

MegaPower® 3200

Matrix Switcher/Controller System

Features that make a difference:

- Scalable, high-density modular architecture for easy expansion
- Supports up to 3,200 video inputs, 256 outputs and 128 keyboards⁽¹⁾
- Dual CPU mode provides inherent passive hot switch failover for system reliability
- Synchronize time to Network Time Protocol (NTP) for integration with other devices on the network
- Store snapshots of important scenes on your network
- Windows®-based system management software provides a powerful tool for remote configuration and monitoring
- Customize your workstation experience with powerful macros
- Keep a watchful eye with video presets, patterns, tours and salvos
- Control recorded video just as easily as live – even switching from one to the other with a simple keystroke⁽²⁾



MegaPower 3200 is a modular, scalable video matrix switcher/controller system designed for the largest and most sophisticated users of CCTV such as airports, corporate or government complexes, casinos, and large medical centers.

Start with a single CPU and switcher bay and easily expand by adding switcher bays for more inputs and outputs. Dual CPU mode provides redundant CPU backup protection with fault detection and hot switch failover to ensure uninterrupted system operation. Achieve a full cross-point video matrix of up to 38,528 video inputs by 256 video outputs with a satellite connection of up to 30 systems. MegaPower 3200 is maintenance and user-friendly, letting you easily swap out the CPU, video input and video output modules without removing system cables. Plus, an LCD displays CPU status while LED indicators provide information on port activity.

With powerful user-defined macros you can customize American Dynamics™ matrix keyboards⁽³⁾ to perform a multitude of system tasks via simple, easy to remember keystrokes.

MegaPower 3200 connects seamlessly to your network to enable PC-based configuration, firmware updates, activity logging, snapshots, time synchronization and email text messaging. In addition, you can send activity logs and reports of user control, alarms and configuration changes to any PC on the network.

As an essential part of the powerful American Dynamics Enterprise Surveillance Solution, MegaPower 3200 enables you to switch back and forth between live and recorded video using the same keyboard and monitor. By integrating with Network Client Remote Management Software, users can achieve important Intellex® digital video management system functionality such as camera playback, tours and salvos using the same CCTV keyboard and monitor.

(1) Requires port expanders and dual mode CPU
(2) Feature supported with AD2089 keyboard and Network Client v4.04
(3) Supports MegaPower 1100, AD2088 and AD2089 keyboards

features

Easy to Configure and Use

MegaPower 3200 uses an Enhanced Administration System (EASy) configuration and monitoring software tool to retrieve, archive, and load back MegaPower CPU data. It provides IP network connection to all satellite systems and can concurrently update dual mode CPUs.

In addition to the powerful macros that allow you to customize your keyboards, MegaPower 3200 also lets you control standard video recorder functions such as play, stop, pause, record, rewind and fast-forward directly from any suitably equipped keyboard. Similarly, you can control fixed or variable-speed domes, pan/tilts, motorized lenses, auxiliary outputs, and 72 presets per video input at camera sites. For each video input, you can assign a 4-digit number to replace the default video input number. This can aid in identifying specific locations in applications like multiple level buildings or satellite configurations.

Selectable on-screen display enables you to display the date/time, video input number and title, site number and title, and monitor status. Three date formats are provided (MM/DD/YY, DD/MM/YY, or YY/MM/DD). The on-screen display uses white characters with black outline to optimize viewing on diverse contrast scenes. The user can turn the following displays on and off: video input number and monitor status, video input title, and date/time displays. Text controls include incremental horizontal/vertical positioning and display brightness. When attempting to control a dome/PTZ, each monitor can also display which user or keyboard of equal or higher priority has control or has locked the camera.

Scalable and Flexible for a Future-Proof System

MegaPower 3200 is available pre-packaged in any combination of 16 video inputs and 4 video output increments up to a maximum of 3200 video inputs by 256 video outputs. Expanded satellite systems interconnect up to 30 systems.

System flexibility is further enhanced by defining authorized access to keyboards, video inputs and video outputs. Partitioning can also be used to limit access to remote systems.

RS-232 ports allow standard communication with keyboards, alarm interface units, satellite system CPUs, recorder control devices, third party interfaces, computers, etc. Each port is individually programmable for standard data rates from 300 to 38,400 BPS. Each port can expand to four ports with the optional port expander.

Ensuring the Most Vigilant Security

MegaPower 3200 supports universal system and individual monitor tours for consistent surveillance. A tour is a sequence of video inputs with each input featuring an individual dwell time, a preset/pattern and an auxiliary action. Tours can run forward or in reverse.

Salvo switching allows multiple video inputs to be called simultaneously to multiple contiguous video outputs. Sixty four individual groups (salvos), consisting of up to 16 video inputs (each with a preset and an auxiliary action) can be called either manually or as part of a tour.

There are 35 user-programmable times available that can be independently designated for multiple days of the week to call universal tours to video output(s). Event timers also enable you to activate and deactivate alarm contacts.

Alarms can be programmed to call a video input or groups of video inputs to any one or more video outputs. Custom text messages can be displayed on alarming monitors. A preset, auxiliary action and individual dwell time may be defined for each alarm input. Any of 25 alarm display/clearance methods may be selected independently for each video output. Clear alarms from a configured block of monitors using Normal, Automatic, or Instant alarm clearing methods for convenient, effective alarm management.

