Data Sheet: Pigeon for CODESYS Control

CODESYS Control for Pigeon allows users to program the Pigeon computers by using the CODESYS Development System.

Product Description

CODESYS Control for Pigeon contains support for the Pigeon computers family (RB100, RB300, RB100-CM3, RB300-CM3, RB700). Pigeon computers are powered by Raspberry Pi Compute Module and Linux system. Pigeon is a series of computers for use in industrial control and automation systems. Pigeon computers have a rich set of inputs and outputs and a wide choice of interfaces (Ethernet, RS-232, RS-485, CAN, USB, 1-wire, HDMI).

After installation of the CODESYS Control runtime system for Raspberry Pi and CODESYS Control for Pigeon, the Pigeon acts as a CODESYS controller, which can be engineered with the CODESYS Development System (V3). Device drivers for the following I/O are included:

- Optoisolated Digital Inputs
- Dry Contact Inputs
- Digital Outputs
- Analog Inputs
- Analog Outputs

Range of Functions

The following peripherals are supported, see the Pigeon technical documentation for full details

http://pigeoncomputers.com/documentation/

Optoisolated Digital Inputs

Eight optoisolated digital inputs. Low-level input voltage 0 ... +5 V DC. High-level input voltage +10 ... +28V DC.

Dry Contact Inputs

Four dry contact inputs

Digital Outputs

Eight open collector outputs 28V 500mA

Analog Inputs

Four 0-10V analog input channels

Analog Outputs

Two 0-10V analog outputs

Installation

CODESYS Control for Pigeon has been tested with CODESYS Control for Raspberry Pi SL 3.5.16.70.

Package Installation

From the CODESYS store download the packages

- CODESYS Control for Raspberry Pi SL
- CODESYS Control for Pigeon

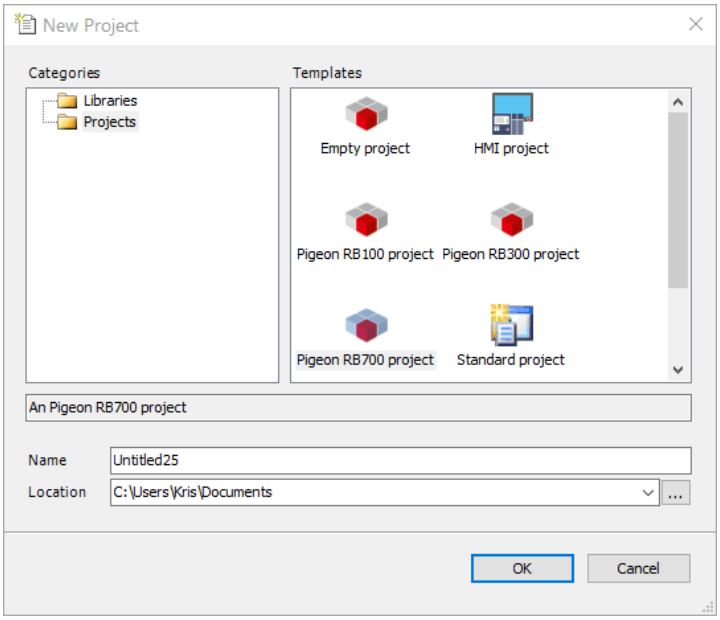
In CODESYS open the Package Manager from the Tools Menu and install CODESYS Control for Raspberry Pi SL followed by CODESYS Control for Pigeon. Restart CODESYS.

