IOT DCU
Industrial IOT Data Concentrator Unit

HARIKRUPA
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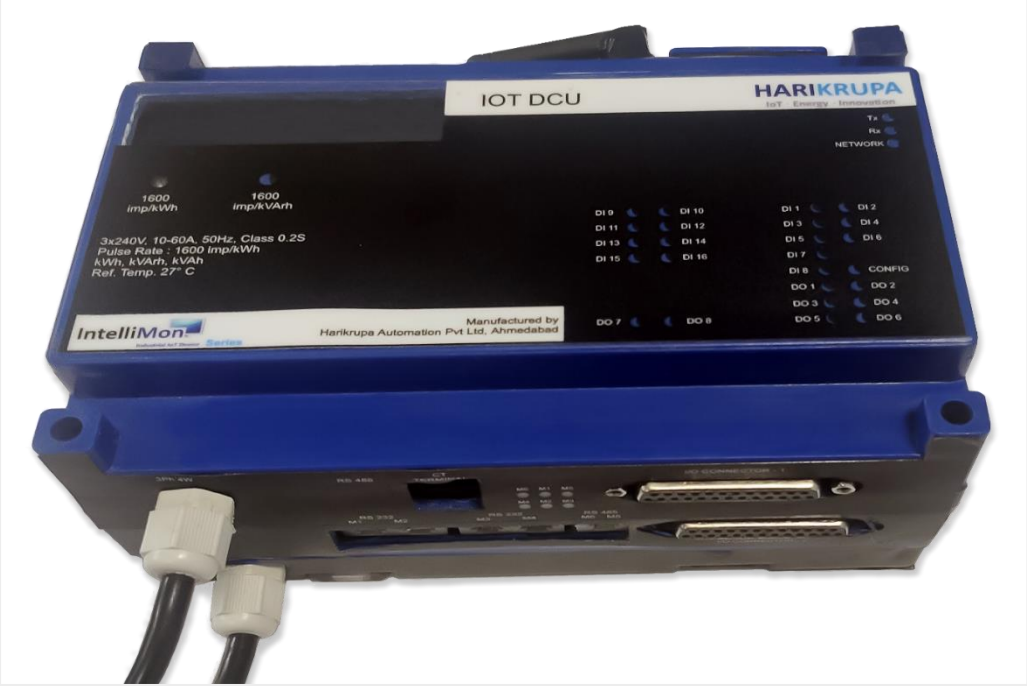

Product Overview

The Harikrupa industrial IOT DCU is designed for embedded data acquisition and processing applications. It has got onboard IO`s in terms of digital inputs, digital outputs and analog inputs. It supports Modbus TCP, Modbus RTU, DLMS etc. protocols for data concentrator applications. It has support for 4G fall back to 2G cellular communication capabilities. It can securely connect to Central Cloud SCADA Software Platform (CERTIN certified) over the cellular networks using TLS v1.2.

Features

- 4 channel 24 BIT Resolution 0.1%FSR Accuracy Analog Input Card.
- Up to 2 serial communication port for data acquisition.
- Isolated Serial Communication with built in surge protection (optional).
- Built-in Class 0.2S accuracy energy meter with LCD display.
- Protocol support for data acquisition from externally connected devices: Modbus RTU, Modbus TCP, and DLMS.
- Secure connection to Central Cloud SCADA Software Platform on cellular or Wi-Fi using TLS v1.2 protocol.
- Built-in 4G fallback to 2G support. Dual Sim: auto-changeover support.
- Built-in SOE capabilities with storage for 100 events.
- Built-in Wi-Fi and embedded webserver.
- Industrial temperature range.
- SD Card support.

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Technical Specification

Product	
Model	IoT DCU/13226260119460

Power Supply	
Operating Voltage	80 – 300V AC
Isolation	4000 VAC
Reverse Polarity Protection	Yes

Communication	
Serial Port	RS485/RS232
Protocol	MODBUS RTU / DLMS (Serial)
Isolation	5000 Vrms Optical
Baud Rate	2400 to 115200
Surge	4 kV
ESD	4KV

Analog Input	
ADC	24-Bit Sigma Delta
Channels	4
Accuracy @ 25 deg C	0.1% FSR
Voltage Range	0-10 VDC
Current Range	0-20 mA
Maximum Input Current	30 mA
Resistor for 4-20 mA	500 Ohms

Digital Output	
Channels	4, open collector (50 mA max load)
Power Dissipation	Channel: 1W max

Digital Inputs	
Input Type	Dry Contact On : Short to Ground Off : Open
Channels	16
Isolation	2500Vrms

Wireless Communication	
Cellular Communication	4G LTE CAT1,2G, EDGE
	Frequency Band: GSM 900/1800 MHz
	LTE-TDD B34/B38/B39/B40/B41
	LTE-FDD B1/B3/B5/B7/B8/B20/B28/B31/B72
	Supports GPRS multi-slot class 12, Coding scheme: CS 1–4: PBCCH
Wi-Fi	802.11 b/g/n
GNSS	GPS/GLONASS/Galileo
SMS	Text and PDU mode, Point to point MO and MT, SMS cell broadcast
SIM Card Slots	2X Micro Sim
Antenna Connector	RP-SMA

Industry Protocols Security	
Protocols	Modbus RTU/TCP, DLMS
Security	TLS V1.0,V1.1,V1.2 With authentication

Others features	
Watchdog Hardware	YES
Dual SIM Card	Stand By,Auto Change Over
Storage	SD(Upto 8GB),Flash(Upto 8 MB
RTC	With Battery Backup
Enclosure & Dimension	Polycarbonate Approx.130mmx184mmx90 mm (LXBXH)
Mounting	Din Rail
Weight	0.840kg

EMC Certifications Compliance	
ESD : IEC61000-4-2	Level-2
RS : IEC61000-4-3	Level-3
EFT : IEC61000-4-4	Level-3
Surge : IEC61000-4-5	Level-4
CS : IEC61000-4-6	Level-3
PFMF : IEC61000-4-8	Level-3
Voltage dips:	IEC61000-4-11

EMI Certifications Compliance
CISPR 32 Class A

Environmental Ratings	
Operating Temp	0 to 75 deg C
Storage Temp	0 to 85 deg C

Environmental Certifications Compliance	
Dry Heat	IEC60068-2-2
Damped Heat	IEC 60068-2-78

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Energy Meter Specifications

Input Voltage	
Nominal Input Voltage (AC RMS)	110 VLL AC RMS
Measuring Range	20%.....120% of nominal value
Overload Withstand	2 x Nominal value for 1 second, repeated 10 times at 10 second intervals
Nominal Input Voltage burden	<0.03VA approx. per phase

Input Current	
Nominal Input Current	1-2 A or 5-10 A
Measuring Range	1%.....120% of nominal value
Overload Withstand	20 x Nominal value for 1 second, repeated 5 times at 5

Auxiliary Supply	
Auxiliary Supply Range	80 – 300V AC
Auxiliary Supply burden	< 5 VA
Auxiliary Supply Frequency	50 with ±5%

Operating Measuring Range	
Current	1%.....120% of nominal value
Starting Current	0,1% nominal
Voltage	20%.....120% of nominal value
Power Factor	-1 to 1
Frequency	50 +/- 5%

Display Specification	
LCD Display	11 Digits Backlit LCD Display
LED Indicators	Kwh Pulse & KVArh Pulse

Accuracy	
Active Energy	Class 0.2S as per IS16497
Reactive Energy	Class 0.2S as per IS16497
IEC 62053-22	Standard-Class 0.2S

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