Easily Monitor Activity and Permissions

Log the occurrence and removal of all alarm and video loss events on a networked PC. An alarm event message includes date/time of event, contact number, video input number and alarm status. Video loss messages include date/time, video input number, video loss status, synchronization loss status and detection mode. Optional internal video loss detection alerts an operator to the complete or partial loss of each video input. Advanced detection circuitry detects loss of video sync or 25%, 50%, 75% loss of video signal for each input⁴.

Keyboards or users can be assigned one of eight levels of priority control of remote camera sites. Up to 64 user codes, each with a unique password, can be assigned to operators. Access to certain system features may be restricted depending on a user's priority level.

⁽⁴⁾ Requires AD2010DBVL module(s)

System Components

Central Processing Unit

ADMPCPU MegaPower CPU for MP 3200 systems,
100-240 VAC

ADACQORJ45 Quick on RJ45 connector for easy
and clean installation

Switcher Bays

AD2010N Standard Matrix Bay, 120 VAC, UL & CSA

AD2020N Bi-Level Matrix Bay, 120 VAC, UL & CSA

AD2010P Standard Matrix Bay, 100-240 VAC, CE

AD2020P Bi-Level Matrix Bay, 100-240 VAC, CE

AD2010PS Power Supply Module for AD2010N, AD2020N

AD2010PS-1 Power Supply Module for AD2010P, AD2020P

Video Input

AD2016PC Input Card

AD2016AVIM-1 Input Module, Single Level

AD2016AVIM-2 Input Module, Level 1 of Multi Level System⁵

AD2016AVIM-3 Input Module, Level 2 of Multi Level System

AD2016AVIM-4 Input Model for Looping/ Additional Multi
Level Systems⁵

AD2016BP-1 VIM-1 Input Card Rear Panel

AD2016BP-2 VIM-2 Input Card Rear Panel⁵

AD2016BP-3 VIM-3 Input Card Rear Panel

AD2016BP-4 VIM-4 Input Card Rear Panel⁵

Video Output

AD2024BVOM-1 Output Module, 960 Input systems
w/ Rear Panel

AD2024BVOM-3 Output Module, 1920 Input systems
w/ Rear Panel

AD2024BVOM-4 Output Module, 3200 Input systems
w/ Rear Panel

AD2024BP-1 VOM-1 Output Card Rear Panel

AD2024BP-3 VOM-3 Output Card Rear Panel

AD2024BP-4 VOM-4 Output Card Rear Panel

AD2024BPC Video Output Card (no Rear panel)

Data Buffers

AD2010DB Data Receiver/Buffer Module

AD2010DBVLKIT Video Loss Detection Module

Looping Panel Accessories

AD2016CB Matrix cable, 30 in (76 cm), for looping

AD2016CB8 Matrix cable, 96 in (244 cm), for looping

ADULP Looping Panel

ADULP-30 Looping Panel, w/ two AD2016CB 30"
(76 cm) Cables

ADULP-96 Looping Panel, w/ two AD2016CB8 96"
(244 cm) Cables

AD2016TERM Matrix terminator cap for AD2016AVIM-3,
AD2016AVIM-4, & AD168VIM-4 (16 inputs)

ADACTP01BNC Unshielded Twisted Pair Adaptor Module
This allows installation with simple
UTP cable for video lines

Optional Accessories

AD2088, AD2088R, Full system keyboards allow for video switching,
pan/tilt control, dome control, auxiliary control,
macro and recorder control (ADCC1100, AD2088
and AD2089 only), and system programming. The
keyboards support bi-directional communication with
the ADMPCPU via RS-232 ASCII commands

AD2081, AD2081X Expands one RS-232 port on a system into
Port Expander four ports. This provides connections to multiple
system keyboards.

AD2091, AD2091-1 Interfaces with the matrix switcher/controller system
Manchester Code via AD Data Line and provides 64 AD Manchester
Generator/Distributor code outputs for use by receiver/drivers and
suitably-equipped pan/tilts and domes.

AD2083-02C, Interfaces with the matrix switcher/controller system
AD2083-02C-1 RS-422 via AD Data Line and provides 16 SEC RS-422
Generator/Distributor outputs for use by suitably equipped domes.

AD2096A, Supervises up to 64 alarm inputs and provides
AD2096-1 Alarm Interface RS-232 ASCII alarm commands to the system.
Alarm inputs can be programmed to call any video
input, display any preset, or to initiate any auxiliary
action. Up to 16 units can be cascaded on a single
RS-232 line.

AD2031, Activates relays when designated video inputs are
AD2031-1 Switcher Follower called to designated video outputs. It interfaces with
the matrix switcher/controller system and provides
up to 32 Form A relays, via AD Data Line, that can
be grouped in series and addressed to a single video
output, or in two groups of 16 relays for two specific
video outputs.

AD2032, Activates relays when associated video outputs are
AD2032-1 Alarm Responder in their alarming condition. It interfaces with matrix
switcher/controllers and provides up to 32 Form A
relays via AD Data Line.

