INSTALLATION OF TetraFlex® SYSTEM

DAMM

INSTALLATION OF TetraFlex® SYSTEM

Configuration of BS421 and SB421

- The system is delivered as a Turn Key solution.
  - BS421 Base station
  - Service Box SB421 installed with WinXPe Sp2
  - TetraFlex® software package preinstalled
  - System and client dongles (License)
- The need to configure the BS421 and SB421 is minimal
- Please refer to manuals in case configuration is needed.

2006 - TetraFlex® V2.10

INSTALLATION OF TetraFlex® SYSTEM

Configuration needed to get system operational upon delivery

- Network management. (using default setup)
  - Individual subscribers (terminals)
  - Country- and network codes, RX/TX frequency ***)**
- Dispatcher
  - Dispatcher client CD and dongle
- SB421
  - WAN IP configuration for client access
- BS421
  - Frequency ***)**

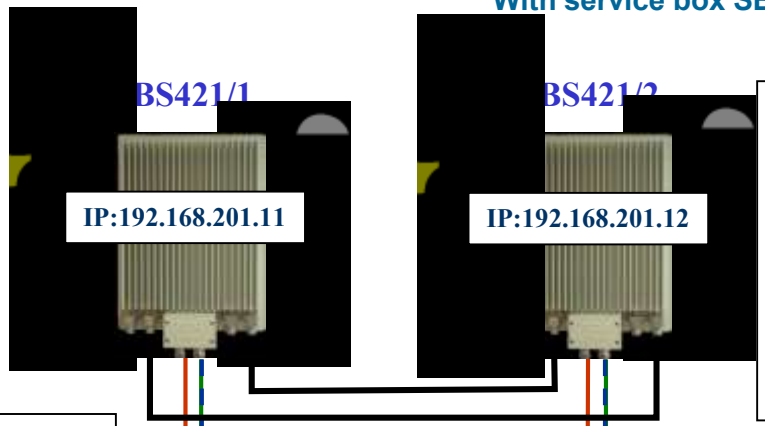
***)** If known and entered in the System Configuration (order) this will be setup as default by DAMM

Please refer to manuals in case further configuration is needed.

2006 - TetraFlex® V2.10

TetraFlex® System Layout

With service box SB421



WAN TCP/IP and OpenH323 connection for
- HotLine Router (To be mandatory)
- NMWS Client
- Dispatcher Client
- PABX/IP-telephone
- Gatekeeper (e.g. Innovaphone IP400/800)
- Etc.

SB421 includes:
- *Pentium PC*
- *- 48V Power supply*
- *Backup battery*
- *IP Switch*
- *Provision for external backup battery*

-48V DC

SB421

D25 system main IP
192.168.201.10

IP-Telephone

IP200

IP800

ISDN-Telephone

LAN (10/100Mb) includes
1. LAN connection BS421 / SB421
2. LAN type connection between the two BS421´s for 1 sec. sync.

A/C Mains

WAN

Switch

Gatekeeper could be any OpenH323 Compatible unit (PABX etc.)

2006 - TetraFlex® V2.10

SB421

Internal Backup Battery
- 2 hrs. With 1 BS421
- 1 hr. With 2 BS421
- Minimum values

Synchronization LED's

Backplane / interconnection card
- TR1 ON/OFF
- TR2 ON/OFF
- CPU Unit ON/OFF
- LAN ON/OFF
- External Battery Temperature select
- Fuses
- Lightening arrestors
- Etc.

