

# NIFE 200/200P2E Controller

Intel® Celeron® Quad Core  
Automation PC-Based Controller



## Main Features

- Distributed, modularized and open-architecture controller
- Compliant with Industrial IEC61131-3 Programming Languages (LD/FBD/SFC/L/ST/CFC)
- Support up to 1024+ I/O Points and maximum 24 Axis for motion
- Support PLC Handler APIs and OPC-UA server for Client/M2M communication
- Available HMI APIs for human-machine interface
- Support industrial Ethernet Fieldbus protocols (EtherCAT, EtherNet/IP, PROFINET)
- Support industrial Fieldbus protocols (PROFINET, PROFIBUS, DeviceNET) by optional FBI
- Available NEXCOM IoT Studio for cloud and data acquisition
- Support Multi-Core, Multi-Tasking powered by Intel® Celeron® Quad Core processor

## Product Overview

Powered by the Intel® Celeron® processor J1900 (formerly codenamed “Bay Trail-D”), NIFE 200 presents intelligent PC-based controller and IoT gateway for factory automation. NIFE 200 supports up to 8G DDR3L memory and have several options on storage devices like SD, mSATA, and SSD. The NIFE 200 support operating temperature from -5 up to 55 degree C with typical DC input 24V  $\pm$ 20% range. The NIFE 200 has high integration ability with optional mini-PCIe module and 2 x COM ports, which makes it a reliable connection with devices in factory automation applications (with optional PROFIBUS, PROFINET, DeviceNET, EtherCAT, EtherNet/IP, CANopen fieldbus modules), IoT applications (with optional GbE LAN, Wi-Fi, 3.5G/4G LTE module) and communication applications (with optional GPIO, RS232/422/485). NIFE 200 is the top choice for M2M intelligent system as a factory automation controller and IoT gateway.

NIFE 200 also meets PLCopen® specifications and allows easy control programming via Control RTE and SoftMotion tool kit. Using libraries of reusable logic and motion functionality, control schemes can be developed with reduced programming efforts for fast deployment of SoftPLC and IoT controllers.

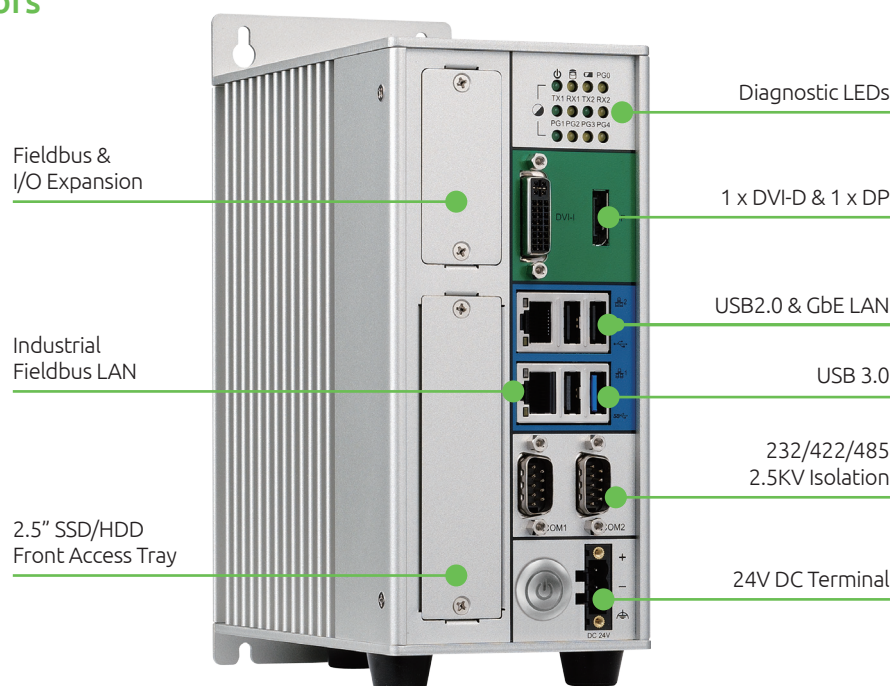
## Controller Specifications

Specification	SoftPLC Controller		SoftMotion Controller	SoftMotion CNC Controller	
Performance Index	P20	P30	M20	R10	R20
Real-Time	Yes	Yes	Yes	Yes	Yes
Software Protocols	EtherCAT, EtherNet/IP, PROFINET				
Optional Protocols via FBI	PROFIBUS, DeviceNET, CANopen				
IEC61131-3 Language	Ladder Diagram, Function Block Diagram, Instruction List, Structured Text, Sequential Function Chart, Continuous Function Chart				
Cycle Time (ms)	0.5	0.5	0.5	0.5	0.5
Max. I/O Points	1024	1024+	1024	512	1024
Max. Axes	No support	No support	24	12	24
Control Group	No support	No support	No support	1	2
Motion Features	No support	No support	GEAR, CAM Function Integrated graphical CAM editor with extensive configuration options		
High-Computing Applications Other Application Software	No support	Yes	No support	No support	No support
HMI (License Options)	JMobile Suite	JMobile Suite	TargetVisu	TargetVisu	TargetVisu

