

ENG

## AUTOMATION

# AUTOMATION PLATFORMS



# GEFRAN

# GCube MACHINE AUTOMATION CONTROLLERS

Integrated automation solutions capable of offering a global response to specific needs. Scalable proposals, single programming environment and a high level of integration of the whole Gefran product range for a tailor-made offer.

PERFORMANCE

Compact Compact Controller



Fit Custom Controller



TEXTILES



FOOD



GLASS



PAPER

## AUTOMATION PLATFORMS

### Perfoma Embedded Controller



### Modula Integrated Controller



- STANDARD IEC61131-3 programming language
- SCALABLE architectures
- REUSABLE applications
- SINGLE SOFTWARE for all automation
- INTEGRATED ETHERNET connection
- INTEGRATED programming environment
- HMI+PROGRAMMING LOGIC

## FUNCTIONALITY

### APPLICATIONS



WOOD



WATER TREATMENT



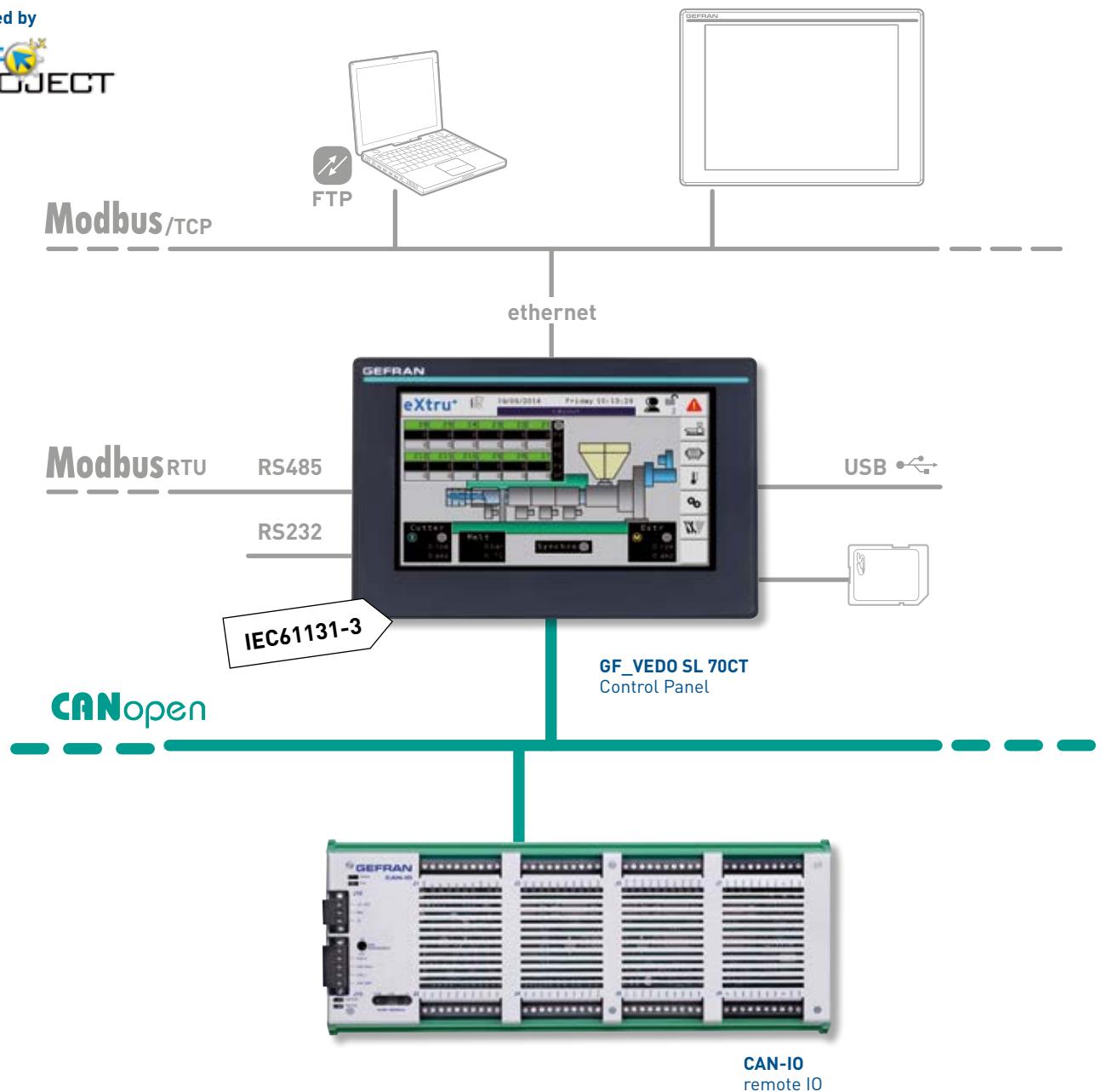
PLASTICS



HEAT TREATMENT

# GCube Fit CUSTOM CONTROLLER

Powered by



Particularly suitable for price-sensitive applications, this highly flexible solution is used on different markets, such as: plastic extruders, autoclaves, furnaces, metal washers, plastic dryers, etc.

Solution consisting of two elements, an integrated control (PLC and HMI) and a remote I/O board with a high level of customisation.

