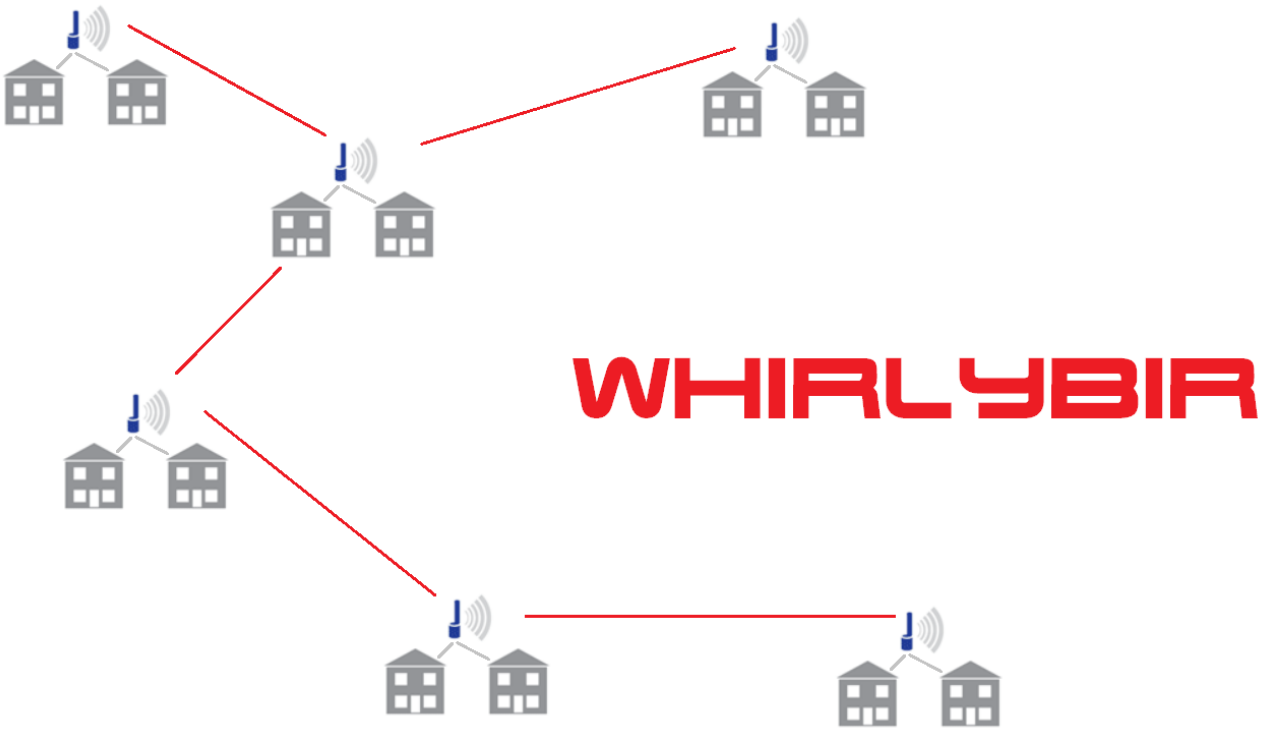
LMC-03-N

RF Mesh Networked Smart Load monitoring and Management System



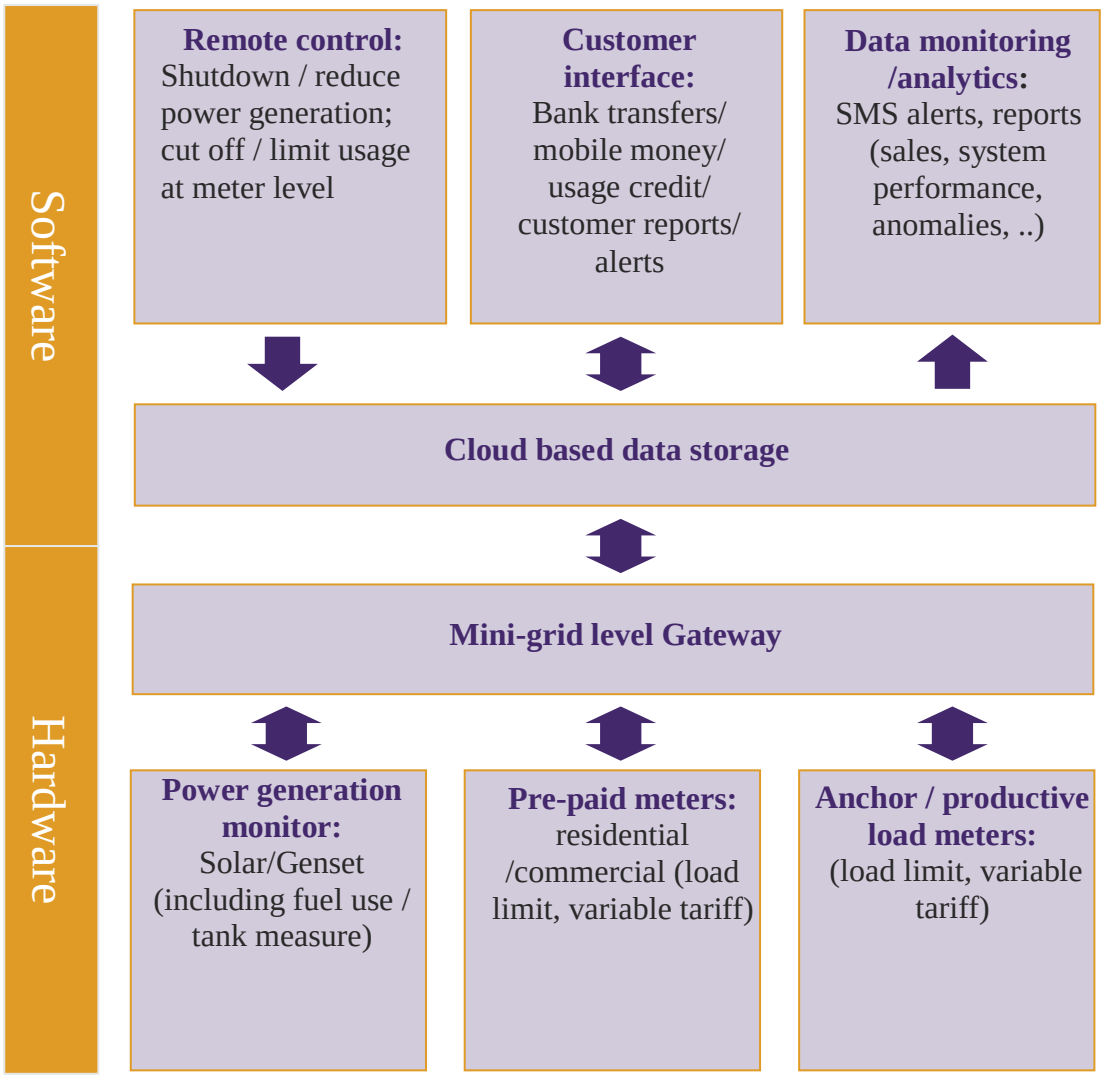
WHIRLYBIRD

LMC-03-N

How It Works

The five channel Load Monitoring and Control (LMC) Unit uses Zigbee mesh network for communication along with application specific integrated circuit from analog devices to accurately measure energy consumption.

Each LMC unit could independently monitor and control five households. Every network has a coordinator which is GPRS enabled to communicate through web based central data collection and control unit. Number application and features are developed over this architecture, some highlights are as follows.