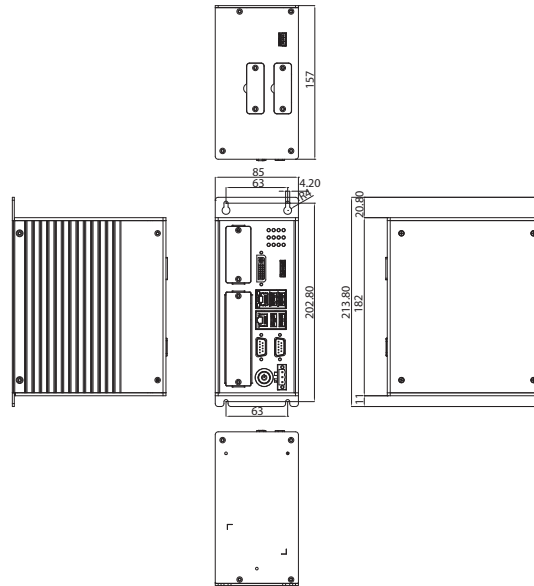
## System Specification

Specification	NIFE 200 / NIFE 200P2E
Processor	Onboard Intel® Celeron® processor J1900 Quad Core 2.0GHz
Main Memory	DDR3L 1600/1333MHz memory maximum up to 8GB
Storage Memory	Optional 2.5" SSD or HDD
Persistent Memory	Optional 1M-bit NVRAM via mini-PCIe
Power Backup	Optional battery pack, NISKBAT
General Interface	2 x GbE RJ45 (i210AT), 1 x DVI-I (DVI-D + VGA), 1 x DP, 3 x USB 2.0, 1 x USB 3.0
Diagnostics LED	1 x Power, 1 x storage, 1 x battery low, 2 x Tx/Rx, 5 x GPO LEDs
Operating System	Win8 32-bit/64-bit, WES8 32-bit/64-bit Win7 32-bit/64-bit, WES7 32-bit/64-bit WEC7 Linux Kernel version 3.8.0
Control Software	SoftPLC: P20, P30 (optional) SoftMotion: M20 (optional) SoftMotion CNC: R10, R20 (optional)
Serial Ports	2 x RS232/422/485 with 2.5KV Isolation
Power Requirement	Typical 24V DC input with $\pm 0\%$ range
Operating Temperature	Ambient with air flow: -5°C to 55°C (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
Storage Temperature	-20°C to 85°C
Relative Humidity	10% to 93% (non-condensing)
Shock Resistance	50G, half sine, 11ms, IEC60068-27
Vibration Resistance	Random: 2Grms @ 5~500Hz, IEC60068-2-64 Sinusoidal: 2Grms @ 5~500Hz, IEC60068-2-64
EMC Standard	CE Approval: EN61000-6-2 & EN61000-6-4/FCC Class A/UL60950/LVD
Dimension and Weight	85mm(W) x 157mm(D) x 214mm(H), Net weight 2.3kg