100-240V AC Mains Supply

Connection card 1
- LAN for BS421
- -48V out to BS421
- Timing for 2 x BS421

Connection card 2
- LAN/WAN
- -48V out
- Timing
- Alarms

Service connections
- VGA
- Keyboard
- USB

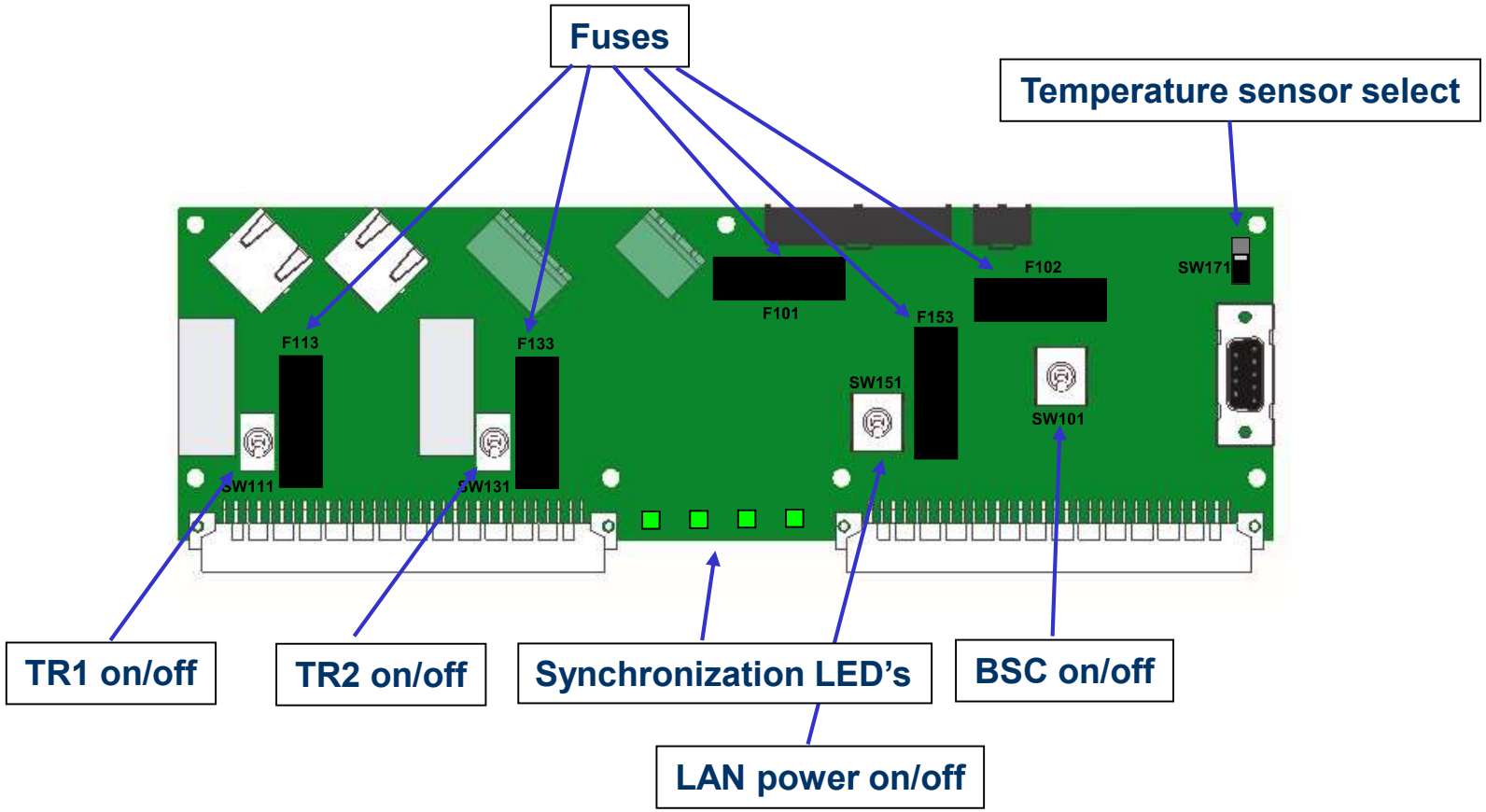
USB for Dongle

48V to external battery back

BSC (CPU) Unit

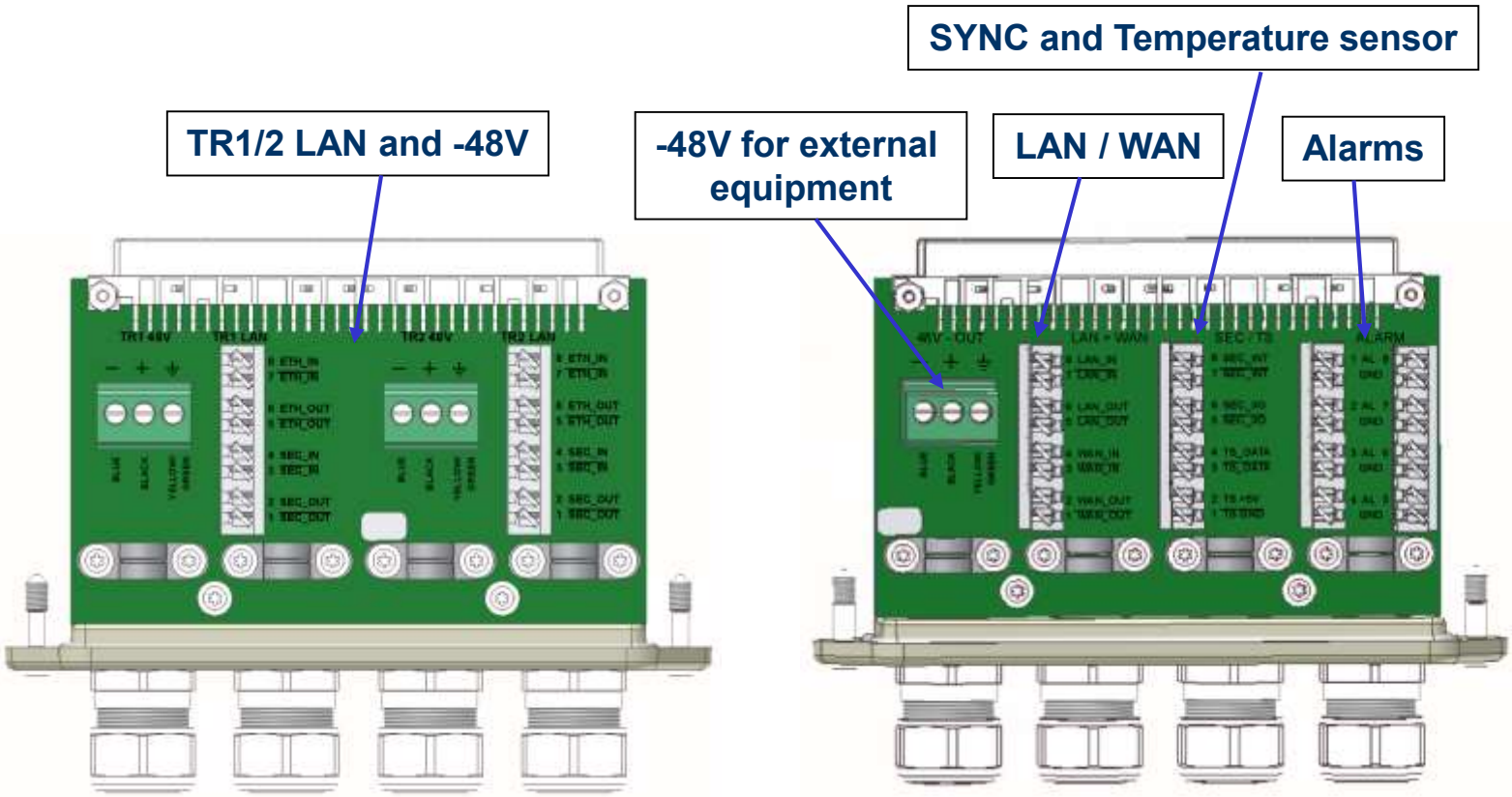
2006 - TetraFlex® V2.10

SB421 Interconnection Board

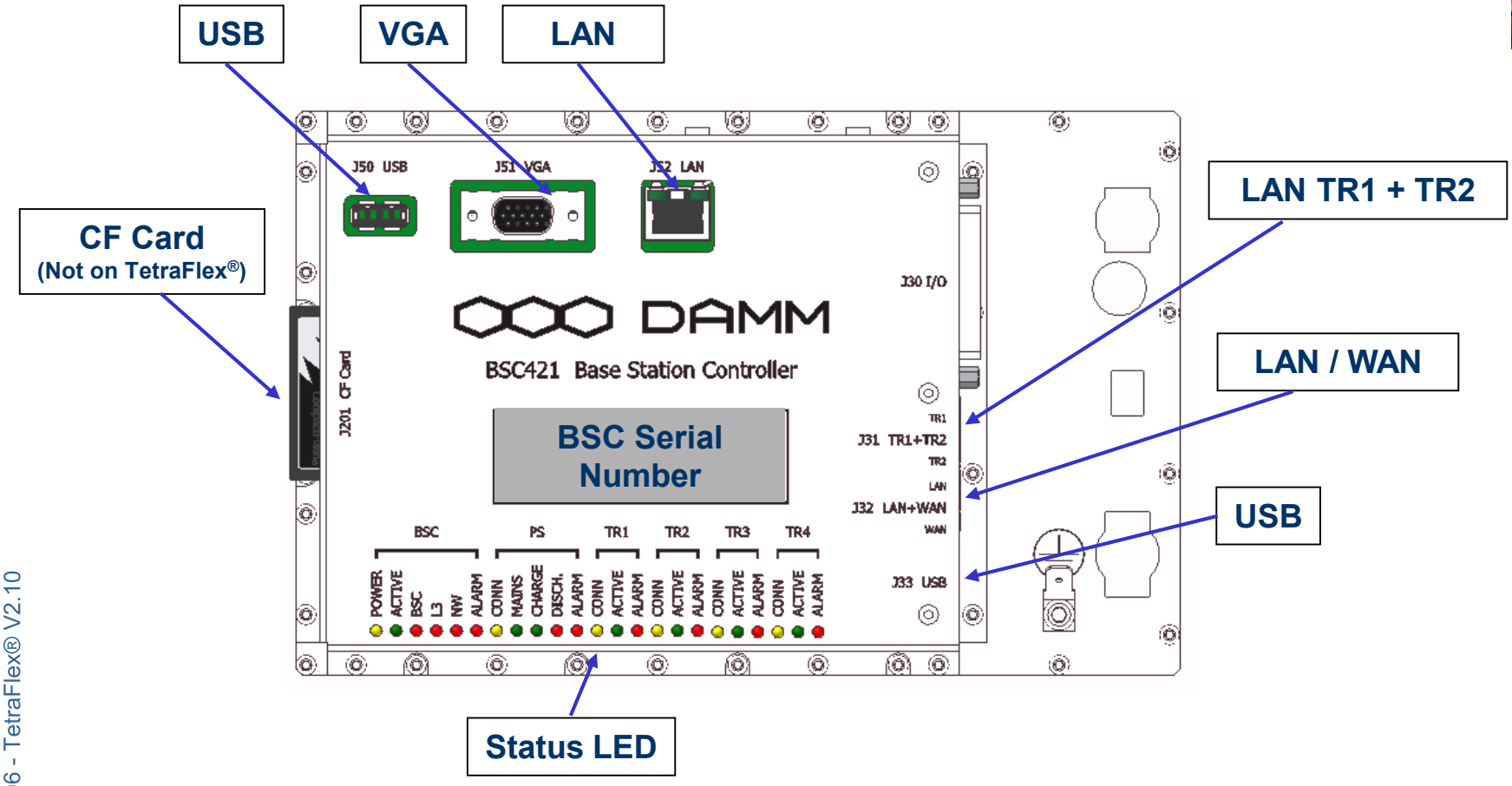


2006 - TetraFlex® V2.10

SB421 Connection Modules