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Monitoring Platform:

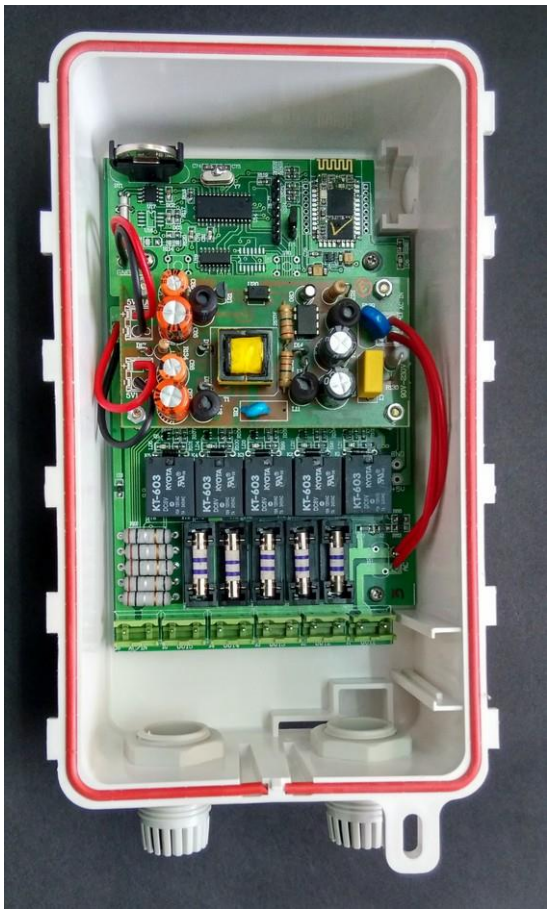
- Update meters with energy credit, start/stop or limit based on time of use
- Customer usage/payment alerts
- Proactive fault management via automated threshold alerts
- Monitor PV production, DG usage, battery charging status

Gateway:

- Aggregates meter data and sends to Whirlybird cloud platform via GSM/GPRS
- Gateway can store 3 months+ plant data locally
- Capable of feeding data at 1min intervals

Meters:

- Meters communicate over mesh network w/gateway, send energy consumption to gateway controller
- Prepaid meter stores available energy credit, daily KWh usage (30 days)



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Technical specifications of 3 channel LMC Unit

S/N	Parameter	Value
1	Input Channels	1
2	Output Channels	3
3	Operating voltage	150-250 Vac
4	Power Consumption	Maximum 10W, Nominal 5W
5	Data backup	30day for each Chanel
6	Absolute max load per channels	500W
7	Energy Measurement	
	Resolution	0.01kWh
	Error	Less than 5%
	Maximum value	650 kWh
8	Load Measurement	
	Resolution	1W
	Error	Less than 5%
	Maximum value	500W
9	Accuracy or RTC with onboard battery	5 minute per month drift
10	Zigbee Communication Range	Up to 200 meters.
11	Over load protection	Meter will disconnect load for 1 minute
12	Short circuit Protection	Fast blow fuse
13	Environmental protection	IP55 rated enclosure

Programmable features

S/N	Parameter	Value
1	Load Limit	Minimum 5W Maximum 500W Resolution 1W
2	KWatt Hour Credit	Minimum 0.1Kwh Maximum 99.9 Kwh Resolution 0.1Kwh
3	Time (days) credit	Minimum 1day Maximum no limit Resolution 1day
4	Meter switch-on and switch-off time	Example: it will enable all channels at 6pm and disable at midnight