Install CODESYS Runtime on the Pigeon

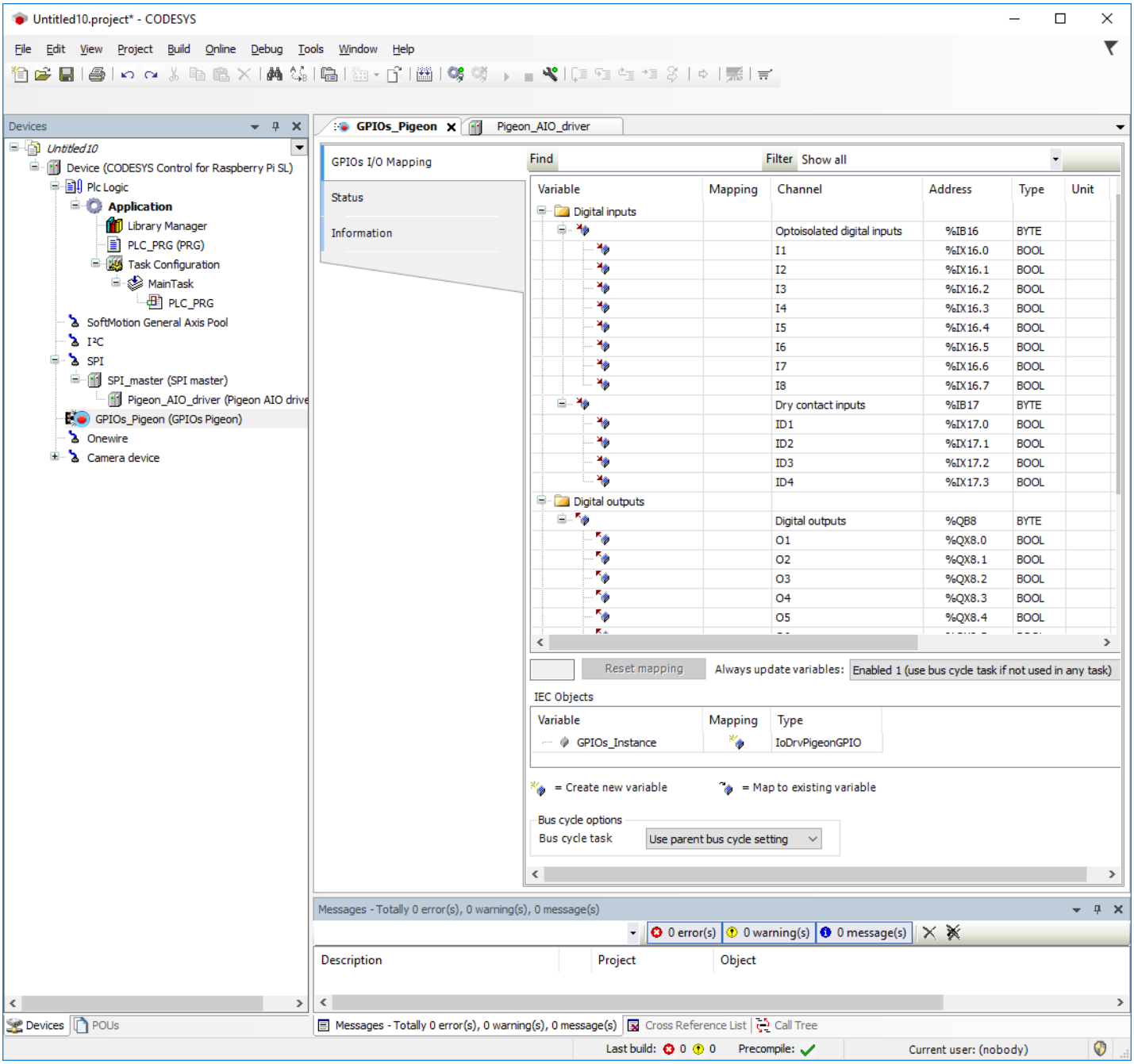
In CODESYS select Tools then Update Raspberry Pi, enter username and password (default: pi/raspberry). Enter the IP address of your Pigeon and click Install. Reboot the Pigeon