SB421 BSC


USB
VGA
LAN
CF Card
(Not on TetraFlex®)
LAN TR1 + TR2
LAN / WAN
USB
Status LED
J50 USB
J51 VGA
J52 LAN
J30 I/O
J201 CF Card
DAMM
BSC421 Base Station Controller
BSC Serial Number
J31 TR1+TR2
J32 LAN+WAN
J33 USB
BSC
PS
TR1
TR2
TR3
TR4
POWER
ACTIVE
BSC
L3
NW
ALARM
CONN
MAINS
CHARGE
DISCH.
ALARM
CONN
ACTIVE
ALARM
CONN
ACTIVE
ALARM
CONN
ACTIVE
ALARM
CONN
ACTIVE
ALARM

INSTALLATION OF TetraFlex® SYSTEM

How does BS421 get its IP address?

When the system is delivered from DAMM, the SB421 and the BS421(s) are paired together and should start up without any need of configuration change. BS421(s) are assigned an IP from a DHCP server located on the SB421

The IP assigned are 192.168.201.11 for BS421_1, 192.168.201.12 for BS421_2 and so on.

However, if the SB421 is connected to another BS421(s), the IP assigned is in the range 192.168.201.200 to 249 and must be changed.

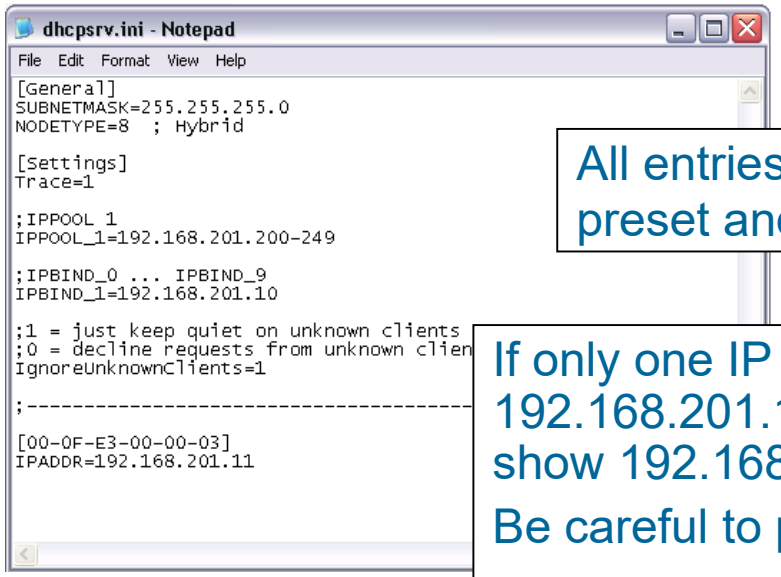
NOTE: SB421 (DHCP Server) must be started before start-up of BS421(s)

