

IoT Chip SE

Our IoT Chip SE is a plug-in System on Module for cloud connection which is freely programmable by users. Unlike other IoT Chip devices, the SYS TEC electronic IoT Chip SE combines sensor2cloud requirements with data preprocessing features ranging from time-critical signals to efficient control tasks. To that end, the IoT Chip SE comes with appropriate function libraries pre-installed, making it ready for use straight away. Moreover our IoT Chip SE is prepared for the Cloud Services, such as IBM IoT Platform.

Data Preprocessing and Reduction

Cloud Independent

Programmable

Insert Ready

Flexible



Prepared for
IBM IoT Platform

IEC 61131-3

CANopen

Modbus

MQTT.ORG

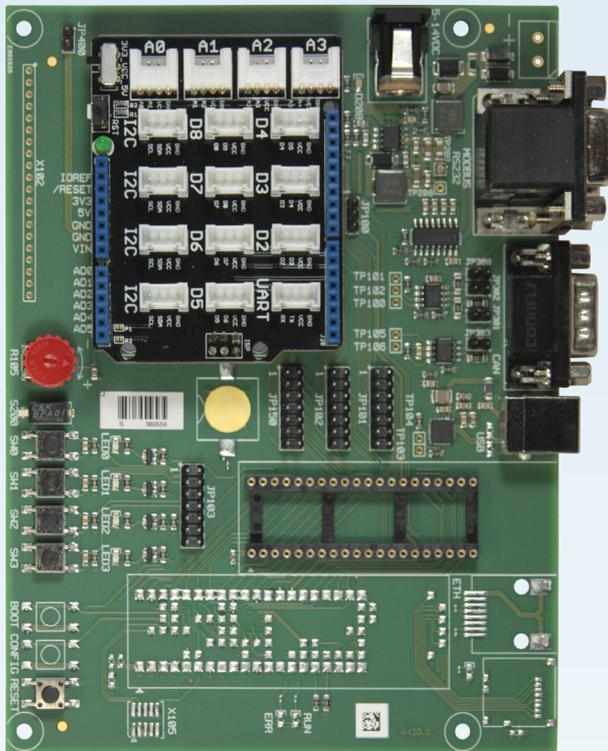
Specifications

Controller	STM32F7 Derivate
Core	ARM 32-bit Cortex™-M7
Frequency (internal)	200MHz
Application memory	128kB for PLC user application
Interfaces	
Ethernet	1x 10/100Mbps, on-board RJ45 Jack
CAN	1
UART	3
SPI	1
I ² C	1
PWM	2
Analog Output	2
Analog Input	4
Fast Counter	1
Board-to-board connectors	DIL-40 socket or LGA
Operating System	SmartPLC by infoteam
Programming Interface	Ethernet
Programmable in	IEC 61131-3
Power Supply	3.3V +/-5%
Operating Temperature	DIL40: 0°C ... +70°C (optional: -25°C ... +85°C) LGA: 0°C ... +70°C (optional: -45°C ... +85°C)
Protocol Support	CANopen, Modbus RTU/TCP, MQTT
LCD Display	via SPI or I ² C
RTC	yes
Mass storage	(Micro)-SD-card (on request)
Security	TSL (on request)
Environmental standard	
RoHS	yes

