

# MegaPower 3200

## Matrix Switcher/Controller System

### Features That Make a Difference:

- **NEW!** Supports SensorNet, Manchester, and RS-422 dome control protocols directly from the CPU without the need for additional accessories
- **NEW!** Integrate SpeedDome Programmable Dome Camera alarms utilizing SensorNet and duplex RS-422 protocols
- **NEW!** Enhanced salvo functionality with new view programming option
- **NEW!** Programming options for setting date/time including Daylight Saving Time (DST)
- Scalable, high-density modular architecture for easy expansion
- Supports up to 3,200 video inputs, 256 outputs, and 128 keyboards<sup>1</sup>
- 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<sup>2</sup>



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<sup>3</sup> 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 and higher  
(3) Supports ControlCenter 1100 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. Set the date/time directly using system keyboards in three date formats (MM/DD/YY, DD/MM/YY, or YY/MM/DD) and configure beginning and end date/time for Daylight Saving Time within the EASY CPU application. 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. Two hundred 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 and can be programmed from one through 9999.

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.

Integrate SpeedDome Programmable Dome Camera alarms utilizing SensorNet and duplex RS-422 protocols. 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 input<sup>4</sup>.

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 System <sup>5</sup>
AD2016AVIM-3 . . . . .	Input Module, Level 2 of Multi Level System
AD2016AVIM-4 . . . . .	Input Model for Looping/ Additional Multi Level Systems <sup>5</sup>
AD2016BP-1 . . . . .	VIM-1 Input Card Rear Panel
AD2016BP-2 . . . . .	VIM-2 Input Card Rear Panel <sup>5</sup>
AD2016BP-3 . . . . .	VIM-3 Input Card Rear Panel
AD2016BP-4 . . . . .	VIM-4 Input Card Rear Panel <sup>5</sup>

### 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

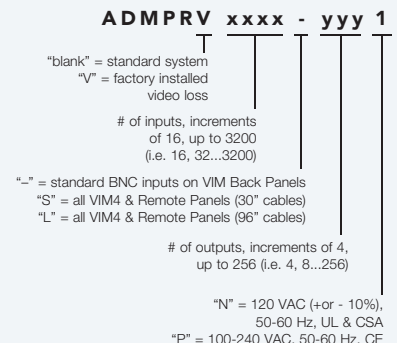
AD2016CB . . . . .	Matrix cable, 30 in (76 cm), for looping
AD2016CB8 . . . . .	Matrix cable, 96 in (244 cm), for looping
ADULP . . . . .	Looping Panel
ADULP-30 . . . . .	Looping Panel, w/ two AD2016CB 30" (76 cm) Cables
ADULP-96 . . . . .	Looping Panel, w/ two AD2016CB8 96" (244 cm) Cables
AD2016TERM . . . . .	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

AD2089, AD2089R, . . . . .	Full system keyboards allow for video switching, pan/tilt control, dome control, auxiliary control, macro and recorder control (ADCC1100 and AD2089 only), and system programming. The keyboards support bi-directional communication with the ADMPCPU via RS-232 ASCII commands.
AD2081, AD2081-1 . . . . .	Expands one RS-232 port on a system into four ports. This provides connections to multiple system keyboards.
ADACSNETD, ADACSNETDP . . . . .	Amplifies and distributes SensorNet or Manchester signals and provides Host A and B inputs for dual CPU systems and 16 output ports with dual connectors for home run, daisy chain, star, and J-Box wiring topologies.
ADAC422D, ADAC422DP . . . . .	Amplifies and distributes RS-422/485 signals and provides Host A and B inputs for dual CPU systems and 16 outputs for home run, daisy chain, star, and J-Box wiring topologies.
AD2091, AD2091-1 . . . . .	Interfaces with the matrix switcher/controller system via AD Data Line and provides 64 AD Manchester code outputs for use by receiver/drivers and suitably-equipped pan/tilts and domes.
AD2083-02C, . . . . .	Interfaces with the matrix switcher/controller system via AD Data Line and provides 16 SEC RS-422 outputs for use by suitably equipped domes.
AD2083-02C-1 RS-422 Generator/Distributor	
AD2096A, . . . . .	Supervises up to 64 alarm inputs and provides 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.
AD2096-1 Alarm Interface	
AD2031, . . . . .	Activates relays when designated video inputs are 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.
AD2031-1 Switcher Follower	
AD2032, . . . . .	Activates relays when associated video outputs are in their alarming condition. Interfaces with matrix switcher/controllers and provides up to 32 Form A relays via AD Data Line.
AD2032-1 Alarm Responder	
AD2033, . . . . .	Activates relays when a specific auxiliary 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.
AD2033-1 Auxiliary Follower	

## Model Number Configurator

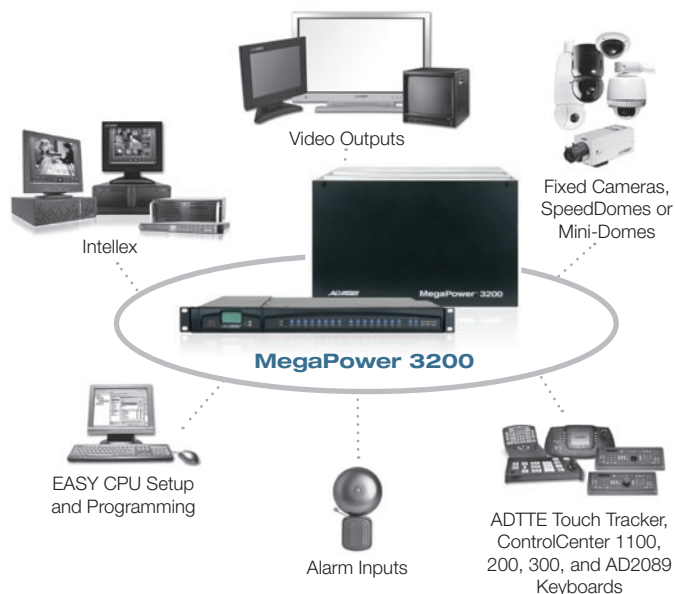
The configuration tool adds flexibility to any job, allowing change as the customers' requirements change. Pre-configured systems from 4 to 128 outputs include one MPCPU; pre-configured systems >128 outputs include two MPCPU.



(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 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 . . . . . ± 1.0°
- Differential Phase . . . . . ≤ 1.5°
- Differential Gain . . . . . ≤ 1.0%
- Tilt . . . . . ≤ 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 . . . . . ≤ 20 ms (typical)
- Keyboard/Receiver
  - Control Time. . . . . 20 ms (typical)
  - Phase Adjustment . . . . . 180° vertical interval adjustment for switching bay
  - Non-volatile Memory. . . . . Setup information saved in permanent flash memory

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

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**Connectors**

- Video Inputs . . . . . 0.5 to 2.0 Vp-p, composite BNC, looping optional<sup>6</sup>
- 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, SensorNet/duplex RS-422 protocol or RS-232
- Relay Outputs. . . . . Optional with external accessories<sup>7</sup>

**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 (noncondensing)
- Storage . . . . . -40° to 70°C (-40° to 155°F)

**Regulatory**

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

