



# *GPRS based Communication*

29/06/2011



**HO Server**



**GSM / GPRS  
Network**



**RS-810**



**SI-810PR**

# Requirements



## **Server Side**

- Broad band connection with static IP or
- Dialup modem (Airtel SIM with GPRS plan) and SMS Modem (Airtel SIM with SMS plan)
- SQL Server 2005
- Best Server Configuration required for speed and storage
- GPRS App Link Software

## **Machine Side**

- Each SI-810PR/RS-810 with modem
- Airtel SIM (\*With GPRS Plan)

# Working Principle



- Machines should know server IP in order to make a communication link
- If Server is having a broadband connection with STATIC IP then IP can be set while installing the machines
- In case of dialup Modem (with dynamic IP) the IP is communicated to machines via SMS. Whenever IP change is detected, automatically “**GPRS App Link**” software will send SMS to all Machines
- Each machine will communicate with different port on the server IP , so “**GPRS App Link**” will identify the machine by its port number
- Once a link is established, the Server process the commands and gets responses from Machines. In case a link is cut, Machines starts retrying on regular intervals and make the link for Server to communicate

# Advantages



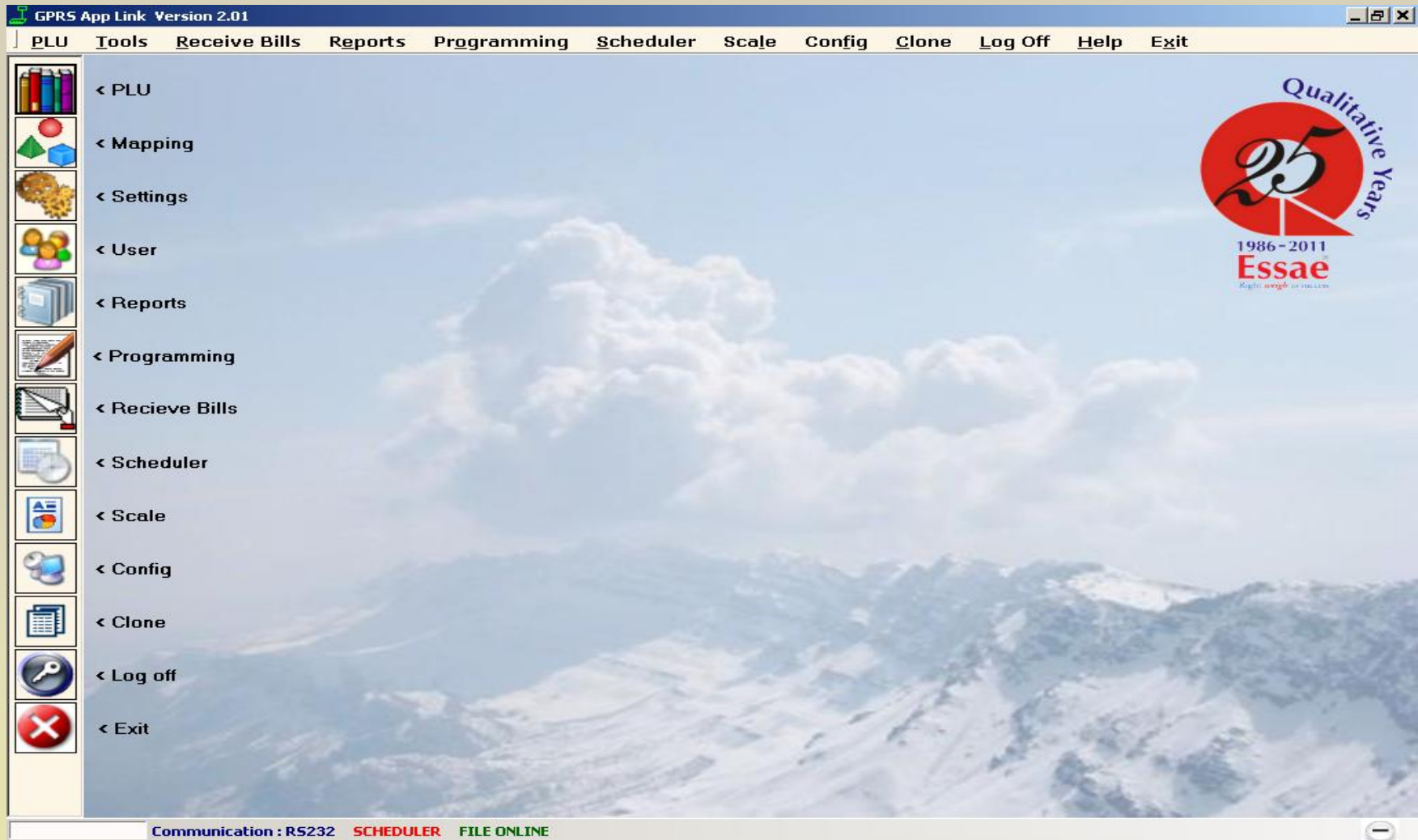
- GPRS is charged based on amount of data transferred rather than time of on line duration.
- If all the modems have same service provider then we can achieve a zero communication cost solution (Only Airtel is tested)
- While using broadband connection with static IP, machines can have any service provider SIM (like Airtel, Vodafone, Docomo....) with GPRS Plan
- No network wirings and makes it portable
- Machines with Ethernet and GPRS can coexist on the Server