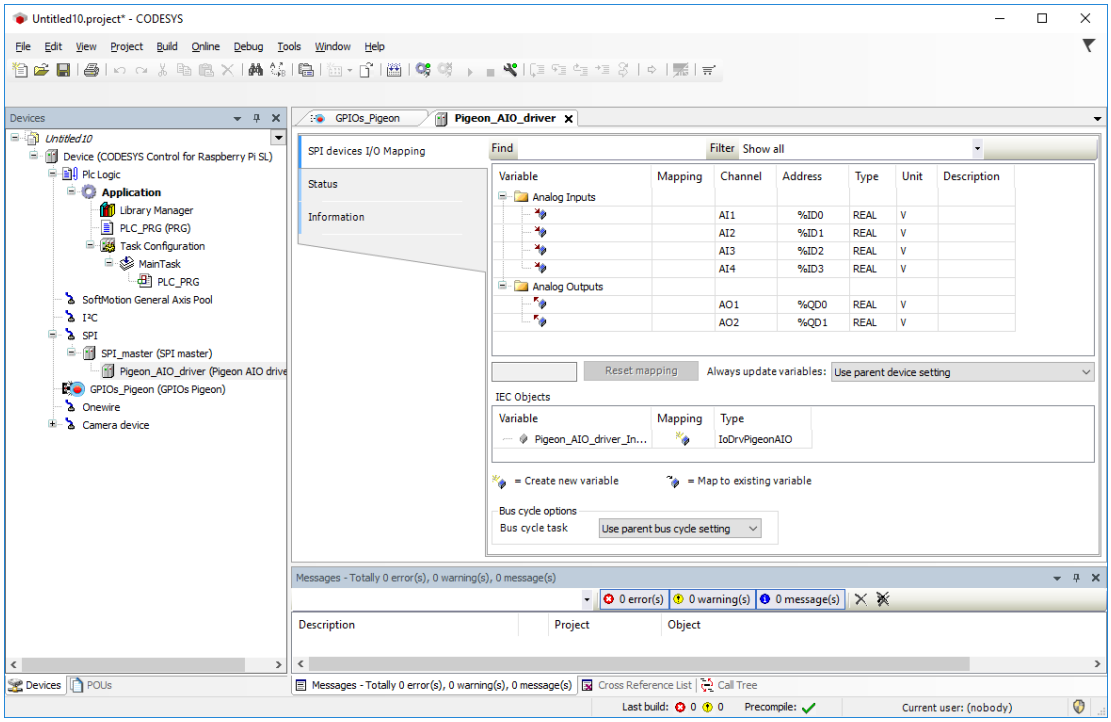
Getting Started

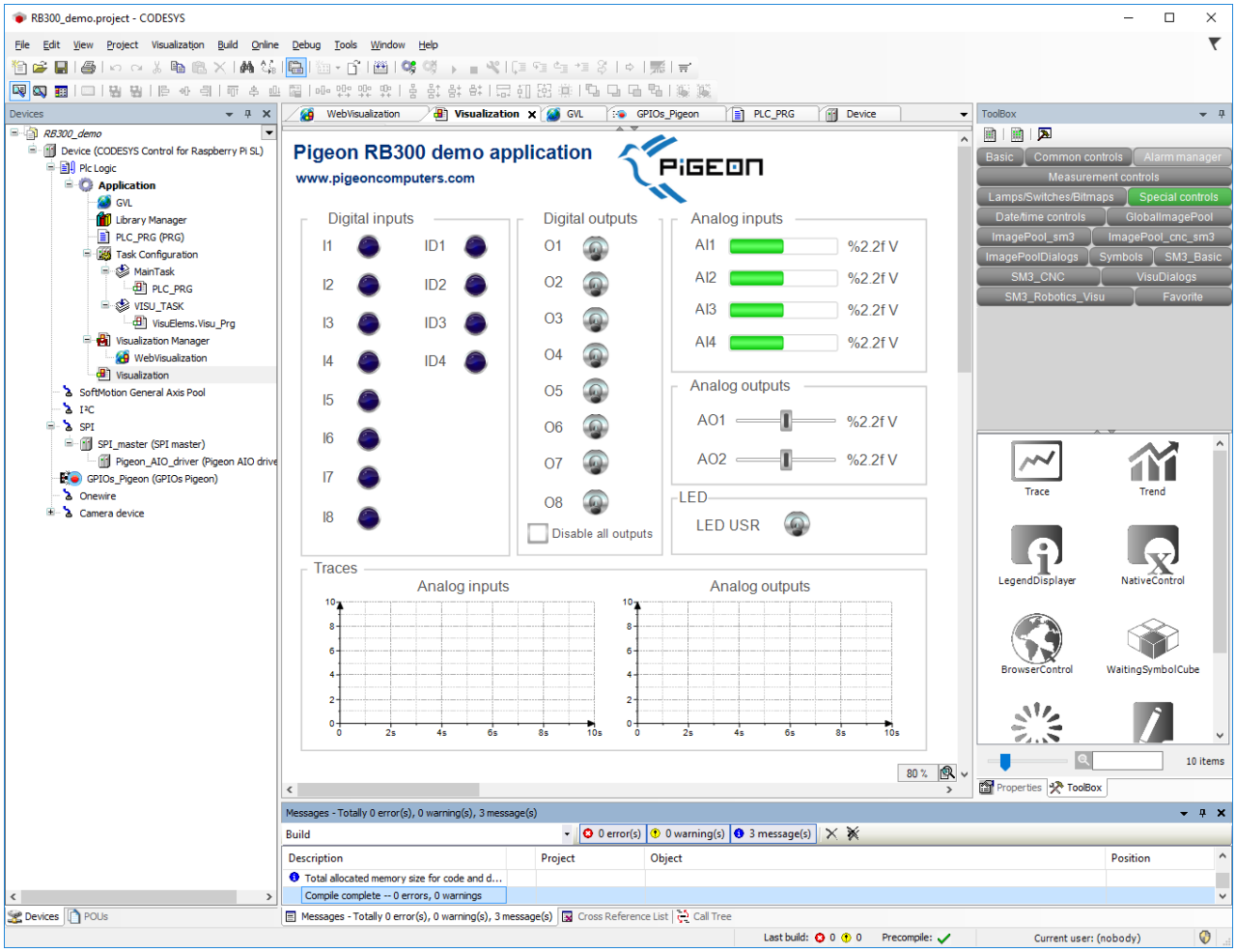
In CODESYS, select File then New Project… and in the Projects category choose Pigeon RB100 project, Pigeon RB300 project or Pigeon RB700 project depending on devices you are using.