- COMPACT SOLUTION
- PROCESS FUNCTIONS
- DATA FILING

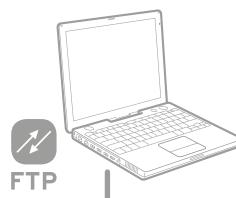
AUTOMATION PLATFORMS

## GCube Compact COMPACT CONTROLLER

Powered by



**Modbus/TCP**



**Modbus RTU**

RS232

IEC61131-3

**CANopen**



GEFRAN  
GF\_VEDO SL 35CT  
Control Panel



GILOGIK II  
remote I/O

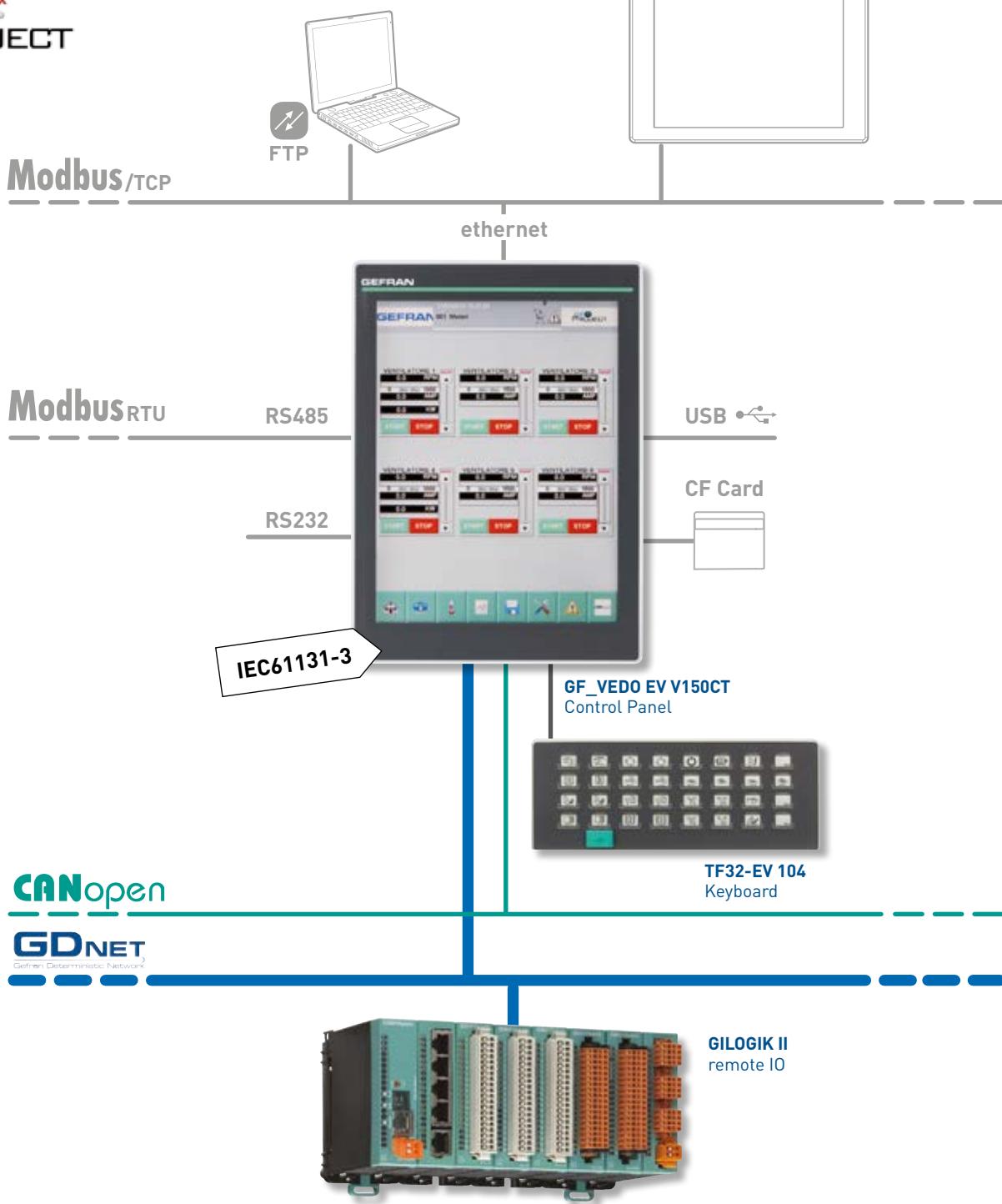
This very compact modular solution enables the satisfaction of different medium-small automation solutions.

Solution consisting of two elements, an integrated control (PLC and HMI) and remote I/O modules.

- MODULAR SOLUTION
- OPEN ARCHITECTURE
- DEDICATED FUNCTIONS LIBRARY

# GCube Modula INTEGRATED CONTROLLER

Powered by



Enables the construction of high-performance, multiprotocol applications that are easily integrated into company networks.

Solution based on integrated control (PLC and HMI) and remote I/O modules connected via a real-time Ethernet fieldbus.

