



## Firmware Revision Information

**Product Code(s):** *ACX048, ACX080, ACX160, ACX288, ACXC8, ACXC16, ACXC32, ACXC48, ACXC48F16, ACXC48F32, ACXC8F, ACXC16F, ACXC32F, ACXC48F, ACXC64F, ACXC80F*

**Product Name(s):** *ServSwitch DKM FX and DKM FXC Firmware*

**Date Modified:** *September 11<sup>th</sup>, 2014*

### Version 3.01 (8-10-2015)

#### **New Features and Enhancements:**

- Full Redundancy Support
- System – Network: Support of second syslog server and configurable syslog port
- System – Network: Support of a second SNMP trap receiver
- System – Network: Support for LDAP (simple)
- Support of SNMP – board
- Network Check: Check availability of FTP, API and SYSLOG connections and ports
- Endpoints: Completely new USB code on all endpoints, not compatible with earlier versions as 100% of the USB code has been overhauled to support newer computers and USB devices.

#### **Improvements:**

- Master handling in Matrix Grid
- Port handling of fixed port extenders (USB 2.0)
- Time monitoring for LAN module
- Handling of LAN sockets
- Update of redundant extenders
- Update of KVM switching status for extenders on I/O board
- CPU connection info on redundant extenders
- Handling of OSD in Multi-Screen Control environment

#### **Bug Fixes:**

- Definition – User: Fixed blocking UI when creating a new User
- Definition – EXT Units: Prevention of various exceptions
- Switch Communication: Fixed error in LAN Echo Management

### Version 3.00 (12-5-2014)

#### **New Features and Enhancements:**

- New video mode 1680x1050 in OSD
- Update of DVI-I CON units (EXTICON)
- CPU Connection info upon keyboard/mouse event in Video Only or KVM sharing mode
- Synchronized switching for operations consisting of multiple commands
- Support of various new extenders types
- Support of new range for serial numbers of extenders

#### **Improvements:**

- Master handling in Matrix Grid

- Port handling of fixed port extenders (USB 2.0)
- Time monitoring for LAN module
- Handling of LAN sockets
- Update of redundant extenders
- Update of KVM switching status for extenders on I/O board
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- Handling of OSD in Multi-Screen Control environment

#### **Bug Fixes:**

- Synchronization of system data in Matrix Grid
- OID definition corrected (SNMP)
- API handling of invalid CPU devices
- CPU selection in OSD
- Fix frame on second of redundant extenders
- Search focus in CPU selection List

### **Version 3.00 (11-24-2014)**

- Completely revised USB HID code to resolve several issues and add new hotkeys to either hardware / software reset the USB stack. Hotkeys would include **hotkeys, R, S, Enter** (software reset) & **hotkeys, R, H, Enter** (hardware reset).  
Software Reset: if data channel is operating between TX and RX  
Hardware Reset: sent via the video connection
- Matrix Grid bug fixes

#### **Known Issues:**

- DKM solution will not support redundant link modules yet (stand alone or in matrix grid mode)
- When using a Mac OS, be sure to ghost the Mac keyboard into the transmitter to emulate correct keyboard device

### **Version 3.00 (8-21-2014)**

#### **New Features and Enhancements:**

##### **MATXCPU**

- Automatic restart of replacement CPU board activating previous network settings
- <F6> key status and sort mode for CPU selection list are saved
- Default Device IDs set to 1001, 2001, 3001 and 4001
- Support of X-Key Stick (16 keys) to activate macros on the matrix

#### **Improvements:**

##### **MATXCPU**

- Local KVM switching
- Switching of USB 2.0 extenders
- Multi-Screen Control switching
- Update time for standard extender update reduced
- Release timer for Mouse/Keyboard Connect
- Management of Matrix Grid configurations
- Connection handling for switching in Matrix Grid
- Handling of status requests
- Date and time stamp of Syslog messages
- Echo function adjusted to socket management
- Operation of network stack (VRRP)