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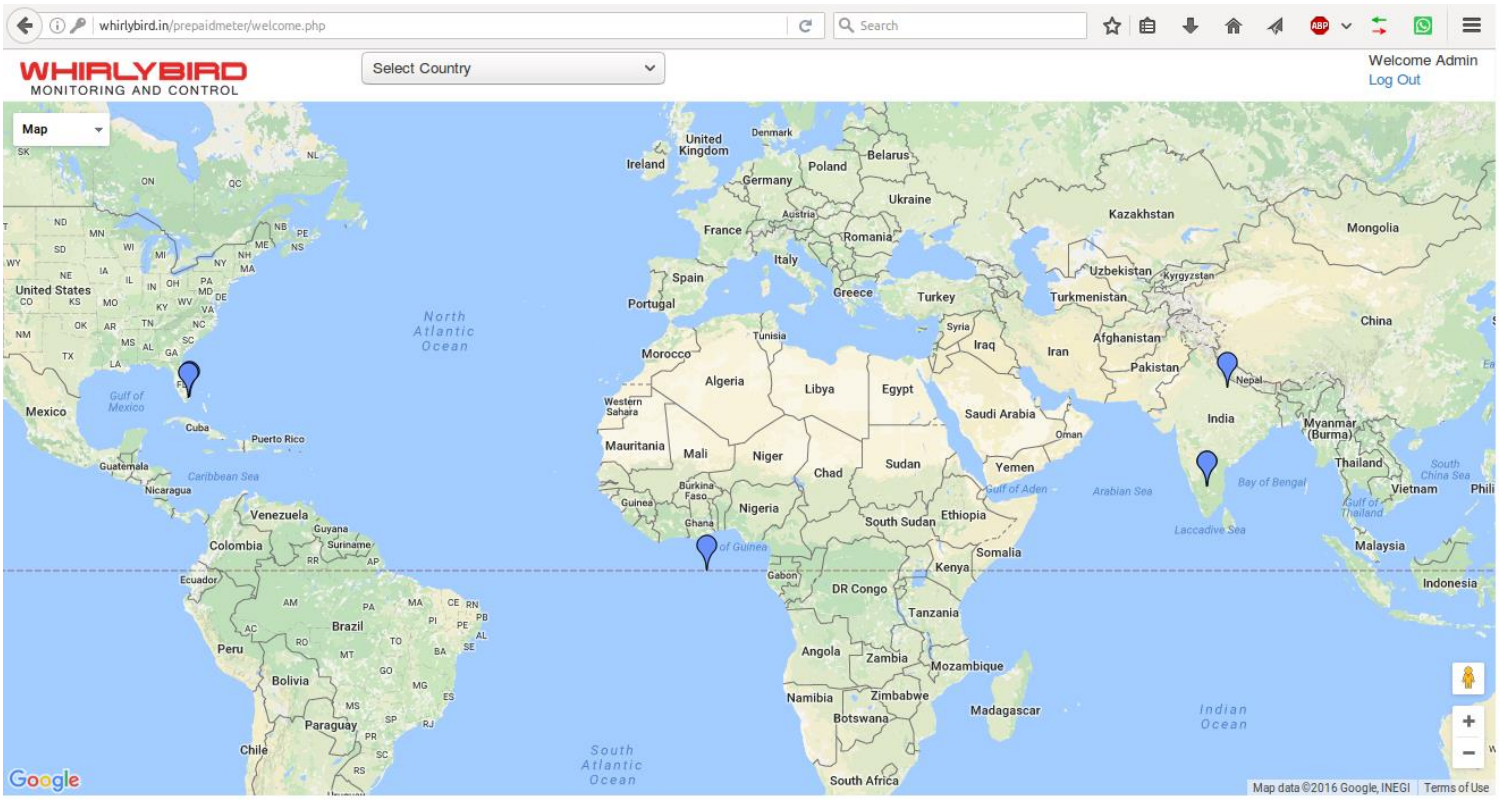