- ETHERNET REAL-TIME
- SCALABLE
- MULTI PROTOCOL

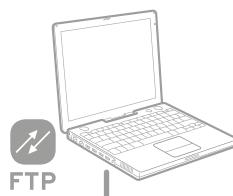
## AUTOMATION PLATFORMS

# GCube Performa EMBEDDED CONTROLLER

Powered by



Modbus/TCP



ethernet



ePanel 150  
Operator Panel

Modbus RTU

RS485

RS232

CANopen

IEC61131-3

GDNET  
Gefran Deterministic Network

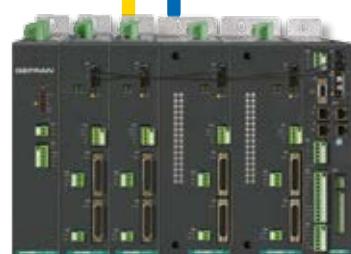
EtherCAT®



GFX4  
4 loop  
Modular power  
controller



GILOGIK II  
remote IO



AXV300  
servodrive



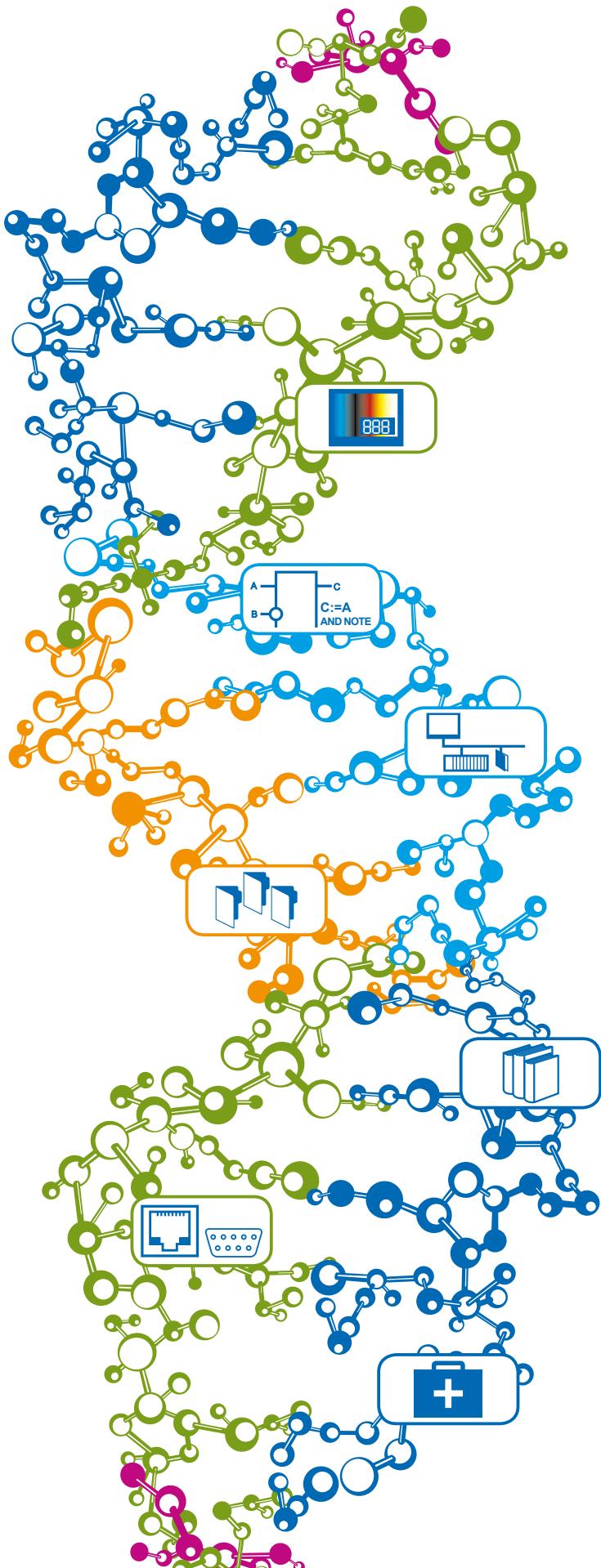
ePCLogic400  
Rack PLC

Is a cost-effective industrial solution for medium-high level automation applications.

The complete and integrated solution for control, monitoring, communication and management of machine automation.

- CONFIGURED AND TESTED FOR THE REQUIRED NUMBER OF I/Os
- LOCALLY EXPANDABLE, REMOTELY EXTENDABLE
- SCALABLE SOLUTION

# PROGRAMMING SOFTWARE



**GF<sub>LX</sub>  
PROJECT**

**GF<sub>VX</sub>  
PROJECT**

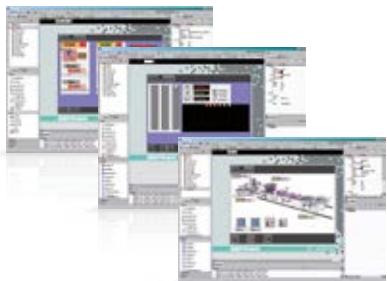
## Gefran Automation DNA

GF\_Project VX & GF\_Project LX are composed of integrated software modules with specific functions that provide easy and intuitive configuration of different type of automation projects.

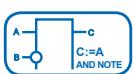
## AUTOMATION PLATFORMS



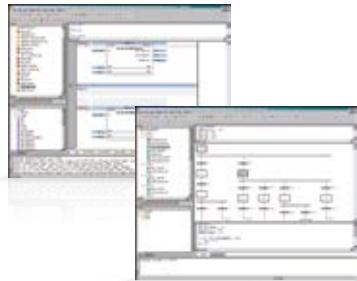
### OPERATOR INTERFACE (HMI)



Configuration of the man/machine graphic pages interface



### MACHINE CONTROL SEQUENCE (PLC)



Configuration of the part of machine control for Real Time solutions.  
Standard language IEC61131-3



### HW + SYSTEM ARCHITECTURE



Configuration of the single devices used and the type of communication adopted



### PROJECT MANAGER



A common configuration style with a clear graphic visualisation for all the project modules help and make easy their configurations.

The following main modules are available:

- alarm management
- multilanguage management (unicode)
- recipe management
- user management.



### PROCESS LIBRARY



In the module library are a structured set of libraries FB that facilitate and reduce the development time of an automation project.



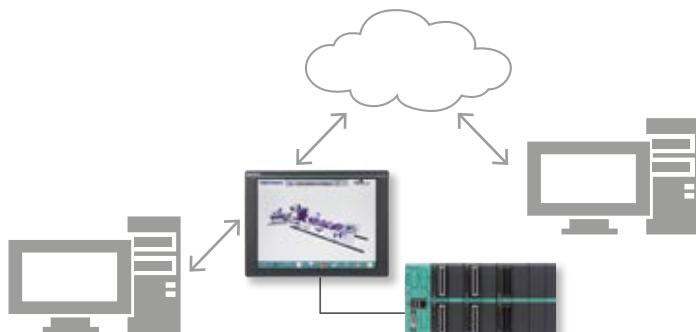
### DIAGNOSTIC



The diagnostic module provides a complete set of easy to use and efficient tool for all phases of testing and verification of the system.



### CONNECTIVITY



- PLC online
- Desktop Remote
- Monitoring
- Remote Pages
- Data Exchange

The connectivity module includes a set of tools to meet the growing demand for remote access to machines and plants.

# CONTROL PANELS

## GF\_VEDO

Outstanding Control and Graphic capabilities in a single product.  
Display size from 3.5" to 15".  
Extensive data logging and recipe handling.

- TOUCH-SCREEN
- INTEGRATED ETHERNET INTERFACE
- INTEGRATED RUN-TIME PLC
- VERTICAL / HORIZONTAL INSTALLATION



### TF32-EV



#### Models

#### Function

#### Connections

#### No. Keys

#### No. LEDs

#### Protection

### TF32-EV 104

Machine keyboard to use in combination with GF\_VEDO EV

USB protocol on Ethernet cable

32

32

IP65 front, IP20 rear

## AUTOMATION PLATFORMS

### GF\_VEDO SL



Models	35 CT	70 CT	V70 CT
Function	Control Panel [PLC+HMI]		
Display	3,5" TFT color		
Touch screen	resistive		
Keypad	Programmable 6-key membrane	Programmable 10-key membrane	
Resolution	QVGA 320x240	WVGA 800x480	WVGA 480x800
Backlight	White LEDs, duration 50.000 hours @ 25 °C		
Processor	ARM9, 400 MHz		
Memory			
System	64 MB DRAM		
Mass	128 MB NAND Flash		
Retentive	32kB FRAM		
Extension	1 x SD memory card slot		
Connections			
Ethernet	1 x 10/100Mbps		
CAN	1 x CANopen		
Serial	1xRS232, 1xRS485		
USB	1xUSB2.0 Host		
Installation			
Horizontal	✓	✓	-
Vertical	-	-	✓
Protection	IP65 front, IP20 rear		
Power supply	24 VDC ±15%		
Programming software	GF_Project LX		

