

In-Circuit Programmer

AF9201

Quick & Flexible

For use in engineering, manufacturing lines, and various other situations

In-Circuit Programmer

Serial programming of various Flash microcontrollers, Serial and SPI Flash

- Standard buffer memory 1Gbit
- Supports single, dual, and quad modes
- High-speed data transfer using USB2.0
- Master data management with dedicated memory cards
- Development of algorithm software for each device for free
- Supports SWD, JTAG, UART, various CLK sync types, and other special serial communication

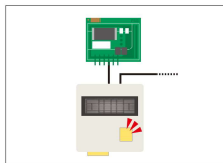
Programming time examples	SPI Flash Program (including Verify)	64Mbit	Approx. 35 sec
		512Mbit	Approx. 63 sec (with high speed algorithm, quad mode)

* Depends on devices and environments.



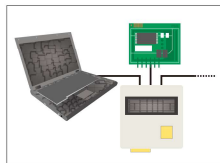
AF9201

Mode selectable according to the operating environment



Standalone mode

Select the stand-alone mode when no PC can be used or fixed data is programmed. This mode is operable with a single key.



Remote mode

Useful when programming data under development or multiple sets of data continuously. Easily operable with a USB-connected PC.

For manufacturing lines

Gang programming by linking multiple programmers

OPTION

Mass production control software for easy control

Up to 8 programmers can easily be controlled with a connected PC. Either remote simultaneous programming of all connected units or manual programming of individual units can be selected. Customization for concurrent programming under master/slave method is also available.



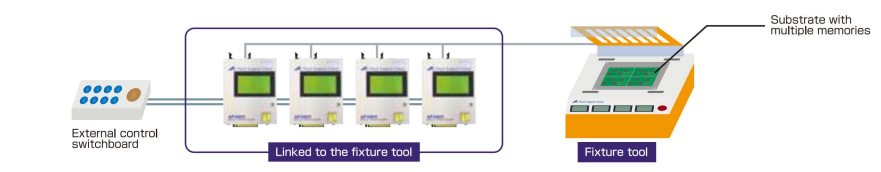
For manufacturing lines

Gang programming to multiple memories on a substrate

OPTION

Custom tools can be produced

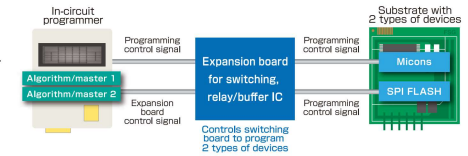
Input of operations or output of results by using trigger signals can be performed with a dedicated interface for external control. Multiple programmers linked to the system improve operability and productivity.



Examples of customization

Concurrent programming to different micons/memories

For a substrate having different types of microcontrollers or memories on it, we can develop a system to manage the devices and program different data by using expansion board for switching. This eliminates the need to establish multiple programming systems, and simplifies production.

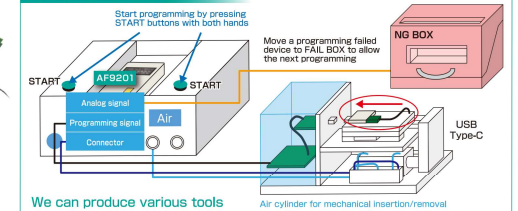


Programming to cables equipped with chips

Our original adapters for USB Type-C realized systems for programming to E-markers of various manufacturers. Control software enables settings and storage of configuration data. The adapters can also be used with AF9724/25 for mass production.



Example of customization



Other examples

Encryption programming using a security code /programming controlled by a sequencer in a production facility / concurrent programming to substrates with multiple memories/ various test systems

Paid options

Dedicated memory card (CF card)	TECFM-1G-20 supporting 1 type of device/TECFM-1G-20-4 supporting 4 types of devices
Control software TEM1000 series	Enables various settings and device functions using a USB-connected PC
Power supply booster box	Enables output of a high voltage and control signals according to device specifications
DLL (file, manual)	Useful when you develop original control software

* One unit of the programmer is provided with one dedicated memory card. Both control software and algorithm software can be downloaded for free from our website. <http://www.-fsg.co.jp/en/>

Product specifications

	AF9201
Supported devices	Flash ROMs, Flash microcontrollers, Serial Flash ROMs of various manufacturers supporting SPI, UART, PC, JTAG or CLK sync
Buffer memory*	Standard : 1Gbit (dedicated DF card)
Concurrent programming	Only 1 device at once
Device functions	COPY · ERASE · BLANK · PROGRAM · VERIFY · B.P.V · E.P.V · E.P · P.V
Programming power (Vcc)	Vcc : 1.5 to 5.0V (Icc : MAX 250mA)
External interfaces	Target interface (CSI, UART, I2C, JTAG, CLK sync) USB2.0 Memory card interface External control interface
Monitor display	20 characters×8 rows, LCD
Input power voltage	AC100 - 240V DC7V (main unit) * Consult us if it exceeds AC125V.
Frequency range	50 to 60Hz
Power consumption	Up to 3VA
Size * excluding protrusions	W100×D120×H22mm
Weight * excluding accessories	Approx. 210g

* Only one series can be registered to one CF card. Another CF card is required for additional device support.