

New functions included:

- **PTP v2**
- **Color Framing** alignment and synchronization
- **GPS** support (optional GPS receiver)
- **GPIO**
- **Mute on Unlock** (BNC Outputs)
- **Output deviations monitoring** (see ch. 13 in the manual)
- **Feature key** for future time code implementation (menu 11.5)

New set-up menus included:

- Menu 1.2: Sync Parameters
- Menu 3. 9: Mute on Unlock
- Menu 5: PTP
- Menu 6: GPS (optional GPS receiver required)
- Menu 7: Time
- Menu 8: Time Code (optional LTC option required for menus 8.2 & 8.3)
- Menu 9: GPIO
- Menu 11.5: Feature Key

New display pages included:

- PTP Ports - Main rotation
- Time & Date - Main rotation
- Installed Options - Status mode (Unit Information page)
- Network Addresses - Status mode
- Times - Status mode
- GPS Receiver (option required) - Status mode

Please refer to the new DXD-16 manual for complete descriptions and instructions.