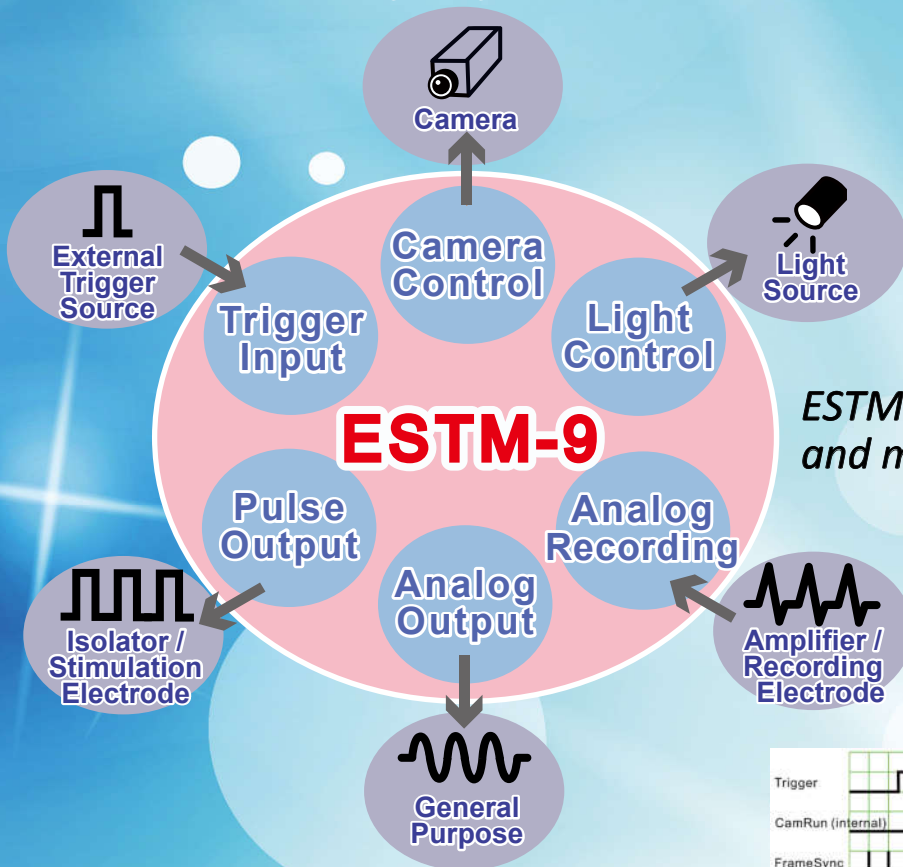


New Product

Multifunctional Imaging Synchronizer **ESTM-9**

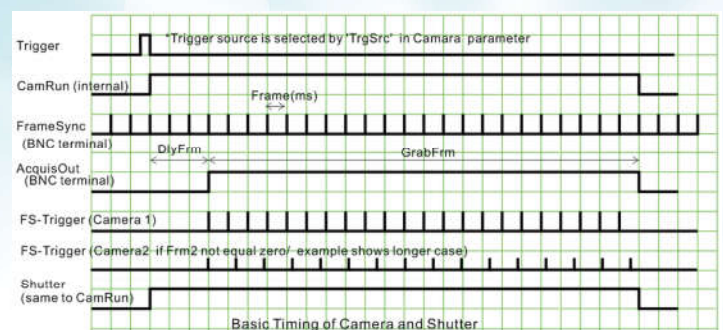


***Integrate your camera into
completely synchronized imaging system***



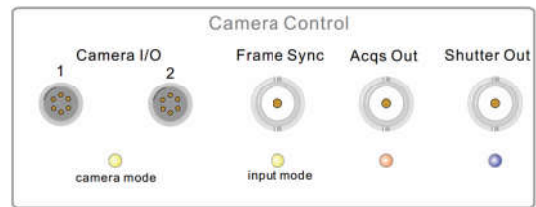
*ESTM-9 integrates external devices
and makes new imaging system*

***All functions run synchronously
with high accuracy of timing***



Acquisition Control for External Camera

- Outputs frame timing pulses to external camera or receives frame timing signals from external camera.
- Frame rate can be specified.
- Time-lapse acquisition control is also available.