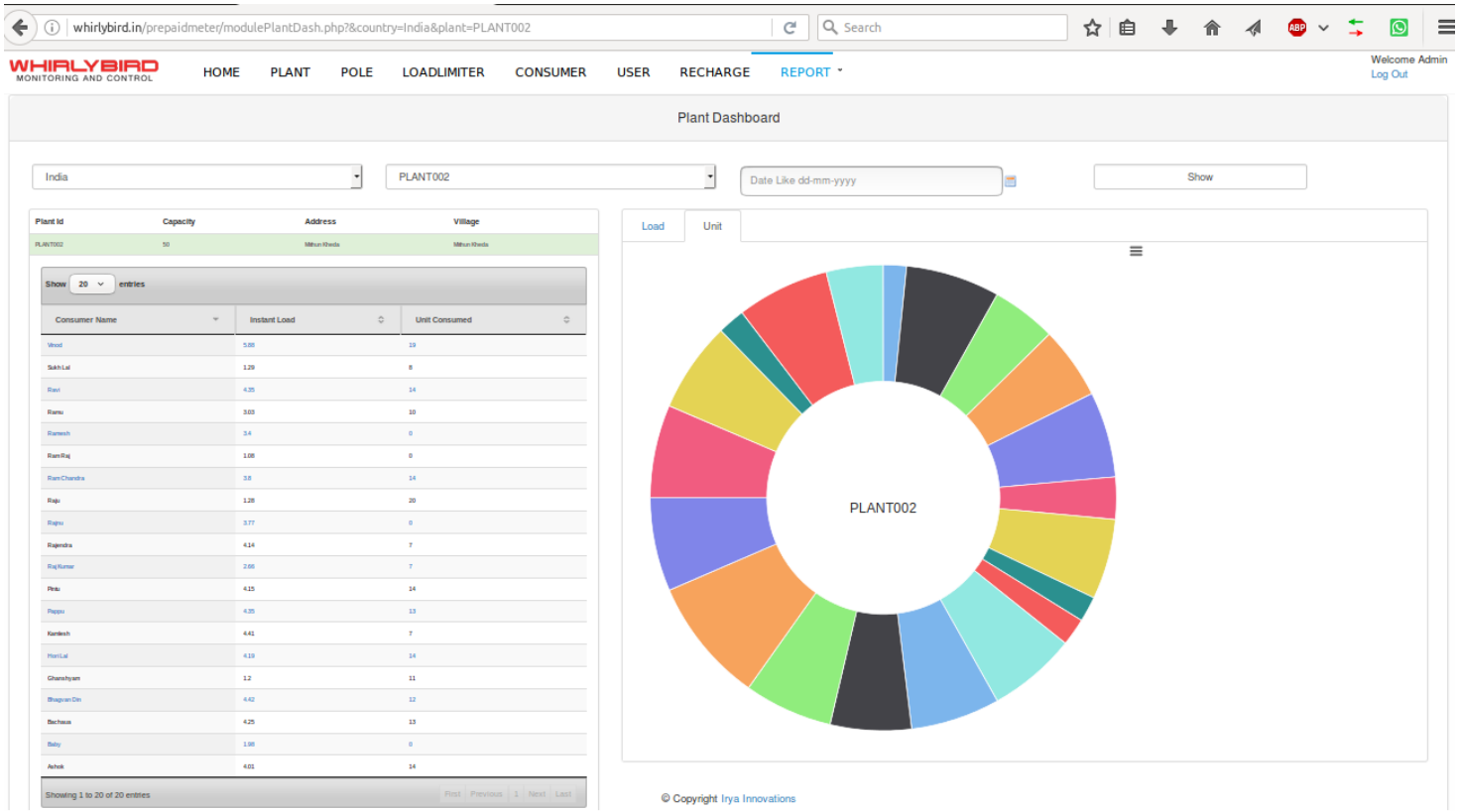
Web Portal





