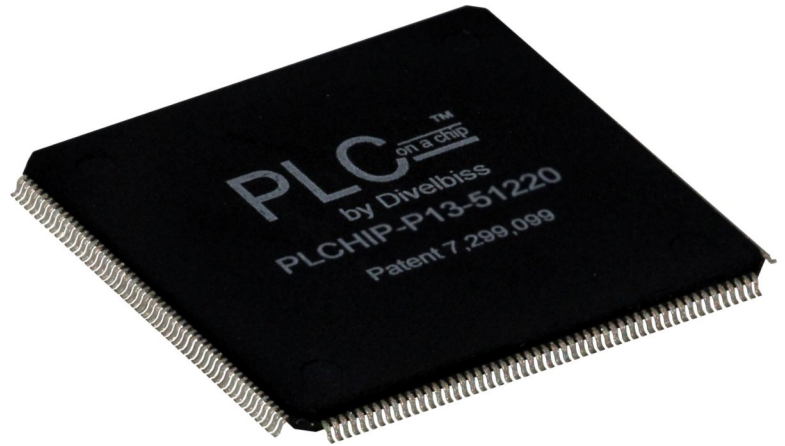


Now Supports J1939 and  
NMEA 2000 Networking

- ▶ Full Featured Industrial PLC
- ▶ Fully Integrated Single IC Construction
- ▶ Programs with EZ Ladder® Software
- ▶ No Low Level Programming Required
- ▶ Easy to Embed
- ▶ Quick to Market Solutions
- ▶ Ladder Diagram with Structured Text
- ▶ Modbus Master / Slave / Modbus TCP
- ▶ Ethernet Port
- ▶ Large Number of I/O and Features
- ▶ CAN & Serial Ports Available
- ▶ SD Card Support
- ▶ J1939, NMEA 2000, OptiCAN CAN Networking



Designed to provide embedded intelligence in OEM products, the P-Series PLC on a Chip® is a cost-effective programmable logic controller packaged in a single integrated circuit. All I/O and integrated functions are pre-assigned for use within the Divelbiss EZ Ladder® PC based, industrial ladder diagram software. The full featured P-Series PLC on a Chip controller and EZ Ladder combination provides for solutions that are both versatile and easy to implement.

Divelbiss Development Kits include a library of pre-designed, drop-in circuitry for I/O, power supply, communications and other supporting components. The library provides all information required to implement P-Series PLC on a Chip integrated circuit and the peripheral circuitry, including PCB layout requirements, standard part numbers, and more.

Divelbiss also offers a cost-effective Design Program using PLC on a Chip technology for instances when PCB design project time or expertise is not available.

### Now with Structured Text

P-Series PLC on a Chip provides the ability for custom functions and function blocks using built-in Structured Text support. These custom functions and function blocks are ideal when customized functionality is needed or when customized communications drivers are required.

### Advantages of a PLC on a Chip Solution:

- ▶ Adds Intelligence by Embedding the PLC
- ▶ Low Integration Cost
- ▶ Quick to Market Solutions
- ▶ Full Factory Support
- ▶ Pre-designed Circuits Library
- ▶ No Low Level Programming
- ▶ RAPID Design Program Available
- ▶ Protects Intellectual Property
- ▶ Increased Product Value
- ▶ Increased Replacement Parts Sales

## SPECIFICATIONS

System Capacity	PLCHIP-P13-51220
Flash Memory	256K Bytes Ladder Program Storage
EEPROM Memory	4000 Bytes (Internal PLC on a Chip)
RAM Memory	32K Bytes Program Exe & Variables
Power Supply	3.3VDC
Package Type	LQFP208 Package IC
Temperature Range	-40 to 85 Degrees C
Retentive Memory	Yes, Using External FRAM Device
Communications*	
Programming Ports	1 TTL Programming Port
General Purpose Serial Ports	4 TTL Ports, 1 Supports Handshaking
ASCII / RTU Communications	Yes
Modbus Master / Slave Serial	Yes
Serial Ports Baud Rate	up to 115.2K Bps
CAN Ports	Yes, 2 TTL Ports - J1939, NMEA 2000, OptiCAN
Ethernet Port	1 TTL Port, Programming or Modbus TCP
USB Ports	2 TTL Ports - Future Expansion
SD Card Port	1 SD Memory Card Interface - requires socket
Input / Output*	
SPI Serial Interface Port	2, TTL Level
I <sup>2</sup> C Ports	2, TTL Level, 1 Mbit/s Data Rate
Analog Inputs	8 Channels, 0-3.3VDC Input, 12 Bit
Analog Outputs	1 Channel, 0-3.3VDC, 10 Bit
PWM Outputs	12 Channels (TTL), 32 Bit
Counter / Timer Inputs	3 Inputs (TTL), 32 Bit
Quadrature Inputs	1 Quadrature Input (TTL) - A, B, Index
LCD Port	Supports LCD Display (TTL) (HD44780 compat)
Keypad Port	Supports Keypad Matrix of 5 Col / 4 Row (TTL)
Digital I/O	Up to 164 TTL Digital I/O Points
Programming	
Program Language	Ladder Diagram, Function Blocks and Structured Text using EZ LADDER®
Function Blocks	Yes, Custom Function blocks using Structured text
Structured Text	Yes
Scan Time	Variable, Based on Program Size
Error Checking	Yes, during program compilation or verification
Real Time Monitoring	Yes
Text Notes	Yes, Placeable text boxes
# of Instructions / Function Blocks	>90

\* Feature Quantities shown are Maximum total (up to). Multiple feature pin functions are shared. See the P-Series PLC on a Chip Data Sheet for details.