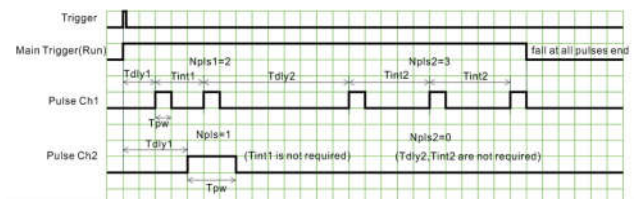
Lighting Control for External Light Source

- Outputs signals to external light source in synchronization with camera control.
- Continuous, intermittent or custom lighting pattern.



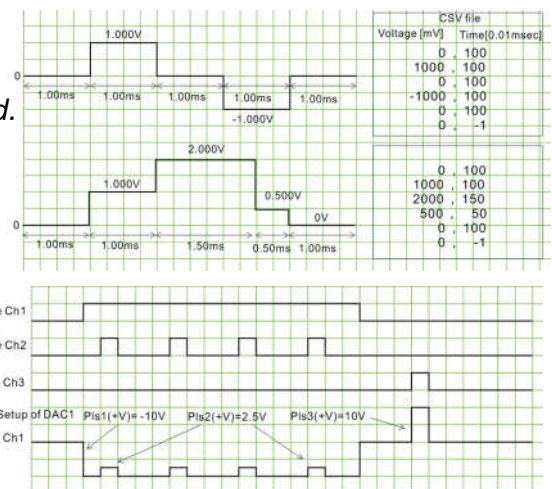
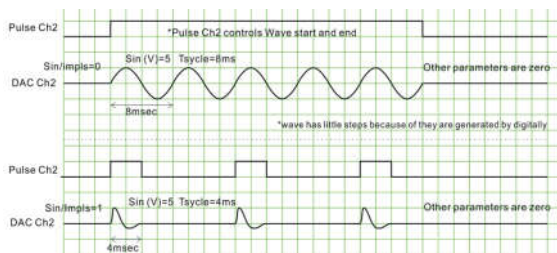
Pulse Stimulator

- 4 channels of pulse stimulators can be controlled individually.
- Stimulator works with or without camera control.
- Continuous stimulation using free-run mode is also available.



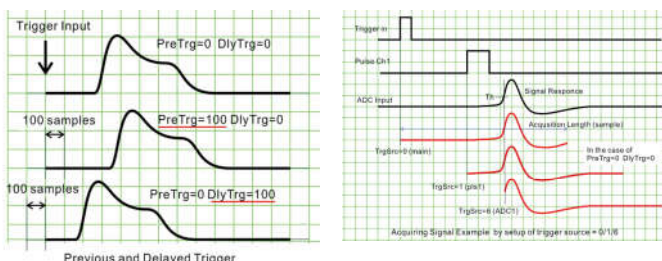
Analog Output - Custom Pulse Pattern

- 2 channels analog outputs
- Pulse 1-4 can be synthesized and output from Aout 1.
- Sine, triangle, sawtooth or custom waveform can be selected.
- Custom pulse pattern can be created using a CSV file.



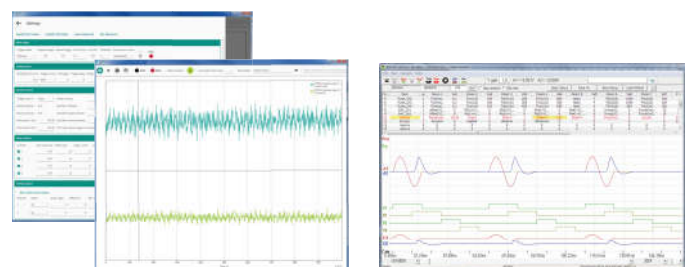
Analog Signal Recording

- 2 channels analog inputs
- Previous-trigger, delayed-trigger and multiple trigger source



Control Software

- 2 versions of control software are included.