Screenshots




Untitled10.project* - CODESYS
File Edit View Project Build Online Debug Tools Window Help
Devices
Untitled10
Device (CODESYS Control for Raspberry Pi SL)
Plc Logic
Application
Library Manager
PLC_PRG (PRG)
Task Configuration
MainTask
PLC_PRG
SoftMotion General Axis Pool
I²C
SPI
SPI_master (SPI master)
Pigeon_AIO_driver (Pigeon AIO drive
GPIOs_Pigeon (GPIOs Pigeon)
Onewire
Camera device
GPIOs_Pigeon
Pigeon_AIO_driver
SPI devices I/O Mapping
Status
Information
Find
Filter Show all
Variable Mapping Channel Address Type Unit Description
Analog Inputs
AI1 %ID0 REAL V
AI2 %ID1 REAL V
AI3 %ID2 REAL V
AI4 %ID3 REAL V
Analog Outputs
AO1 %QD0 REAL V
AO2 %QD1 REAL V
Reset mapping
Always update variables: Use parent device setting
IEC Objects
Variable Mapping Type
Pigeon_AIO_driver_In... IoDrvPigeonAIO
= Create new variable
= Map to existing variable
Bus cycle options
Bus cycle task Use parent bus cycle setting
Messages - Totally 0 error(s), 0 warning(s), 0 message(s)
0 error(s) 0 warning(s) 0 message(s)
Description Project Object
Devices POUs
Cross Reference List Call Tree
Last build: 0 0 Precompile: Current user: (nobody)


RB300_demo.project - CODESYS
File Edit View Project Visualization Build Online Debug Tools Window Help
Devices
RB300_demo
Device (CODESYS Control for Raspberry Pi SL)
Plc Logic
Application
GVL
Library Manager
PLC_PRG (PRG)
Task Configuration
MainTask
PLC_PRG
VISU_TASK
VisuElems.Visu_Prg
Visualization Manager
WebVisualization
Visualization
SoftMotion General Axis Pool
I²C
SPI
SPI_master (SPI master)
Pigeon_AIO_driver (Pigeon AIO drive
GPIOs_Pigeon (GPIOs Pigeon)
Onewire
Camera device
WebVisualization Visualization GVL GPIOs_Pigeon PLC_PRG Device
Pigeon RB300 demo application
www.pigeoncomputers.com
PIGEON
Digital inputs
I1 I2 I3 I4 I5 I6 I7 I8
ID1 ID2 ID3 ID4
Digital outputs
O1 O2 O3 O4 O5 O6 O7 O8
Disable all outputs
Analog inputs
AI1 AI2 AI3 AI4
%2.2f V
Analog outputs
AO1 AO2
%2.2f V
LED
LED USR
Traces
Analog inputs
Analog outputs
ToolBox
Basic Common controls Alarm manager
Measurement controls
Lamps/Switches/Bitmaps Special controls
Date/time controls GlobalImagePool
ImagePool_sm3 ImagePool_cnc_sm3
ImagePoolDialogs Symbols SM3_Basic
SM3_CNC VisuDialogs
SM3_Robotics_Visu Favorite
Trace
Trend
LegendDisplayer
NativeControl
BrowserControl
WaitingSymbolCube
10 items
Properties ToolBox
Messages - Totally 0 error(s), 0 warning(s), 3 message(s)
Build
0 error(s) 0 warning(s) 3 message(s)
Description Project Object Position
Total allocated memory size for code and d...
Compile complete -- 0 errors, 0 warnings
Devices POUs
Messages - Totally 0 error(s), 0 warning(s), 3 message(s)
Cross Reference List Call Tree
Last build: 0 0 Precompile: Current user: (nobody)

General Information

Supplier	KRISTECH Krzysztof Kajstura Porzeczkowa 12 43-450 Ustron Poland
Support	support@kristech.eu
Product	CODESYS Control for Pigeon
Order Number	**000099**
Sales	CODESYS Store store.codesys.com
Scope of Delivery	▪ Software package "CODESYS Control for Pigeon"

System Requirements and Restrictions

Programming System	CODESYS Development System ≥ V3.5.16.70
Target System	CODESYS Control for Raspberry Pi SL (MC) ≥ V4.1.0.0
Supported Platforms / Devices	Pigeon RB100 Pigeon RB100-CM3 Pigeon RB300 Pigeon RB300-CM3 Pigeon RB700 (all versions)
Additional Requirements	-
Restrictions	-
Licensing	No license is required
Required Accessory	-