AD2033, Activates relays when a specific auxiliary
AD2033-1 Auxiliary Follower is triggered either manually or automatically for
an associated video input. Interfaces with matrix
switcher/controllers and provides up to 32 Form A
relays via AD Data line.

AD100XA/AD100XA-1A CPU of the recorder interface network; can
Recorder Controller accommodate the entire network and it enables
programming of the control devices.

AD100IR16/AD100IR16-1A Controls any recorder that has IR capability and is
IR Interface Module supplied with an IR remote (used to learn the
IR commands).

AD100RL8/AD100RL8-1 Controls recorders that can be controlled via
Resistive Ladder Module resistive ladder.

AD100RS8/AD100RS8-1 Controls RS-232 VCRs and DVRs
RS-232 Module

Model Number Configurator

The configuration tool adds flexibility to any job, allowing change as the customers' requirements change. Pre-configured systems from 4 to 128 outputs include one MPCPU; pre-configured systems >128 outputs include two MPCPU.

ADM**PRV** **x x x x** - **y y y** **1**

"blank" = standard system
"V" = factory installed video loss

of inputs, increments of 16, up to 3200 (i.e. 16, 32...3200)

"-" = standard BNC inputs on VIM Back Panels
"S" = all VIM4 & Remote Panels (30" cables)
"L" = all VIM4 & Remote Panels (96" cables)

of outputs, increments of 4, up to 256 (i.e. 4, 8...256)

"N" = 120 VAC (+or - 10%), 50-60 Hz, UL & CSA
"P" = 100-240 VAC, 50-60 Hz, CE

(5) Includes AD2016CB 30" (76 cm) cables.

Basic System Diagram

The MegaPower 3200 matrix switcher supports up to 3200 video inputs, 256 video outputs, 128 keyboards, 4096 alarms, and 30 satellite systems. The MP3200 provides Intellex DVR control using the AD2089 keyboard and Network Client software, and hot switch capabilities using a second MPCPU unit....with no hot switch accessory unit required. The EASy configuration and monitoring software allows remote configuration and monitoring.



Operational

Bandwidth 17 MHz
 Frequency Response ± 0.5 dB to 12 MHz
 S/N Ratio ≥ 65 dB (Vp-p vs. Vrms noise)
 Crosstalk
 Adjacent Channels ≤ 55 dB (at 3.58 MHz)
 Input to Input ≤ 70 dB (at 3.58 MHz)
 Differential Delay $\pm 1.0^\circ$
 Differential Phase $\leq 1.5^\circ$
 Differential Gain $\leq 1.0\%$
 Tilt $\leq 0.5\%$
 Gain Unity ± 1 dB
 Return Loss
 Input/Output ≥ 40 dB
 DC Level (video signal) 0 volts
 Switching Complete switching of cross-point matrix. EIA RS-170 and NTSC, CCIR and PAL
 Switching speed Less than 20 ms (typical)
 Non-volatile Memory Setup information saved in permanent flash memory

(6) Looping panel is optional: ADULP-30 or ADULP-96
 (7) AD2031, AD2032, AD2033

Product offerings and specifications are subject to change without notice. Actual products may vary from photos. Not all products include all features. Availability varies by region; contact your sales representative. Certain product names mentioned herein may be trade names and/or registered trademarks of other companies.

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Connectors

Video Inputs 0.5 to 2.0 Vp-p, composite BNC, looping optional⁶
 Video Outputs 4 – 256, 1 Vp-p, composite BNC
 RS-485/RS-232 Sixteen or thirty-two 8-pin modular. Optional port expander extends each RS-232 port to four

Communication

Dome Protocols Sensornet, RS-422, Manchester (with external accessories)
 Alarm Inputs 4,096 via AD2096, AD2083 or RS-232
 Relay Outputs Optional with external accessories⁷

Electrical

Power Requirements **AD2010 and AD2020 switcher bays:**
 40 watts nominal, 60 watts Maximum (with 16 modules)
ADMPCPU:
 100-240 VAC, 50-60 Hz, 0.4a, 42 VA

Mechanical

Mounting 19-inch rack mount
 Dimensions (H x W x D) **AD2010 and AD2020 switcher bays:**
 26.7 x 48.3 x 47 cm (10.5 x 19 x 18.5 in)
ADMPCPU:
 4.45 x 48.2 x 30.48 cm (1.75 x 19 x 12 in)
 Unit Weight **AD2010 and AD2020 switcher bays:**
 28 kg (60 lbs), fully loaded bay (with 16 modules)
ADMPCPU:
 4.5 kg (10 lbs)
 Color Black

Environmental

Operating Temperature 0° to 40°C (32° to 104°F)
 Humidity 0 to 95% RH (non-condensing)
 Storage -40° to 70°C (-40° to 155°F)

Regulatory

Emissions FCC Part 15, Subpart B, Class A
 EN55022, Class B (CE)
 Immunity EN50130-4 (CE)
 Safety EN60950 (CE)
AD2010 and AD2020 series:
 UL2044
ADMPCPU:
 UL60950, CSA 22.2 60950 (cUL)



tyco