



## Main Features

- Support SCARA robot
- Robot group control functions: PTP/Line/3D arc
- Support extension single axis control
- Single axis control functions: PTP/Jog/Halt/Stop
- Support C\C++, C# and VB.Net for user programming
- Support Intel® 6th Core™ i5-6500TE processor
- Internal USB for software license dongle

## Product Overview

GRC-100B is a SCARA robot controller. It integrates NexCOBOT's general robotic control software, NexGRC-SC, to perform real-time robot control and provides TPUI (Teach Pendant HMI) for TP-100-1 and TP-200 to users directly control their own robot hardware. Besides, NexGRC-SC also provides Windows APIs for users developing their own robot control HMI or application. GRC-100B also provides an integrated development environment called NexMotion Studio to speed up development time for users.

## Specifications

### NexGRC Runtime

- Support robot type: Articulated/Delta/SCARA robot
- Support axes group no.: up to 4 groups
- Robot group control functions: PTP/Line/3D arc
- Robot blending motion: aborting/buffered/blending
- Extension single axis no.: up to 16 axes
- Single axis control functions: PTP/Jog/Halt/Stop
- Single axis blending motion: aborting/buffered/blending
- Single axis override functions:  
position/velocity/acceleration/deceleration
- NexCOBOT EtherCAT master, CoE and DC supported
- Support standard EtherCAT slave devices

### NexMotion Studio

- EtherCAT devices offline edit and online scan
- EtherCAT master configuration
- PDO mapping edit
- Online SDO edit
- Export ENI
- CiA 402 device operation: PP/PV/PT/CSP
- Single axis edit and operation
- Group axes edit and operation
- I/O mapping edit and operation
- Provide simulation operation mode

### Teach Pendant HMI

- Optional TPUI software

### CPU/Chipset

- Intel® Celeron® Processor G3900, 2.8 GHz
- Intel® H110 Chipset

### Main Memory

- 4 GB DDR4 2400 SO-DIMM

### Storage

- 128GB 2.5" SATA3 MLC SSD

### Display

- 1 x HDMI display

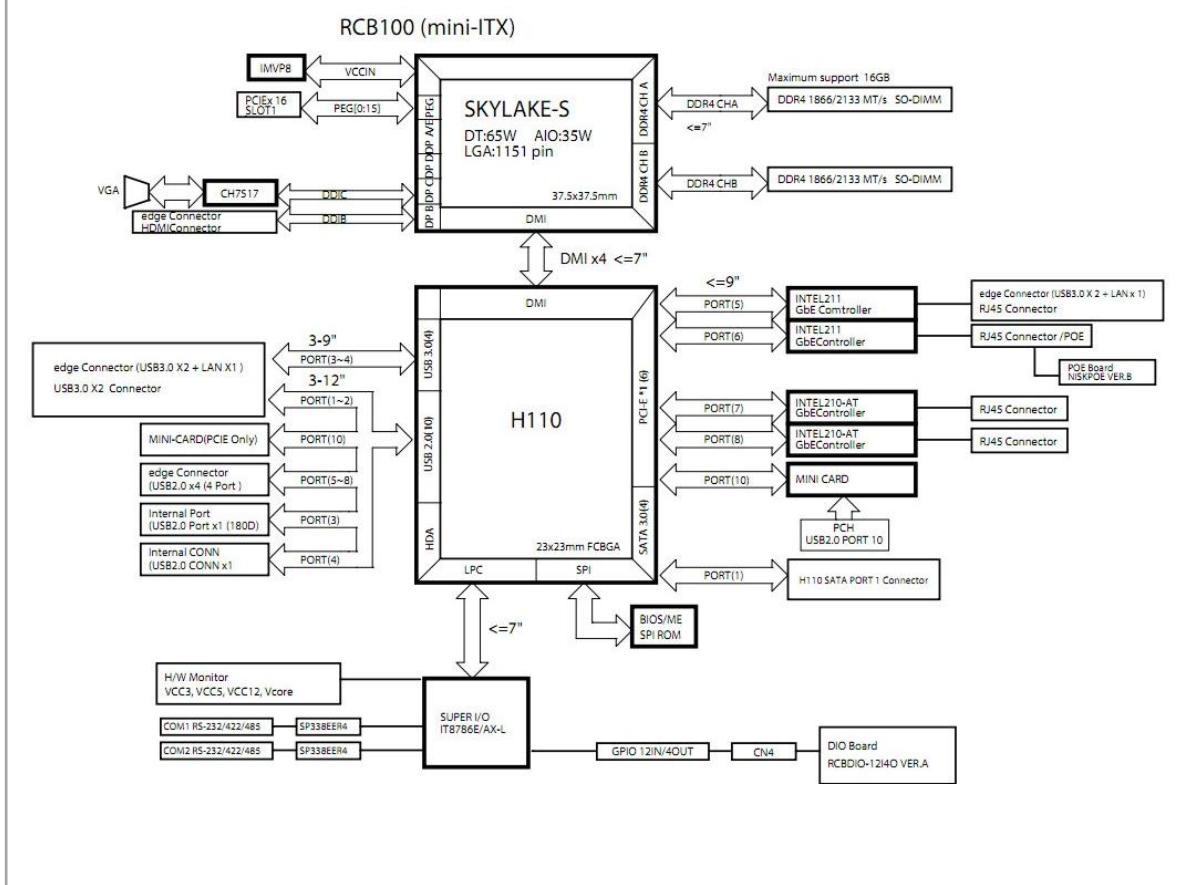
### Edge I/O Interface

- 1 x COMs (RS232/422/485 with auto flow control (default RI))
- 4 x USB 2.0
- 2 x USB 3.0
- 2 x I211AT GbE LAN (one port can be PoE port, IEEE 802.3af compliant, need optional PSE board)

### Internal I/O Interface

- 2 x I210AT GbE LAN
- 2 x USB 2.0
- 1 x VGA ( 1920 X 1200 @60 Hz)
- 1 x COM (RS 232/422/485 with auto flow control)
- Optional isolated I/O (12 in, 4 out)

**Block Diagram**



**I/O Interface-Top**

- 1 x 3-pin remote switch
- 1 x CFast expansion
- 1 x SIM card

**User Programming**

- Provide windows APIs for user programming
- Support programming language: C\C++, C#, VB.Net

**Expansion Slots**

- 1 x PCIe16
- 1 x Mini PCIe
- 1 x SATA

**Power Requirement**

- Support AT/ ATX mode
- ATX 4-pin connector for 24V DC±10%

**Dimensions**

- 170 x 170 mm (Mini-ITX form factor)

**Environment**

- Operating temperatures: 0°C to 60°C with CPU fan and system fan
- Storage temperature: -20°C to 80°C
- Relative humidity: 90%

**Certifications**

- CE/FCC Class A

**Pre-installed Software Package**

- Operating system: Windows Embedded Standard 7 (32-bit, 64-bit)
- NexGRC-SC runtime
- NexMotion Studio
- TPUI software

**Ordering Information**

**GRC-100B (P/N:98GRC100B000F)**

SCARA Robot Controller