### GF\_VEDO EV



Models	104CT	V104CT	150CT	V150CT		
Function	Control Panel [PLC+HMI]					
Display	10.4" TFT colors			15.0" TFT colors		
Touch screen	resistive					
Resolution	SVGA 800x600	SVGA 600x800	XVGA 1024x768	XVGA 768x1024		
Backlight	LED/30.000	LED/50.000				
Processor	Geode LX900, 600 MHz					
Memory						
System	256MB / 512MB / 1GB					
Mass	1GB					
Retentive	Su file					
Extension	Scheda CF (system memory)					
Connections						
Ethernet	2 x Ethernet 10/100 Mbps					
CAN	1 x CANopen					
Serials	1 x RS232 1 x RS485					
USB	4 x USB 2.0 Host					
PS2	2 x PS2 (mouse, keyboard)					
TF Serial	1x machine keyboard					
Installation						
horizontal	✓	-	✓	-		
vertical	-	✓	-	✓		
Protection	IP65 front, IP20 rear					
Power supply	24 VDC ±25%					
Programming Software	GF_Project VX					

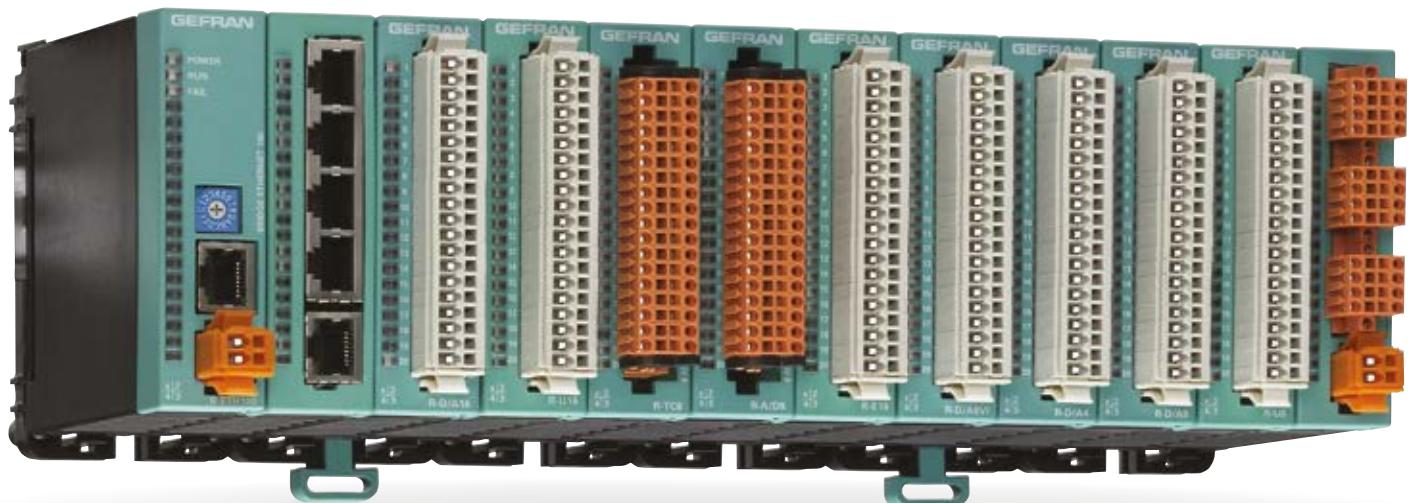
# REMOTE I/Os

## GILOGIK II

High performance remote modular I/O.

Compact design with high I/O density per module for installation in small spaces.

High performance Fast-ethernet GDnet or CANopen protocol with easy integration of third-party products



- SPACE SAVING DESIGN
- PARALLEL BACKPLANE
- FAST-ETHERNET GDNET / CANOPEN PROTOCOL
- MODULAR SOLUTION

Different backplanes are available [2, 4, 8, 12 and 18 slot] for the installation of digital, analogue and functional modules.

The type of fast-ethernet GDNet or CANopen communication protocol is achieved via fieldbus modules installed in the first position on the backplane.

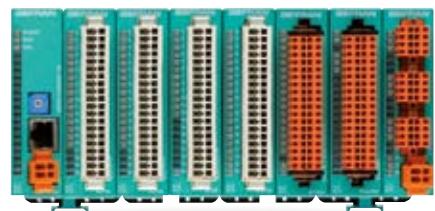
## AUTOMATION PLATFORMS



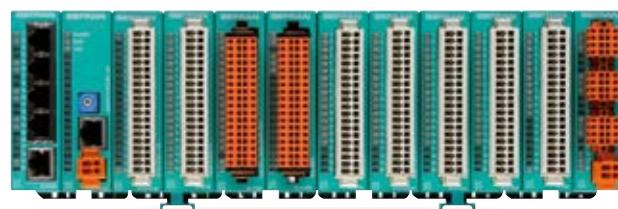
**Back-plane 2 slot**



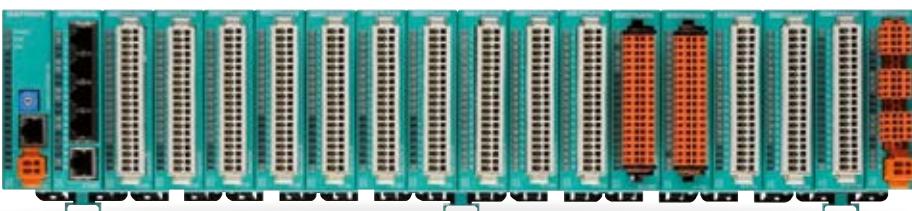
**Back-plane 4 slot**



**Back-plane 8 slot**



**Back-plane 12 slot**



**Back-plane 16 slot**

### GILOGIK II



**CANopen**

### FIELDBUS



**R-ETH100**



**R-SW5**

Models	R-GCANS	R-ETH100	R-SW5
Function	Fieldbus coupler	Fieldbus coupler	Ethernet switch
Protocol	CANopen -slave -	GDNet -Fast Ethernet-	-
Connector	D-sub 9 male	RJ45	5x RJ45
Baudrate	20 Kbit/s...1Mbit/s	10/100 Mbit/s	10/100 Mbit/s