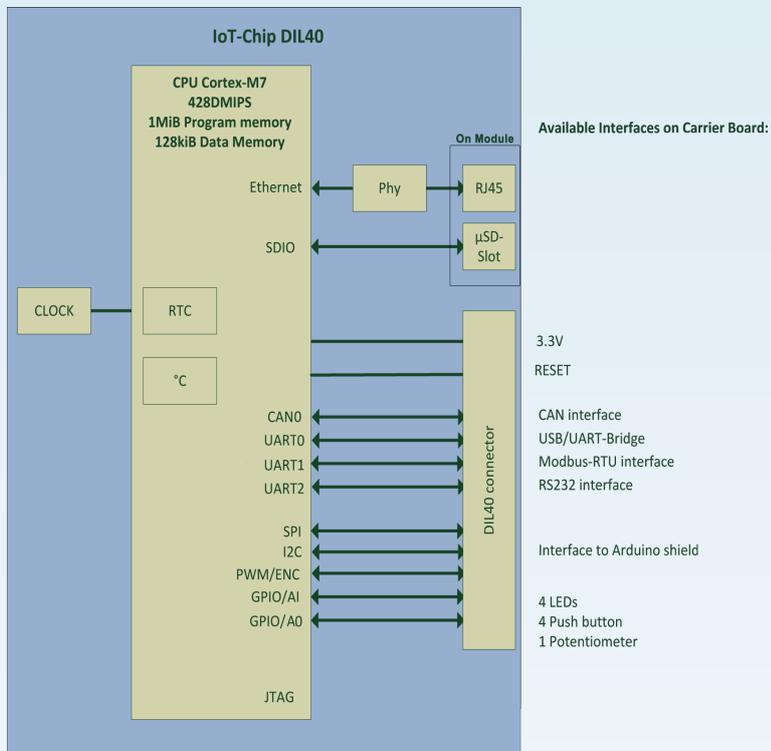
Board Connector

Pin #	Function	Baseboard
1	VCC_3V3	VCC_3V3
2	GND	GND
3	UART0/RXD	UART0
4	UART0/TXD	UART0
5	DO0/PWM	LED0
6	/RESET	/RESET
7	CAN0/TXD	CAN
8	CAN0/RXD	CAN
9	UART1/RXD	UART1
10	UART1/TXD	UART1
11	UART1/DE	UART1
12	SPI/CS	SPI
13	SPI/MOSI	SPI
14	SPI/MISO	SPI
15	SPI/CLK	SPI
16	I2C/SDA	I2C
17	I2C/SCL	I2C
18	GND	GND
19	DI0	SW0
20	DI1	SW1
21	GND	GND
22	DI2	SW2
23	DI4/ENC	
24	DI5/ENC	
25	DO1/PWM	LED1
26	DO2	LED2
27	VAREF	VAREF
28	GND	GND
29	AI0	POT1
30	AI1	
31	AO0	
32	AO1	
33	AI2	
34	AI3	
35	DO3	LED3
36	DI3	SW3
37	UART2/CTS	UART2
38	UART2/RTS	UART2
39	UART2/TXD	UART2
40	UART2/RXD	UART2

IoT-Chip SE Development Board



IoT-Chip SE Block Diagram



IoT Chip SE Functions

The IoT Chip SE is easy to integrate for use in Internet of Things/ Industry 4.0 applications and the connecting devices/machines to the cloud as these fields require. Like every of our devices the IoT Chip SE is prepared for the direct connection to Cloud. Due to the partnership with IBM we make your devices ready for IoT.

The benefits of the SYS TEC electronic IoT Chip SE lie in its use, security and cloud connection. On the chip are libraries and protocols such as MQTT, Modbus or CANopen which are ready to use immediately.

The templates supplied in the source code are available to users as a starting point for their own customisation. I²C and SPI make it possible to directly connect actuators and sensors.

This allows the entire measurement, control and regulation to be handled on the IoT chip. As a result, the chip works independently of the cloud. There is no additional gateway required for cloud connection.

Our IoT Chip SE delivers M2M communication at the highest level, as well as being efficient and available at a moderate cost.

About SYS TEC electronic

We are an experienced electronic service provider for distributed automation technology and embedded communication. We have more than 26 years of experience in customized development of electronic solution for automation, transportation, energy and communication.

Our expertise is the development and production of customer specific devices as well as standard components for embedded systems using CAN, CANopen, Ethernet POWERLINK and MQTT.

According to your needs, we can implement each project phase from project consulting to development and to serial production for you. With our in-house production facility, we are fully equipped to produce your custom hardware, regardless of its complexity.

Ordering Information

3390100	IoT-Chip DIL 40
3390101	IoT-Chip SE
KIT-175	Development Kit

For quotations please contact us:
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