#### **Fixed Bugs:**

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**MATXCPU**  
ServSwitch DKM FX and DKM FXC firmware revision

- Restart process of Matrix Grid
- Identification of extenders during restart
- Switching of CON IDs via API
- Handling of broadcast messages (network)

## Version 3.00 (7-2-2014)

### New Features and Enhancements:

#### MATXCPU

- Automatic restart of replacement CPU board activating previous network settings
- <F6> key status and sort mode for CPU selection list are saved
- Default Device IDs set to 1001, 2001, 3001 and 4001
- Support of X-Key Stick (16 keys) to activate macros on the matrix

### Improvements:

#### MATXCPU

- Local KVM switching
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- Multi-Screen Control switching
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- Management of Matrix Grid configurations
- Connection handling for switching in Matrix Grid
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- Date and time stamp of Syslog messages
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- Operation of network stack (VRRP)

### Fixed Bugs:

#### MATXCPU

- Restart process of Matrix Grid
- Identification of extenders during restart
- Switching of CON IDs via API
- Handling of broadcast messages (network)

## Version 3.00 (4-9-2014)

### New Features and Enhancements:

#### MATXCPU

- Automatic CPU failover for redundant setups implemented
- Matrix Grid for bidirectional connection of multiple KVM matrices via Grid Lines
- Update of converter firmware (CONVGPU) for DVI-I CPU Units included
- Update process for Dual-Link/Dual-Head extenders in standard mode included

**Improvements:****MATXCPU**

- OSD communication between the KVM matrix and extenders improved
- Memory management during update process improved

**Fixed Bugs:****MATXCPU**

- Handling of Local CPU switching corrected
- Telegram handling for various functions corrected

**Version 2.11 (12-4-2013)****New Features and Enhancements:****MATXCPU**

- OSD fixed resolution format 1280x800 added for Dual link support
- New API commands for CPU, CON and User status
- Local switching support for Universal I/O boards implemented

**Improvements:****MATXCPU**

- LOS\_FRAME and FIX\_FRAME data are properly updated in case of switching via Extender OSD
- Connection Info update now waiting for execution of switching command
- Connection Info update will only indicate connection changes
- Switch & Macro Command Connect Video will now overwrite existing Full Access connection
- New terminology in System Data menu for Sync and Sub Matrix modes
- Handling of matrix ports for cascading improved
- Internal switch communication and boot process of IO boards accelerated
- Additional sanity check of boot images

**Fixed Bugs:****MATXCPU**

- Switching in CPU selection menu in conjunction with Sharing and Connect active could lead to automatic return to previous connection
- Sort function and update function in case of empty lists in OSD corrected
- USB switch command detects switch events also on CON side
- Video only connection could overwrite disabled video sharing. Video sharing is now blocked correctly in such cases.
- OSD behavior in case of disconnect command corrected
- API commands regarding switch status corrected

**Version 2.10 (9/4/2013)****New Features and Enhancements:****MATXCPU**

- System option Echo Only allows mutual synchronization of two switches with redundant extender configuration
- CON devices may now switch in Port Mode, directly addressing specific matrix ports by <Hotkey><##>, where <##> can be any single or two digit number. If Port Mode is enabled, CON Favorites are not supported

- OSD Support for HDMI CON switch units with Local CPU support, even if connected to a local CPU
- New extender types included in update function
- USB 3.0 support added

#### **EXTCPU/EXTCON**

- Improved communication between extender and Matrix (requires MATXCPU V2.10 dated 2013-07-11 or later)
- Redundant (dual-port) CON units support switching between two CPU units
- HDMI CON switch units support switching between KVM ports and local CPU ports via hotkey or matrix OSD
- HDMI CON switch units support local loop-through of analog audio
- HDMI CON units support embedding of digital audio into HDMI output
- CON units support splitting of HDMI digital audio signals to digital audio output modules

#### **HIDCPU/HIDCON**

- KeyRepeat function for OSD menus implemented
- Device handling at USB hubs improved
- Compatibility with various DVI switches