GILOGIK II	DIGITAL					ANALOG	
	R-E16	R-EU16	R-EU32	R-U8	R-U16	R-AD8	R-MA6
<b>Models</b>	<b>R-E16</b>	<b>R-EU16</b>	<b>R-EU32</b>	<b>R-U8</b>	<b>R-U16</b>	<b>R-AD8</b>	<b>R-MA6</b>
Total Channels	16	16	32	8	16	8	12
<b>Analog Input</b>						<b>8</b>	<b>6</b>
<i>Voltage 0...10V DC</i>						8	6
<i>Voltage -10...+10V DC</i>						2	
<i>Voltage 0...+2V DC</i>						4	4
<i>Voltage 0...+2.5V DC</i>							
<i>Current 0/4...20mA</i>						4	4
<i>Strain gauge 0...25mV DC</i>							
<i>Strain gauge 0...30mV DC</i>						2	2
<i>Strain gauge 0...60mV DC</i>							
<i>Strain gauge 0...100mV DC</i>						2	2
<i>Temperature RTD</i>							
<i>Temperature TC</i>							
<i>Current Transformer 0...50mA AC</i>							
<i>Potentiometer</i>						8	6
<i>Transducer power supply +10V DC</i>						•	•
<i>Transducer power supply +24V DC</i>						•	•
<b>Analog Output</b>							<b>6</b>
<i>Voltage -10...+10V DC</i>							6
<i>Current 0/4...20mA</i>							
<b>Digital Input</b>	<b>16</b>	<b>8</b>	<b>16</b>				
<i>24 VDC</i>	16	8	16				
<b>Digital Output</b>		<b>8</b>	<b>16</b>	<b>8</b>	<b>16</b>		
<i>24 VDC</i>		8	16	8	16		
<i>Relays</i>							
<i>PWM</i>							
<b>Encoder-Counter</b>							
<i>Incremental Encoder</i>							
<i>Encoder Power Supply +5V</i>							
<i>Encoder Power Supply +24V</i>							
<i>Counter</i>							

## AUTOMATION PLATFORMS

ANALOG								FUNCTIONAL							
R-DA4	R-DA8	R-DA16	R-MIX	R-MIXR	R-TEMP4	R-TC8	R-C3	R-DA4	R-DA8	R-DA16	R-MIX	R-MIXR	R-TEMP4	R-TC8	R-C3
4	8	16	24	28	14	25	3								
			<b>6</b>	<b>6</b>	<b>6</b>	<b>8</b>									
			4	4	4										
														8	
			4	4	4										
			4	4	4										
			4	4	4										
			4	4	4										
			4	4	4										
			4	4	4										
			4	4	4										
			4	4	4										
			4	4	4										
			2	2	2										
			4	4	4										
			•	•	•										
<b>4</b>	<b>8</b>	<b>16</b>	<b>2</b>	<b>2</b>											
4	8	16	2	2											
			2	2											
			<b>8</b>	<b>8</b>										1	
			8	8										1	
			<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>16</b>								
			8	8	8	8	16								
					4										
				2	2	2									
			<b>2/3</b>	<b>2/3</b>										<b>3/3</b>	
			2	2										3	
														•	
														•	
														3	

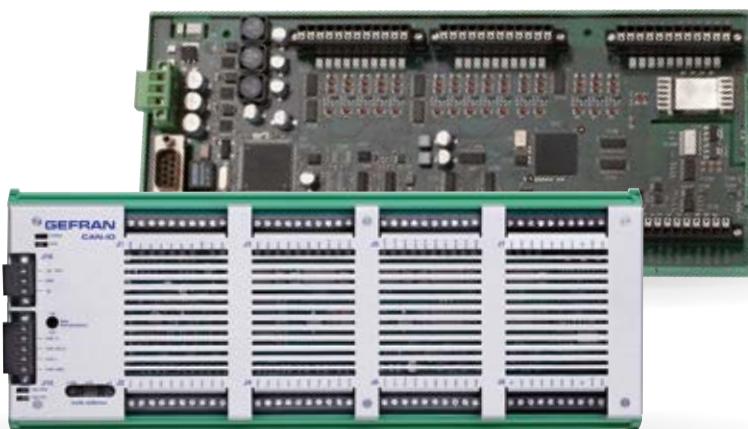
# REMOTE I/Os

## CAN-IO

Compact remote I/O modules with CANopen protocol.  
Complete with fieldbus diagnostic LEDs and input/output state LEDs for acquisition of different signals from the field.  
Easy installation and rapid wiring make it the ideal solution for small and medium applications.

- COMPACT

- CANopen PROTOCOL



CAN-IO			
Models	F056105	F057637	F065859
DIGITAL IO			
Digital inputs			
+24 VDC	14+4 <sup>[1]</sup>	9	6
Fast counters			
Fast counter	3	-	-
Digital outputs			
+24 VDC 0,5 A	18	8	24
PWM outputs			
+24 VDC 0.5 A 5kHz max.	-	-	-
ANALOG IO			
Analog inputs			
±10 V	-	-	6
0-20 mA	4	8	-
Temperature inputs			
Thermocouples J, K, S, N, T, E, B, R	-	-	12
Pt1000	4	-	-
Analog outputs			
±10 V	2	-	3
COMMUNICATION			
Protocol	CANopen slave DS301 v. 4.02, DS401		
Connector	SUB-D 9-pin male	Open-Style 5 pin male+female	
GENERAL			
Installation	on panel	on DIN rail	
Protection	IP00	IP20	
Connectors	Push-in removable, 12 pins	screw-type non-removable, 12 pins	
Power supply	+24 VDC		

[1] PNP/NPN Configurable

## AUTOMATION PLATFORMS

# REMOTE I/Os

## CAN-IO CUSTOM

Remote IO with CANopen Slave protocol [DS301 and DS401 compliant].  
"Tailor made" solution perfectly adaptable in terms of I/O [quantity and type] to specific automation needs.