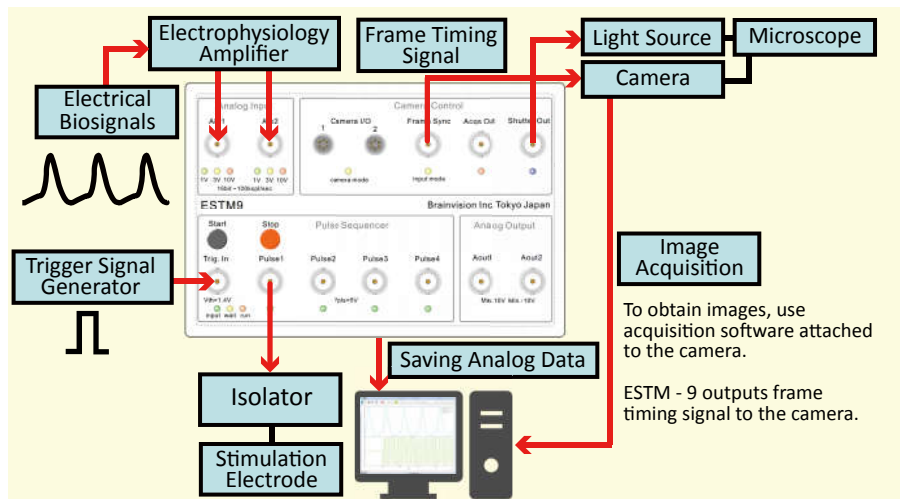


Standard Version

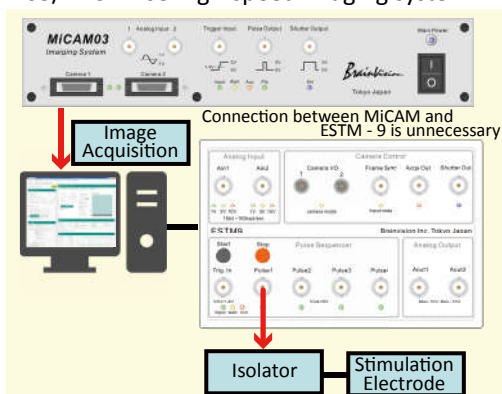
Expert version suitable for electrophysiological experiment

Examples of Use

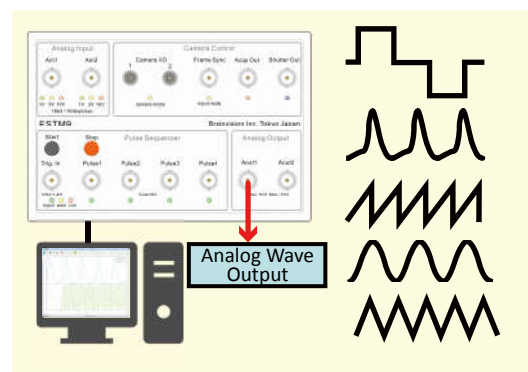
1) Image acquisition and biosignal analog recording in combination with camera, light source, isolator, electrophysiological amplifier, external trigger signal generator



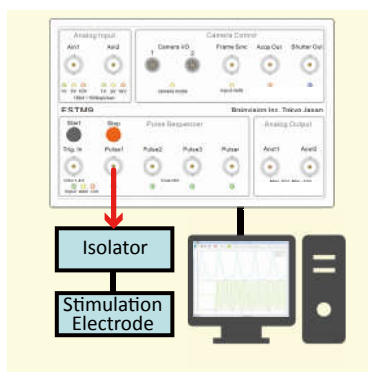
2) Electrical stimulation in combination with Brainvision's MiCAM05/MiCAM03 high-speed imaging system



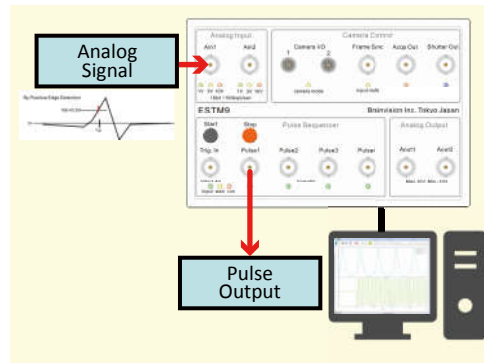
3) Use as a function generator and output arbitrary waveform



