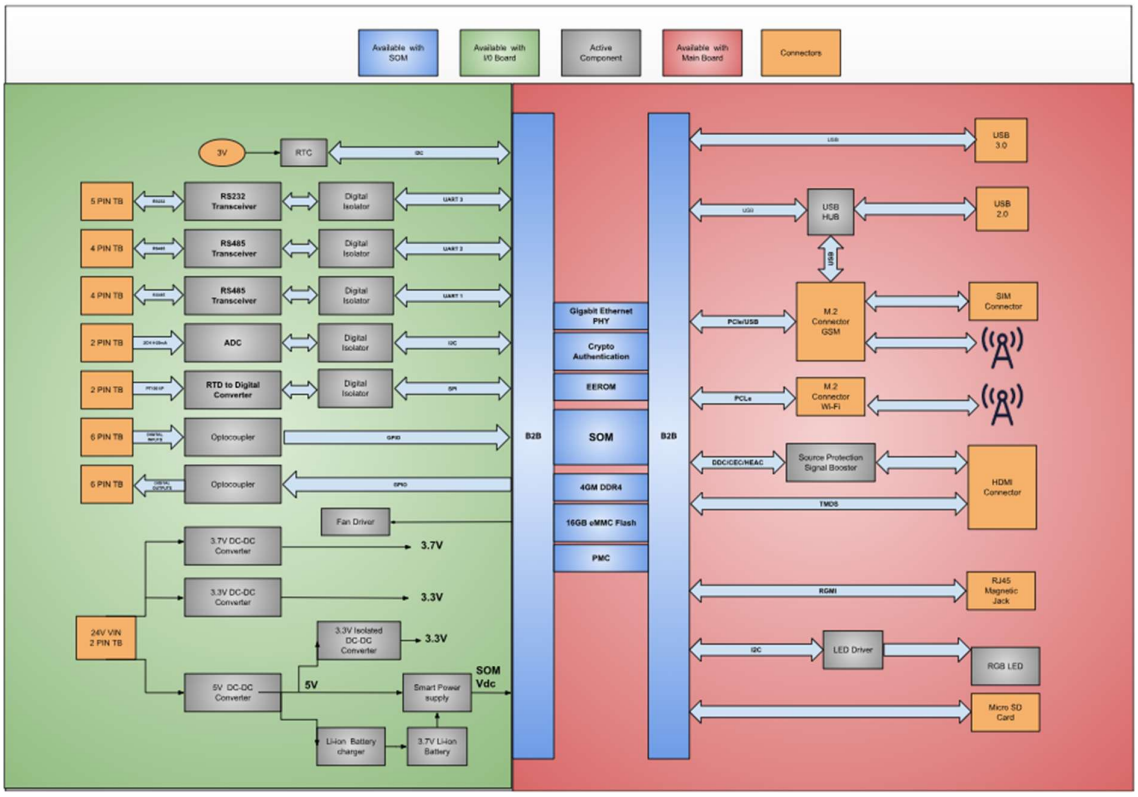
Smart IoT Gateway – A case study

Internet of Things (IoT) is a way to control & collect information from various devices and also to use that in the industrial or other applications as needed. These Data loggers allow users to capture various types of information about a specific environment or process, often gathered remotely over an extended period of time. Dedicated data recording devices are most often used in applications where critical measurements need to be taken regularly and consistently. The digitally stored data can then be actively monitored, documented and analyzed. They provide means for remote monitoring of processes or equipment and to control them as desired.

Aashaya Group of companies has designed an IoT based industrial digital IoT Gateway which can capture data on its digital channels and can send the data over the WiFi or Ethernet to the designated server and the data can be downloaded in the CSV format for later analysis and use. A representative block diagram of this data logger is as shown below:



The IoT Gateway is built around the System On Module from Debix. Model number Debix SOM A. The SoC i.MX 8M-Plus on SOM supports both Linux and Windows IoT OS. The IoT Gateway unit comprises of two PCBAs named as Main Board and I/O Board, where baseboard connects with the SOM module using 4

numbers of 0.4mm pitch / 80 pin mezzanine connectors. Mainboard and I/O board are connected using 2.54mm headers.

IoT Gateway

A system with various parameter capturing capabilities and set up is designed into this smart IoT industrial edge device and Data Logger. The system supports the following:

1. Ubuntu-20.04
2. Yocto-L5.10.72_2.2.0
3. Windows IoT Enterprise LTSC - Ver: 21H2

For any further queries, please contact us at 99010-23235