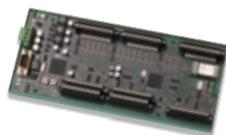
- SPECIFIC
- ECONOMICAL

### CAN-IO three-step custom solution for a tailor made board

- 1- Select the type of input/output installation, protection degree and connectors
- 2 - Set the quantity required
- 3 - Check the total number of channels (max. 40)



## CAN-IO CUSTOM



Models	SPECIFICATIONS
DIGITAL IO	
Digital inputs	
+24 VDC	0/3/6/9/12/15/18/21/24
Fast counters	
Fast counter	0/3/6
Digital outputs	
+24 VDC 0,5 A	0/2/4/6/8/10/12/14/16
+24 VDC 2A	0/2/4/6/8/10/12/14/16
Relay, 250VAC 5 A	0/2/4/6/8
PWM outputs	
+24 VDC 0.5 A 5kHz max.	
ANALOG IOI	
Analog inputs	
±10 V	0/2/4/6/8
0-20 mA	0/2/4/6/8
Strain gauge 3.3mV/V	0/2/4/6/8
Potentiometer	0/2/4/6/8
Temperature inputs	
Thermocouples J, K, S, N, T, E, B, R	0/2/4/6/8/10
Pt100	0/2/4/6/8/10
Pt1000	0/2/4/6/8/10
Analog outputs	
±10 V	0/2/4/6/8
0-20 mA	0/2/4/6/8
COMMUNICATION	
Protocol	CANopen slave DS301 v. 4.02, DS401
Connector	SUB-D 9-pin male
GENERAL	
Installation	on panel / DIN rail
Protection	IP00/IP20
Connectors	Push-in removable, screw-type non-removable, comb-type
Power supply	+24 VDC

# OPERATOR PANEL

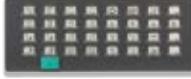
## eGT-I, ePanel

The Operator Panels, equipped with a high-contrast color display with very wide viewing angle, let you display and change automation data on a touch screen (always present). Installable on the panel, on the rack, or on the control console, in combination with the ePCLogic400 series PLC, they are an efficient and reliable solution for a wide range of machines. Integrated keyboard solutions are available, designed specifically for plastic processing machinery.



- COLOR, TOUCH SCREEN
- INDUSTRIAL MONITORS
- SLIM AND COMPACT DESIGN
- CUSTOM DESIGN

## AUTOMATION PLATFORMS

ePANEL							
<b>Models</b>	104CT	V104CT	150CT	V150CT	eGT-I		
<b>Function</b>	Operator Panel						
<b>Display</b>	10.4" TFT colors		15.0" TFT colors		10.4" TFT colors		
<b>Touch</b>	resistive						
<b>Keyboard</b>	no						
<b>Resolution</b>	SVGA 800x600	SVGA 600x800	XVGA 1024x768	XVGA 768x1024	SVGA 800x600		
<b>Backlight</b>	white LEDs, 30.000 hours @ 25°C		white LEDs, 50.000 hours @ 25°C		white LEDs, 30.000 hours @ 25°C		
<b>Connections</b>							
<b>Video</b>	DVI-D						
<b>USB</b>	2x USB 2.0 host [type A], rear 1x USB 2.0 client [type B], rear			1x USB 2.0 host [type A], rear 1x USB 2.0 host [type A], rear 1x USB 2.0 client [type B], rear			
<b>Protection</b>	IP65 front, IP20 rear						
<b>Power Supply</b>	+24 VDC, ± 25%						
eKM							
<b>Models</b>	eKM32-104						
<b>Function</b>	Machine keyboard to use in combination with ePanels						
<b>Connections</b>	USB protocol on Ethernet cable						
<b>No. Keys</b>	32						
<b>No. Leds</b>	32						
<b>Protection</b>	IP65 front, IP20 rear						

# Rack PLC

## ePCLogic400

ePCLogic400 is the complete solution for process and automation control: a single, modular system (preconfigured and expandable) that controls sequences and manages work processes.

The ePanel and eGT-I operator interfaces are available separately, in combination with the in-rack ePCLogic400 PLC, which integrates CPU and I/O modules.

The PLC can be completely customized with respect to CPU power and to the number and type of inputs and outputs, adapting perfectly to the machine or system to be controlled.



- FANLESS AND DISKLESS SOLUTION
- DIN RAIL MOUNTING
- READY TO USE

ePCLogic400	Rack
Models	e4R08
Brief Description	Rack complete with communications backplane and power supply [ housing for 1 CPU and 8 IO modules]
Number of slots	9 [1x CPU + 8x IO]
Mounting	On DIN-RAIL
Protection Level	IP20
Power Supply	+24 VDC, ± 25%

## AUTOMATION PLATFORMS

ePCLogic400			
CPU			
<b>Models</b>	<b>e491XX</b>	<b>e492XX</b>	<b>e493XX</b>
<b>Processor</b>		Atom E6xx series	
<b>Frequency</b>	600 MHz	1.0 GHz	1.3 GHz
<b>Memory</b>			
<b>System</b>		512 MB DRAM	
<b>Mass</b>		4 GB Flash	
<b>Retentive</b>		to file	
<b>Mass memory extension</b>		1 x SD card slot	
<b>Connections</b>			
<b>Video</b>		DVI-D	
<b>Ethernet</b>	2x 10/100 Mbps [1x Modbus TCP 1xGDnet]	2x 10/100 Mbps [1x Modbus TCP 1xEthercat\GDnet]	
<b>CAN</b>		1x CANopen	
<b>Serial</b>		1x RS232, 1x RS485	
<b>USB</b>		4x USB 2.0 Host [type A]	
<b>Programming software</b>		GF_Project VX	
ePCLogic400			
IO digital / analog / functional			
<b>Models</b>	<b>e410</b>	<b>e411</b>	<b>e430</b>
<b>Brief Description</b>	16 digital inputs + 20 digital outputs	16 digital inputs + 16 digital outputs	6 analog inputs + 4 analog outputs + 8 temperatures
<b>Total channels</b>	36	32	18
<b>Analog Input</b>			6
<b>Voltage 0...10 V</b>			6
<b>Voltage -10...+10V</b>			6
<b>Current 0...20 mA</b>			6
<b>Potentiometer</b>			6
<b>Transducer power supply +10V</b>			✓
<b>Temperature Input</b>			8
<b>Thermocouple</b>			8 [ J, K, S, N, T, E, B, R, L ]
<b>Analog Output</b>			4
<b>Voltage -10...+10V</b>			4
<b>Digital Input</b>	<b>16</b>	<b>16</b>	
<b>+ 24 V DC</b>	16	16	
<b>Fast Digital Input</b>	3		
<b>Digital Output</b>	<b>20</b>	<b>16</b>	<b>20</b>
<b>+ 24 V DC, 2A</b>	20	16	
<b>+ 24 V DC 0.5A</b>			20
<b>PWM</b>	2		

