TarangNet

TarangNet uses the simpler form of networking between Tarang modules and it supports point-to-point and point-to-multipoint networks by simple configuration.

Every RF data packet sent on air contains a Source Address and Destination Address field in its header. To send a packet to a specific module using 16-bit addressing, set the destination address parameter to the desired address. All the modules can be configured with their own unique 16-bit addresses. Nodes can be grouped to communicate among themselves with the PAN ID parameter. Tarang module provides 16 different channels for RF communication and each direct sequence channel has 64K unique network addresses.

Network Types

TARANG supports the following types of networks.

- Unicast Network

- Broadcast Network

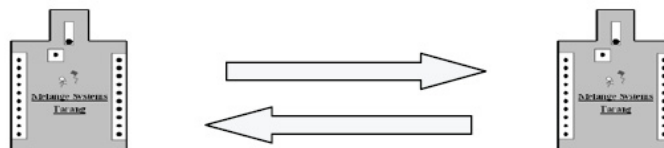- Peer to peer Network or Point to point Network

These topics are discussed here in detail.

Unicast Network

In Unicast Network the communication happens only between the two modules with respective source and destination addresses. In such network the destination address of the TARANG 1 is source address to TARANG 2, and vice versa. For any effective communication the source address and destination address should be configured properly.

Example:

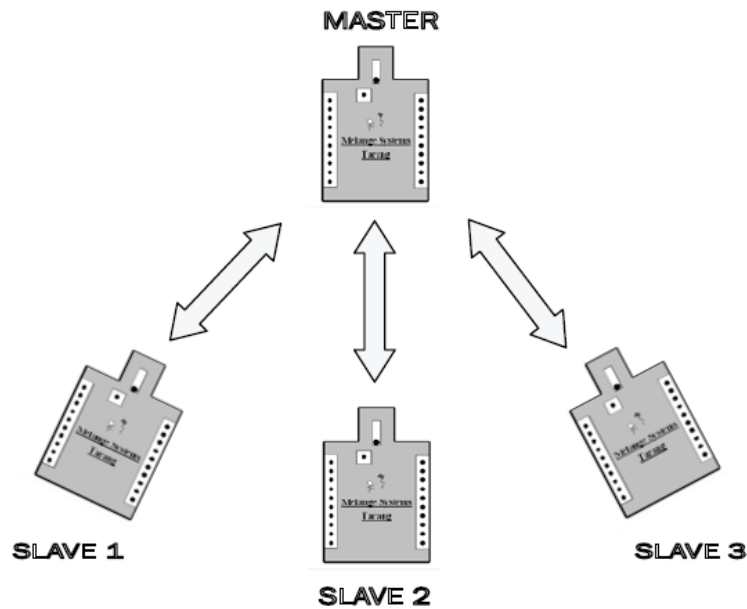| PARAMETER	TARANG 1	TARANG 2
Source address(MY)	0x1000	0x2000
Destination address(DA)	0x2000	0x1000

Broadcast Network

In Broadcast Network only one module will broadcast the data to all other modules, and then each individual module will respond to that. There is no communication between the individual modules except "Broadcasting Module". Consider the fig 6.1.2, only master module will broadcast to all the slave modules and then each slave module will respond to master module only. There is no communication between slave modules. The source address of the master will be destination address to all the slaves and destination address of the master is set to broadcast address 0xFFFF.

Example:

PARAMETER	Master	Slave 1	Slave 2	Slave 3
Source address(MY)	0x0004	0x0001	0x0002	0x0003
Destination address(DA)	0xFFFF	0x0004	0x0004	0x0004

MASTER

SLAVE 1

SLAVE 2

SLAVE 3

Peer to Peer or Point to point Network

In peer to peer network the modules in a network can communicate with any module without any restrictions like master and slave. Each module will share the role of both master and slave and communicate with each other. By default Tarang modules work with this mode of network. The addressing is chosen based on the application needs.

Example:

PARAMETER	TARANG1	TARANG2	TARANG3
Source address(MY)	0xFFFF	0xFFFF	0XFFFF
Destination address(DA)	0xFFFF	0xFFFF	0xFFFF