#### **Improvements:**

##### **MATXCPU**

- Verification of USB 2.0 connections
- I/O board syslog suspended during updates
- Flash memory management optimized
- Timeout for I/O board registration increased

**Version 2.10 (7/4/2013)****New Features and Enhancements:**

- System option Load Default allows to boot with default configuration rather than with the last active configuration
- CPUs in Private Mode are listed in red color
- Extender OSD shows information about shared access

**Improvements:**

- <F8> key status is now stored
- Private Mode only CPUs can be selected by <ENTER>
- User login included in Trace and Syslog
- CPU selection list shows key codes

**Fix Bugs:**

- IO boards with invalid firmware are shutdown even before registration has been completed
- Former configurations are properly converted
- Time stamp in Trace is displayed correctly

**Version HIDCPU HIDCON (7/11/2013)****New Features and Enhancements:**

- CON access of Video converter OSD by <Hotkey><v>
- CON switch between KVM connections and local PC function by <Hotkey><k><1>, <Hotkey><k><2> and <Hotkey><I>

**Version EXTCPU EXTCON V2.28/V2.29 (7/5/2013)****New Features and Enhancements:**

- RS232/RS422 support at 115 kBaud and audio support
- Audio and Serial TX/RX compatible between RS232 and RS422 modules
- CON units can convert any 1090P signal to 50Hz (requires parameter "1080p50Hz" in config.txt)
- CPU units support HID access to Video converter OSD
- Redundant units support matrix communication on both ports
- Redundant CPU units support shared access from two CON units (see manual for config.txt parameters)
- HDMI units support HDCP on local ports
- USB embedded signal disabled during local access

**Version EXTMSD V2.29 (6/11/2013)****New Features and Enhancements:**

- New EDID with 1080p default for DVI and HDMI
- New EDID supports 2-ch PCM audio for HDMI
- Parameters "1080p50Hz" and "PRIVATEACCESS" added
- Parameters for shared access to redundant CPU unit added

**Version CONVGPU CONVPGA CONVMSD V1.30 (6/11/2013)****New Features and Enhancements:**

- Default conversion modified to 1:1 transmission
- Support of HID access to Video converter OSD added

## Version MATXCPU V2.10 (2/25/2013)

### New Features and Enhancements:

- Multi-Screen Control allows seamless switching between up to four consoles simply by moving the mouse across the monitors or using hotkeys (numeric keypad 0-4). Optionally, the new screen is marked up by an orange frame overlay to the video signal
- SNTP time server support implemented
- CPU Scan mode added to connection options
- SNMP service extended; traps can be activated individually
- Full support of Master/Slave mode for matrix interconnections

### Improvements:

- <F8> key in CPU menu toggles between all or active CPUs only
- User can log in or log out from Extender OSD or Main Menu by <F10> key
- OSD can be closed by <ESC> key from Main Menu
- Admin user is automatically logged out when leaving the OSD
- Current user login is restored after using a special account for configuration or extended switch changes (Admin, super, power)
- Extender OSD revised (Connection info and CPU selection can be configured separately)
- Serial numbers for IO boards and backplane are transmitted to Javatool
- OSD Video Mode 1920x1200 added
- OSD Keyboard Layout French (CH) added
- IO boards with an older firmware status than the CPU board shut down automatically upon insertion, without causing a matrix freeze
- Switching stability of direct USB 2.0 connections improved; in Shared Mode, a release time of 10 sec. is required to fulfill USB 2.0 protocol requirements imposed by the computer OS.