# PROGRAMMING SOFTWARE

## GF\_Project

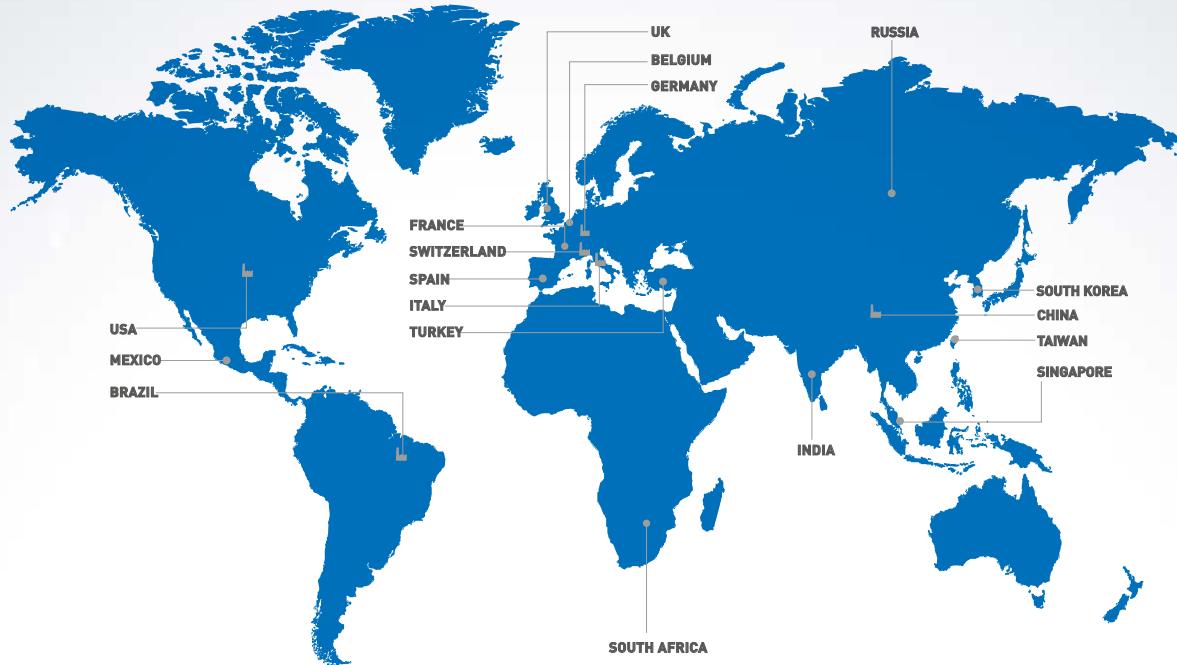


Main functions	GF_Project VX	GF_Project LX
Configurable number of variables	Up to 64000	Up to 10000
Integrated Alarm Management	√	√
Number of alarms	Typical 300	Typical 150
Integrated Recipe Management	√	√
Number of recipe types	Typical 8	Typical 8
Number of variables per recipe type	Typical 100	Typical 100
USB support for recipe Export / Import	√	√
PC utility to change Recipe values offline	√	√
Integrated Multi-lingual Management	√	√
Selection of runtime language	√	√
Number of languages	Typical 8	Typical 8
Number of texts for each language	Typical 200	Typical 200
Import / Export texts in CSV format	√	√
UNICODE support	√	√
Integrated User Management	√	
Max levels of user access	15	
Number of users for each access level	Typical 4	
User Management – Restrict page access	√	
User Management – Restrict data change	√	
User Management – Restrict components display	√	
Integrated DataLogging	√	
Number of configurable Datalog variables	Typical 50	
DataLog sampling type	Trigger – Time	
DataLog sample time	Minimum 1 sec.	
Saving of encrypted DataLog files	√	
Export DataLog values in CSV format	√	
Offline PC utility per DataLog file decrypting on CSV	√	
Target FW update	√	√
USB target update (Application SW & FW)	√	
Ethernet target update (Application SW & FW)	√	√
Remote service	√	√
PLC online	√	√
Desktop Remote	√	
Monitoring	√	
Remote Pages	√	
Data Exchange	√	√

## AUTOMATION PLATFORMS



	GF_PROJECT VX	GF_PROJECT LX
<b>Machine control (PLC)</b>		
PLC Programming standard IEC61131-3	✓	✓
<i>Languages IEC61131 – text base</i>	IL, ST	IL, ST
<i>Languages IEC61131 – graphic base</i>	LD, FBD, SFC	LD, FBD, SFC
Bit DataType	BOOL, BYTE, WORD, DWORD	BOOL, BYTE, WORD, DWORD
Signed Integer DataType	INT, DINT	INT, DINT
Unsigned Integer DataType	UINT, UDINT	UINT, UDINT
Floating DataType	REAL	REAL
Other DataType	STRING, ARRAY, STRUCTURE	STRING, ARRAY, STRUCTURE
Preset Variables	✓	✓
Retentive Variables	✓	✓
On-Line PLC	✓	✓
<i>On-Line change</i>	✓	✓
<i>On-Line watch list</i>	✓	✓
<i>Hot download</i>	✓	✓
<i>Breack point</i>	✓	✓
Trigger	✓	✓
Configurable PLC task	✓	✓
Init - boot	✓	✓
Fast	✓	✓
Normal	✓	
Slow	✓	✓
Background	✓	✓
Configurable Function Block / Custom Function library	✓	✓
Gefran FB Library	✓	✓
<b>Graphic interface configuration</b>		
Widgets Library	✓	✓
<i>"Basic" Widgets (dataset, datavalue, panel..)</i>	✓	✓
<i>"Advanced" WIDGET BOX</i>	✓	
Events management	✓	✓
<i>Events management on Widgets</i>	✓	✓
<i>Events management on page actions</i>	✓	✓
<i>Events configuration with script run</i>	✓	✓
Supported image types	GIF (89a) / JPG (jpeg) / PNG	BMP / ICO / JPG / EMF / GIF
Selectable Snap to grid	✓	✓
Object alignment	✓	✓
Undo and redo single change	✓	
PC Page Simulator	✓	✓
<b>HW configuration</b>		
Graphic configuration of system architecture	✓	✓
Target selection from Gefran catalogue	✓	✓
Instrumentation	✓	
Power Control	✓	✓
Motion	✓	✓
Automation	✓	✓
Sensors	✓	
Multi Fieldbus support	✓	✓
Ethercat\GDnet fast ethernet support	✓	
Modbus RTU Fieldbus support with Gefran devices	✓	✓
Integration of third-party devices in Modbus RTU	✓ (via dedicated tool)	✓ (via dedicated tool)
Modbus TCP Fieldbus support with Gefran devices	✓	✓
Integration of third-party devices in Modbus TCP	✓ (via dedicated tool)	✓ (via dedicated tool)
CANOpen Fieldbus support with Gefran devices	✓	✓
Integration of third-party devices in CANOpen	✓ (via EDS import file)	✓ (via dedicated tool)
Parameterisation of individual Fieldbuses	✓	✓



