



Ultra **eSAM**RS232/RS485 USER GUIDE





INTRODUCTION

The eSAM and Ultra eSAM modems are both equipped with a single RS232 or RS485 port, accessible using the included terminal block. By combining this Serial port with the modems software and embedded 4G Modem, it is possible to connect two separate RS232 devices using the eSAM as a Serial to 4G LTE Bridge.

In this configuration two eSAM's will be required, one at each end of the RS232 Link. One will act as a server and the other will act as a host, but both RS232 Devices will be able to transmit and receive.

This document will explain how to configure the eSAM for this function.

Note: For RS485 devices, you will require an RS485 compatible eSAM model. Please contact intercel.com.au for further details.

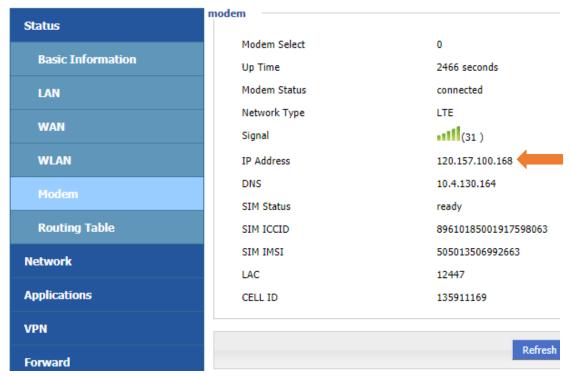


SERVER CONFIGURATION

In this part of the guide, we will configure the DTU Server on one of the eSAM Modems.

1. First, we must ensure that this eSAM can be contacted by the Client eSAM. To do this, the server eSAM must either be connected to the same VPN as the Client or it must have a publicly accessible IP Address.

The IP Address can be read from the 'Status>Modem' Window



Public IP Addresses are any addresses that are not in any of the following ranges:

10.x.x.x 192.x.x.x

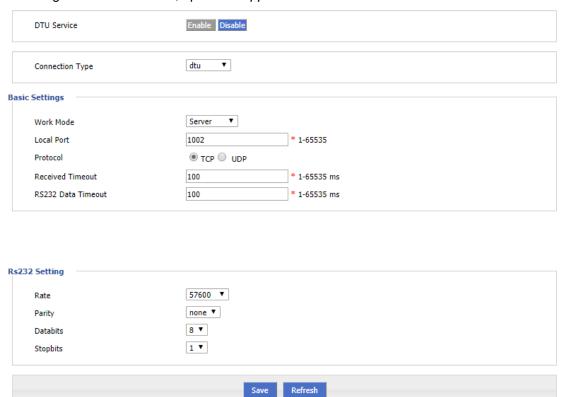
It is not required for clients to have a Public IP Address, only the Host needs to have one.

2. Once we have confirmed that the Host is visible to the client, we can now configure the DTU Server.

The DTU Service is the function within the eSAM that is used to access the RS232/RS485 Port.



To configure the DTU Server, open the 'Applications>DTU/MODBUS' window



3. Configure the DTU Server as follows:

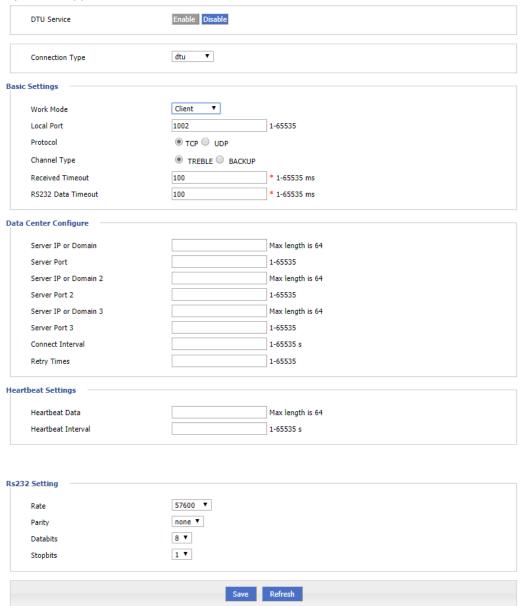
Parameter	Setting	
Connection Type	DTU	
Basic Settings		
Work Mode	Server	
Local Port	Whichever Port you want to use for DTU Communication	
Protocol	TCP or UDP	
Received Timeout	Set according to your application (100ms typical)	
RS232 Data Timeout	Set according to your application (100ms typical)	
	RS232 Settings	
Rate	Set this to match your RS232 Device	
Parity	Set this to match your RS232 Device	
Databits	Set this to match your RS232 Device	
Stopbits	Set this to match your RS232 Device	

- 4. Save your settings, and ensure the service is enabled.
- 5. Connect the host to your RS232 Device

CLIENT CONFIGURATION

Now, we will configure the second eSAM Modem to act as a DTU Client.

- 1. As described in the host configuration, the Host must have a public IP Address, so the client is able to contact it. The Client does not require a public address.
 - We can test the connection between client and host using the 'System>Network Test' Window. Enter the host IP Address as the destination and attempt to ping the Host. If communication fails, the Host is not able to respond to the client and we know the network configuration is incorrect.
- 2. Open the 'Applications>DTU/MODBUS' window





3. Configure the DTU Server as follows:

Parameter	Setting	
Connection Type	DTU	
Basic Settings		
Work Mode	Client	
Local Port	Set the same as your Host	
Protocol	Set the same as your Host	
Channel Type	Treble	
Received Timeout	Set the same as your Host	
RS232 Data Timeout	Set the same as your Host	
Data Center Configure		
Server IP or Domain	IP Address of your DTU Host	
Server Port	Set the same as your Host	
Connect Interval	Set according to your application	
Retry Times	Set according to your application	
Heartbeat Settings		
Heartbeat Data	Set according to your application	
Heartbeat Interval	Set according to your application	
RS232 Settings		
Rate	Set the same as your Host	
Parity	Set the same as your Host	
Databits	Set the same as your Host	
Stopbits	Set the same as your Host	

- 4. Save your settings
- 5. Connect the Client to your RS232 Device

At this point, your host and server device should connect and link the two RS232/RS485 Devices. If you encounter any issues, please contact intercel@intercel.com.au for support and troubleshooting.





www.intercel.com.au 33 Glenvale Crescent Mulgrave VIC 3170 Australia

intercel@intercel.com.au +61 (0) 3 9239 2000