# Functionality








- PLU information from server is uploaded to all machines in parallel
- Reports and Bills downloaded from all machines in parallel
- Maximum 6 machines operational display can be visualized online
- Inventory can be uploaded / downloaded in parallel
- Scheduling downloading Reports, Upload/ download PLU in parallel
- Email reports
- Online Receive bills from the machines and create a CSV files in addition to database storage.
- Automatic/ manual Mapping customer CSV files to database
- Reports viewing single/ multiple machines

# RPR App Link Screen shots



**PLU Manager** \_ [ ] X

Refresh Upload Download Delete Database Exit






Sino	MachineName	IPAddress/HostName	Port	Status	Capacity	Accuracy	All
1	mac1	TESTPR	4321	OFFLINE	15	0.002	<input type="checkbox"/>

PLU Number	PLU Name	PLU Code	Unit Of Measure	Unit Price	Quantity	Tare Weight	Group Link	Tax Link	Discount Type	First Target
1	SOLIDAGO	115378	PCS	100.00	1	0	999	0	%Unit Price	0
2	ASPARAGUS DECO	115375	PCS	150.00	1	0	999	0	%Unit Price	0
3	GONGURA	115273	PCS	190.00	1	0	999	0	%Unit Price	0
4	CURRY LEAF	115268	PCS	200.00	1	0	999	0	%Unit Price	0
5	DILL	115269	PCS	250.00	1	0	999	0	%Unit Price	0
6	PUDINA	115270	PCS	250.00	1	0	999	0	%Unit Price	0
7	AMARANTHUS GR...	115264	PCS	290.00	1	0	999	0	%Unit Price	0
8	AMARANTHUS RED	115265	PCS	290.00	1	0	999	0	%Unit Price	0
9	CORIANDER HYB...	115267	PCS	290.00	1	0	999	0	%Unit Price	0
10	METHI	115272	PCS	290.00	1	0	999	0	%Unit Price	0
11	SUGARCANE CUT ...	146384	PCS	290.00	1	0	999	0	%Unit Price	0
12	CORIANDER COU...	115266	PCS	300.00	1	0	999	0	%Unit Price	0
13	BANANA LEAF	115310	PCS	300.00	1	0	999	0	%Unit Price	0



PLU Manager

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Empty area for additional data or notes.



Sno	MachineName	IPAddress/HostName	Port	Status	Capacity	Accuracy	All
1	RPR	192.168.2.117	4321	ONLINE	15 Kg	0.010	<input checked="" type="checkbox"/>
2	RPR	192.168.2.55	4321	ONLINE	15 Kg	0.003	<input checked="" type="checkbox"/>

Digital Tare Value:

<p>Machine Name: RPR IP: 192.168.2.117</p> <p>{10 : 15 : 51 24/12/2010 Fri }</p> <p>0.00</p> <p>0.00</p> <p>OP 25 22 21 01</p>	<p>Machine Name: RPR IP: 192.168.2.55</p> <p>GARDENR KHURPA(1PCS)</p> <p>-9.075 kg</p> <p>OP 25 02 03 +T+ 9.075</p> <p>140.00</p> <p>140.00</p>
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Refreshing...  
 Status as on 24-12-2010 10:12:29 AM  
 Host/IpAddress : 192.168.2.117 Status : Communication Success.  
 Host/IpAddress : 192.168.2.55 Status : Communication Success.

# SI-810PR /RS-810 GPRS TEST REPORT



	NO OF MACHINES	USING ETHERNET(LAN)		USING GPRS (SERVER SIDE)							
				NETCONNECT		TATA PHOTON WHIZ		AIRTEL WITH M10 MODEM		AIRTEL NOKIA 5310 MODEM	
		FT	ST	FT	ST	FT	ST	FT	ST	FT	ST
100 PLU UPLOAD	2	2sec	2Sec	16sec	16sec	25sec	47sec	21sec	21sec		
1000 PLU UPLOAD	2	29sec	8sec	2min 2sec	2min 2sec	2min 37sec	3min 8sec	3min 36sec	3min 16sec		
<b>100 PLU DOWNLOAD</b>	<b>1</b>	<b>10sec</b>		<b>9sec</b>		<b>36sec</b>		<b>22sec</b>			
<b>1000 PLU DOWNLOAD</b>	<b>1</b>	<b>1min 15sec</b>		<b>1min 15sec</b>		<b>2min 57sec</b>		<b>2min 37sec</b>			
CLONING DOWNLOAD	1	33sec		14min 30sec		15min 4sec		26min			
CLONING UPLOAD	1	27sec		12min 23sec		17min 11sec		28min			
ALL REPORTS DOWNLAD	1	10sec		2min		2min		3min 28sec			
1000 PLU UPLOAD	3			2min 10sec	2min 10sec	3min 12sec	2min 44sec			3min 16sec	2min 40sec
100 PLU UPLOAD	3			16sec	16sec	36sec	25sec				

\* FT- First Time      ST-Second Time