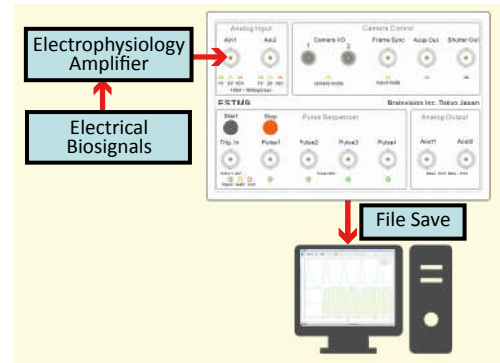
4) Use as a single pulse generator and perform electrical stimulation



5) Use as a window discriminator and output a pulse when the input signal reaches the set amplitude range

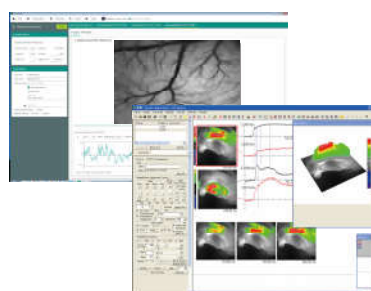


6) Use as an analog signal recording device, and biosignal data is stored in a file



Related Product - 1920x1200 pixels camera and ESTM-9

High Resolution Imaging System
BV-XB1



for
Calcium Imaging
GCaMP
Flavoprotein
FRET
Intrinsic Imaging

- Turnkey system ready for immediate use
- 1920x1200 pixels, 1/1.2" CMOS camera
- Completely synchronized dual camera system
- Software for data acquisition and data analysis with intuitive user interface

Specifications

Hardware		
Main Body	Pulse Output	4 Channels (BNC)
	Analog Input	2 Channels (BNC)
	Analog Output	2 Channels (BNC)
	Camera I/O Port for XB1CM	2 Channels (4 pin connector)
	Frame Timing Signal Output	1 Channels (BNC)
	Acquisition Status Output	1 Channels (BNC)
	Shutter Control Output	1 Channels (BNC)
	External Trigger Input	1 Channels (BNC)
	Others	Trigger Button, Stop Button, 8-pin Connector for Optional Function
	Control Software	2 versions (basic/expert)
	Interface	USB2.0
	Power	USB bus power
	Includes	ESTM-9, USB2.0 cable, Control Software (basic/expert)
	Dimensions	180mm(W) x 120mm(D) x 65mm(H)
Main Trigger	Trigger Mode	Software / External / Internal
	Trigger Source	Software / External Trigger Input / Trigger Button
	Trigger Edge	Positive / Negative
Pulse Output	Output Voltage	5V
	Clock Cycle	10μsec~10msec
	Duration Time	10μsec~10min
	Delay Time	10μsec~10min
	Interval Time	10μsec~10min
	Pulse Number	1~65,535
Analog Input	Input Range	±1V / ±3V / ±10V
	Sample Clock	10μsec~10msec
	Trigger Source	Main / Pulse1 / Pulse2 / Pulse3 / Pulse4 / Ain1 level
	Others	Previous-trigger, Delayed-trigger, Low-pass filter, Polarity inversion
Analog Output	Output Voltage	-20V~20V
	Output Waveform	Sine, Triangle, Sawtooth, Custom (with a CSV file)
Camera Control	Number of camera port	Brainvision XB1CM : 2 (I/O connectors) Other camera : 1 (BNC connector)
	Frame Timing Signal	Output or Input (selectable)
	Frame Timing Signal Cycle	10μsec~300msec
	Trigger Source	Main / Ain1 level / Pulse3
	Others	Time Lapse Acquisition
Light Control	Lighting Mode	Continuous / Synchronous with data acquisition Synchronous with frame acquisition / Custom lighting pattern
	Others	Polarity inversion

* Specifications & appearance are subject to change without prior notice due to continuous improvements.

* All products are made in Japan.

Developed and Manufactured by:



UI-building 7F, 2-2 Kanda-Ogawamachi,
Chiyoda-ku, Tokyo 101-0052 Japan
Tel: +81 3 5280 7108
Fax: +81 3 5280 7109
Email: info@brainvision.co.jp
URL: www.brainvision.co.jp

Contact Information:



940 South Coast Drive, Suite 160
Costa Mesa, CA 92626
Tel: +01 714 850 0797
Fax: +01 714 850 9308
Email: info@scimedia.com
URL: www.scimedia.com