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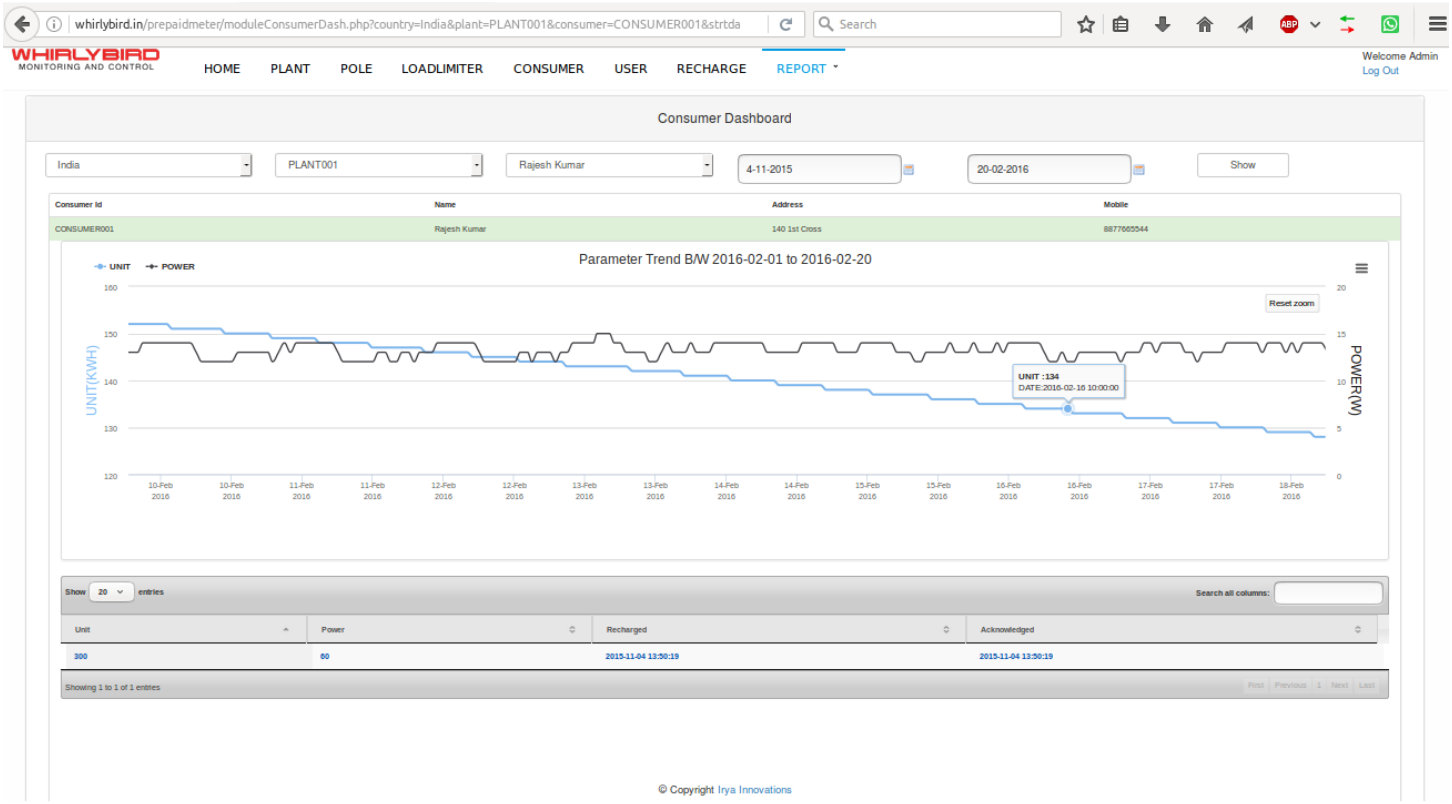
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WHIRLYBIRD
MONITORING AND CONTROL
HOME
PLANT
POLE
LOADLIMITER
CONSUMER
USER
RECHARGE
REPORT
Welcome Admin
Log Out
Consumer Dashboard
India
PLANT001
Rajesh Kumar
4-11-2015
20-02-2016
Show
Consumer Id
Name
Address
Mobile
CONSUMER001
Rajesh Kumar
140 1st Cross
8877665544
Parameter Trend B/W 2016-02-01 to 2016-02-20
UNIT
POWER
UNIT(KWH)
POWER(W)
Reset zoom
UNIT :134
DATE:2016-02-16 10:00:00
Unit
Power
Recharged
Acknowledged
300
60
2015-11-04 13:50:19
2015-11-04 13:50:19