### Fixed Bugs:

- Extender or device IDs cannot occur twice
- Extended switch function in OSD is always available

## Version MATXOSD MATXOSL V2.27 (2/28/2013)

### New Features and Enhancements:

- Multi-Screen Control support added

## Version HIDCPU HIDCON (2/28/2013)

### New Features and Enhancements:

- Multi-Screen control support added

### Improvements:

- <Print> key added to fast OSD access single key options
- Keyboard leaves command mode after 10 seconds of inactivity

### Fixed Bugs:

- HID Ghosting support for certain device classes added
- <Return> and <Enter> now works similarly in command mode

## **Version EXTCPU EXTCON V2.25 (2/26/2013)**

### **New Features and Enhancements:**

- Multi-Screen control support added
- Video Mode detection for autodesk applications
- RS422 module detection and support
- HDMI extender and local access support
- Redundant extender support

### **Improvements:**

- LOS Frame and hold picture function improved
- EDID transmission in case of monitor sleep mode improved
- Boot behavior improved

### **Fixed Bugs:**

- HOLDPIC function corrected
- Analog audio switch noise reduced

## **Version CONVGPU CONVPGA CONVMSD V1.20 (2/04/2013)**

### **New Features and Enhancements:**

- New naming convention for FW files implemented
- Serial control support (RS232)
- Support for flags in config.txt on flash drive

### **Improvements:**

- IR RC support improved
- No Sync display independent of input type

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## **Version 2.9 (11-5-2012)**

### **New Features and Enhancements:**

- License management implemented
- Firmware update now overwrites the older firmware version (default)
- Current firmware can be overwritten on demand to return to former firmware status
- Distributed firmware update of extenders via IO boards
- Number of Favorites increased to 16
- Internal switching on IO boards
- New user type "Super user" can access and switch all CPUs but cannot change configuration
- FIX Frame option for CPU devices adds a semi-transparent colored frame to the video
- Trace revised to syslog format and memory increased
- Initial support of Syslog service
- Basic support of SNMP service

- Admin account is always closed upon leaving the OSD
- Matrix serial number implemented
- Macros offer simplified Push/Get functions

#### **Improvements:**

- Fan management improved
- Embedded OSD revised (Location, Display time, enable, update)
- Function *Auto Logout* can be disabled (“-1”)
- Private access is now a property of the CPU device and is also supported by Macros and Favorites
- Macros verify access rights before execution
- Function *Reset Matrix* renamed to *Factory Reset*
- Function *DKM Service* renamed to *API Service*
- Error behavior of LAN socket improved
- Configuration options for OSD console at CPU board added

#### **Fixed Bugs:**

- “Previous” Shortcut now verifies current access rights
- Video only attribute is now reset in all cases
- Only one CON can control a CPU at the same time

### **Version MATXOSD 2.25 (10-15-2012)**

#### **New Features:**

- Added internal switching (on board)

#### **Fixed Bugs:**

- Fixed communication to Extender OSD
- Fixed Extender update problems

### **Version MATXHID, HIDCPU, HIDCON (11-5-2012)**

#### **New Features and Enhancements:**

- HID Ghosting support. Reference HID devices can be initialized, enabled, disabled and removed by hotkey commands

#### **Improvements:**

- Hotkey and OSD Shortcut can now be defined by the user and can be reset to default during power cycle
- Mac boot menu supported
- Auto repeat keyboard support for OSD mode
- Special support of X-Keys removed

#### **Fixed Bugs:**

- USB wake up could enable Key Lock

### **Version EXTCPU, EXTCON (11-5-2012)**

#### **New Features and Enhancements:**

- FIX Frame option for CPU devices adds a semi-transparent colored frame to the video
- Bidirectional Digital Audio support

#### **Improvements:**

- Embedded OSD revised (Location, Display time, enable, update)
- EDID update can be disabled
- Flash drive shows Serial no.

**Version MATXCPU 2.8 (7-20-2012)****New Features and Enhancements:**

- Implementation of general purpose Fixport extenders

**Version MATXCPU 2.8 (3-20-2012)****Improvements:**

- Update of EXT unit properties in case of module revisions implemented.
- Function *AutoDisconnect* improved.
- Function *CPU Timeout* improved.
- Number of Extender-ID Requests increased.
- Initialization of external OSD improved.