#### GEFRAN DEUTSCHLAND GmbH

Philipp-Reis-Straße 9a  
D-63500  
Seligenstadt  
Ph. +49 (0) 61828090  
Fax +49 (0) 6182809222  
vertrieb@gefran.de

#### SIEI AREG - GERMANY

Gottlieb-Daimler Strasse 17/3  
D-74385  
Pleidelsheim  
Ph. +49 (0) 7144 897360  
Fax +49 (0) 7144 8973697  
info@sieiareg.de

#### SENSORMATE AG

Steigweg 8,  
CH-8355 Aadorf, Switzerland  
Ph. +41(0)52-2421818  
Fax +41(0)52-3661884  
<http://www.sensormate.ch>

#### GEFRAN FRANCE SA

4, rue Jean Desparmet  
BP 8237  
69350 LYON Cedex 08  
Ph. +33 (0) 478770300  
Fax +33 (0) 478770320  
commercial@gefran.fr

#### GEFRAN BENELUX NV

ENA 23 Zone 3, nr. 3910  
Lammerdries-Zuid 14A  
B-2250 OLEN  
Ph. +32 (0) 14248181  
Fax +32 (0) 14248180  
info@gefran.be

#### GEFRAN UK Ltd

Unit 7 Brook Business Centre  
54a Cowley Mill Road  
Uxbridge  
UB8 2FX  
Ph. +44 (0) 8452 604555  
Fax +44 (0) 8452 604556  
sales@gefran.co.uk

#### GEFRAN ESPAÑA

Calle Vic, números 109-111  
08160 - MONTMELÓ  
[BARCELONA]  
Ph. +34 934982643  
Fax +34 935721571  
comercial.espana@gefran.es

#### GEFRAN MIDDLE EAST ELEKTRIK VE ELEKTRONİK San. ve Tic. Ltd. Sti

Yesilkoy Mah, Ataturk  
Cad. No: 12/1 B1 Blok K:12  
D: 389 Bakirkoy /Istanbul TURKIYE  
Ph. +90212 465 91 21  
Fax +90212 465 91 22

#### GEFRAN RUSSIA

4 Lesnoy pereulok, 4  
Business center "White Stone"  
125047, Moscow, Russia  
Ph. +7 (495) 225-86-20  
Fax +7 (495) 225-85-00

#### GEFRAN SOUTH AFRICA Pty Ltd.

Unit 10 North Precinct,  
West Building Topaz Boulevard  
Montague Park,  
7411, Cape Town  
Ph. +27 21 5525985  
Fax +27 21 5525912

#### GEFRAN SIEI Drives Technology Co., Ltd

No. 1285, Beihai Road, Jiading  
District, Shanghai, China 201807  
Ph. +86 21 69169898  
Fax +86 21 69169333  
info@gefran.com.cn

#### GEFRAN SIEI - ASIA

31 Ubi Road 1  
#02-07,  
Azttech Building,  
Singapore 408694  
Ph. +65 6 8418300  
Fax +65 6 7428300  
info@gefran.com.sg

#### GEFRAN INDIA

Survey No. 191/A/1,  
Chinchwad Station Road, Chinchwad,  
Pune-411033, Maharashtra  
Ph. +91 20 6614 6500  
Fax +91 20 6614 6501  
gefran.india@gefran.in

#### GEFRAN TAIWAN

No.141, Wenzhi Rd.,  
Zhongli City,  
Taoyuan County 32054,  
Taiwan (R.O.C.)  
Ph. +886-3-4273697  
eddie.liao@gefran.com.sg

#### GEFRAN SOUTH KOREA

Room #1207, Hogue-Dong Anyang  
IT Valley 16-39, LS-ro 91Beon-gil,  
Dongan-gu, Anyang-si, Gyeonggi-do,  
431-848, South Korea  
Ph. +82 70 7578 8680

#### GEFRAN Inc.

8 Lowell Avenue  
WINCHESTER - MA 01890  
Toll Free 1-888-888-4474  
Fax +1 [781] 7291468  
info.us@gefran.com

#### GEFRAN BRASIL ELETROELETÔNICA

Avenida Dr. Altino Arantes,  
377 Vila Clementino  
04042-032 SAO PAULO - SP  
Ph. +55 (0) 1155851133  
Fax +55 (0) 1132974012  
comercial@gefran.com.br

#### GEFRAN HEADQUARTER

Via Sebina, 74  
25050 PROVAGLIO D'ISEO (BS) ITALY  
Ph. +39 03098881  
Fax +39 0309839063

#### Drive & Motion Control Unit

Via Carducci, 24  
21040 GERENZANO (VA) ITALY  
Ph. +39 02967601

Fax +39 029682653

[info.motion@gefran.com](mailto:info.motion@gefran.com)

#### Technical Assistance:

[technohelp@gefran.com](mailto:technohelp@gefran.com)

#### Customer Service

[motioncustomer@gefran.com](mailto:motioncustomer@gefran.com)

Ph. +39 02 96760500

Fax +39 02 96760278



[www.gefran.com](http://www.gefran.com)

# GEFRAN

You know we are there