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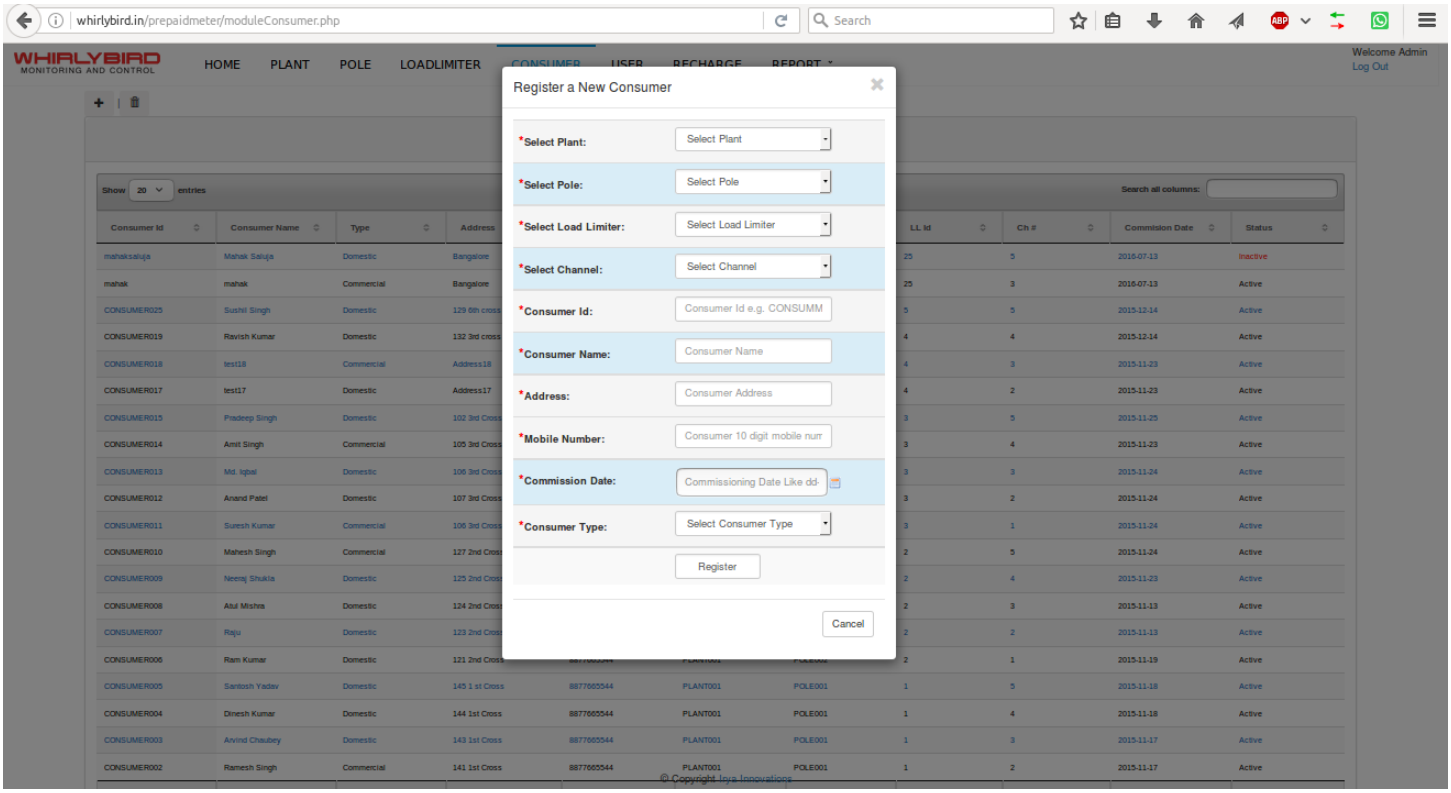
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WHIRLYBIRD
MONITORING AND CONTROL
HOME
PLANT
POLE
LOADLIMITER
CONSUMER
USER
RECHARGE
REPORT
Welcome Admin
Log Out
Register a New Consumer
*Select Plant:
Select Plant
*Select Pole:
Select Pole
*Select Load Limiter:
Select Load Limiter
*Select Channel:
Select Channel
*Consumer Id:
Consumer Id e.g. CONSUMM
*Consumer Name:
Consumer Name
*Address:
Consumer Address
*Mobile Number:
Consumer 10 digit mobile numr
*Commission Date:
Commissioning Date Like dd-
*Consumer Type:
Select Consumer Type
Register
Cancel
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