## I/O Connectors

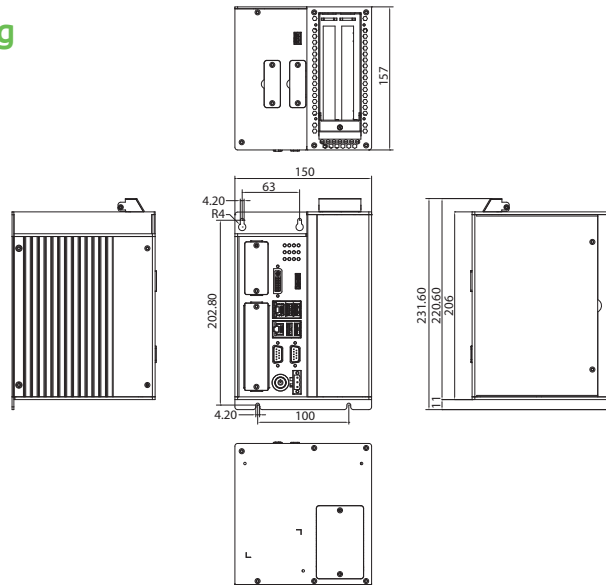


## Dimension Drawing



NIFE 200

## Dimension Drawing



NIFE 200P2E








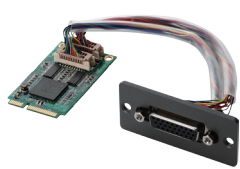





## Ordering Information

\* HMI Software License Exclude

System	Processor	Main Memory	Storage	Software Package	SoftPLC				HMI (Optional)	
					SoftMotion				JMobile	
					SoftMotion CNC				TargetVisu	
NIFE200 P20 Controller A0J70020000X0	Celeron J1900	4G	32G	<ul style="list-style-type: none"><li>♦ P20 Windows WES7 Package (P/N: 88J70020011X0)</li><li>♦ P20 Linux Ubuntu Package (P/N: TBC)</li></ul>	V	-	-	V	-	
NIFE200 P30 Controller A0J70020000X0		4G	32G	<ul style="list-style-type: none"><li>♦ P30 Windows WES7 Package (P/N: 88J70020012X0)</li><li>♦ P30 Linux Ubuntu Package (P/N: TBC)</li></ul>	V	-	-	V	-	
NIFE200 M20 Controller A0J70020000X0		4G	32G	<ul style="list-style-type: none"><li>♦ M20 Windows WES7 Package (P/N: 88J70020013X0)</li><li>♦ M20 Linux Ubuntu Package (P/N: TBC)</li></ul>	V	V	-	-	V	
NIFE200 R10 Controller A0J70020000X0		8G	64G	<ul style="list-style-type: none"><li>♦ Windows 7 Pro Emb Package (P/N: 88J70020014X0)</li><li>♦ R10 Linux Ubuntu Package (P/N: TBC)</li></ul>	V	V	V	-	V	

System	Processor	Main Memory	Storage	Software Package	SoftPLC				HMI (Optional)			
					SoftMotion				JMobile			
					SoftMotion CNC						TargetVisu	
NIFE 200 R20 Controller A0J70020000X0	Celeron J1900	8G	64G	<ul style="list-style-type: none"><li>R20 Windows 7 Pro Emb Package (P/N : 88J70020015X0)</li><li>R20 Linux Ubuntu Package (P/N: TBC)</li></ul>	V	V	V	-	V			
NIFE 200P2E R20 Controller A0J70020002X0		8G	64G	<ul style="list-style-type: none"><li>R20 Windows 7 Pro Emb Package (P/N: 88J70020015X0)</li><li>R20 Linux Ubuntu Package (P/N: TBC)</li></ul>	V	V	V	-	V			
NIFE 200 Bare-bone System 10J70010000X0		Option	Option	Support <ul style="list-style-type: none"><li>Win8 32-bit/64-bit, WES8 32-bit/64-bit</li><li>Win7 32-bit/64-bit, WES7 32-bit/64-bit</li><li>Linux Kernel version 3.8.0</li></ul>	-	-	-	-	-			
NIFE 200P2E Bare-bone System 10J70010100X0		Option	Option	Support <ul style="list-style-type: none"><li>Win8 32-bit/64-bit, WES8 32-bit/64-bit</li><li>Win7 32-bit/64-bit, WES7 32-bit/64-bit</li><li>Linux Kernel version 3.8.0</li></ul>	-	-	-	-	-			
System	Optional Power Adapter											
Power Adapter	60W 24V/2.5A w/3pin phoenix contact w/o power cord (P/N: 7400060033X00)											

## Optional Modules

FBI Fieldbus Module			
			
P/N:10J50090E08X0 EtherCAT Protocol	P/N:10J50090E09X0 PROFIBUS Protocol	P/N:10J50090E10X0 DeviceNet Protocol	P/N:10J50090E15X0 CANopen Protocol
FBI Fieldbus Module		COM Module	
			
P/N:10J50090E20X0 EtherNet/IP Protocol	P/N:10J50090E21X0 PROFINET Protocol	P/N:10JK0ECOM04X0 NISKECOM3 4xRS485	P/N:10JK0ECOM06X0 NISKECOM4 4xRS232
LAN Module		Power Pack	
			
P/N:10JCLAN0401X0 NISKLAN04 2Xi210AT	P/N:10JCLAN0101X0 NISKLAN01 1X82574L	P/N:10JK00BAT00X0 NISKBAT MAIN	P/N:10JK00BAT01X0 NISKBAT EXPANSION
Persistent Memory Module			
			
P/N:10JKNVRAM00X0 NISK-NVRAM 1MB			