2006 - TetraFlex® V2.10

INSTALLATION OF TetraFlex® SYSTEM

Change of BS421 IP address

Open C:\Programs\DHCPServer\dhcpsrv.ini in a text editor



All entries above the dotted line are factory preset and MUST NOT be changed

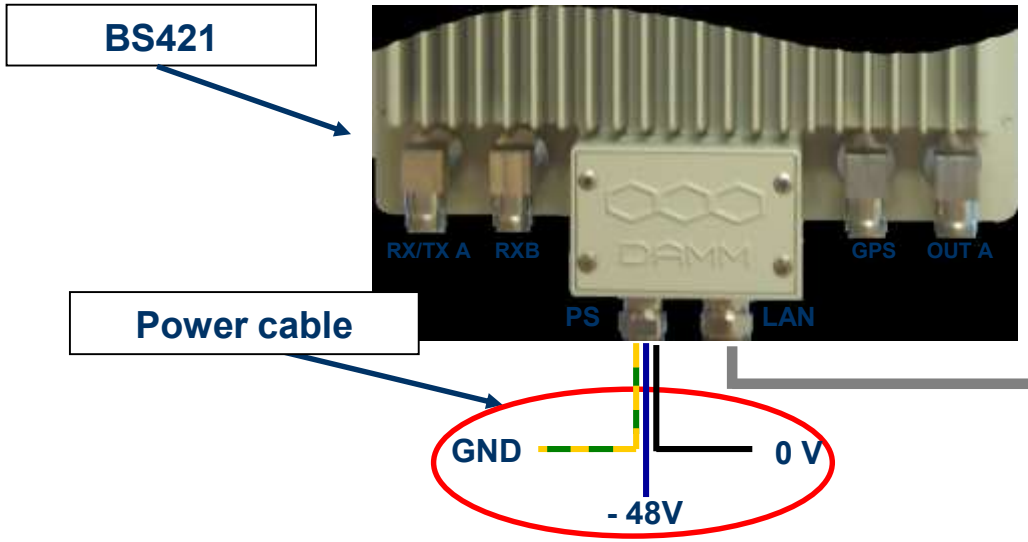
If only one IP / MAC is shown it should be assigned 192.168.201.11 (If two BS421, the second should show 192.168.201.12). If not, change and save.

Be careful to pair the correct IP and MAC

Remember to restart.

INSTALLATION OF TetraFlex® SYSTEM

Service Cable



Service cable includes

- 3 wire power cable
- 1 x LAN cable (LAN and 1 sec. pulse)

LAN to SB421 consisting of:

1 LAN connection (2 pairs)

1 ”LAN” type connection for BS421_2 via SB421. Used for 1 sec. frequency synchronization pulse (2 pairs)

Considerations to observe

- PS is –48 volt DC
- BS *must* be grounded
- A protection fuses for two BS421s (3,15A Slow) are placed inside the SB421
- Arresting devices are placed inside the SB421

2006 - TetraFlex® V2.10

INSTALLATION OF TetraFlex® SYSTEM





Placement

The recommended placement of the Base Station is as close to the antennas as possible to reduced cable loss. The placement of the Base Station and Service Box shall be such that it is securely fastened to a mast or building that is able to carry the weight of the units and withstand the local environmental conditions. All cables, antennas etc. shall be properly fastened to the mast or building using appropriate fixtures as to avoid damage to the equipment and possible injury to persons.

2006 - TetraFlex® V2.10

INSTALLATION OF TetraFlex® SYSTEM

BS421 Environmental / climatic requirements

The Base Station is designed for outdoor operation, such that it can be placed in the antenna mast close to the antennas.

The Base Station is designed to be able to operate at severe environmental conditions.

The Base station is guaranteed to operate from –25 to +55 C ambient temperature. Storage temperature for the BS421 is from –40 to +55 C. Note that operation at elevated temperatures (Internal temperature of > 70C) for prolonged periods will result in a significant reduction in MTBF.

NOTE: If the internal BS421 temperature raises to +85 C, the BS will shut off the PA stage for protection. (Delta = 15C)

The Base Station encapsulation complies with IP65

2006 - TetraFlex® V2.10

INSTALLATION OF TetraFlex® SYSTEM

SB421 Environmental / climatic requirements

The Service Box is designed for outdoor operation, such that it can be placed on base of the antenna mast.

The Service Box is designed to be able to operate at severe environmental conditions.

The Service Box is guaranteed to operate from –20 to +55 Celsius limited by the batteries and the CPU board. Note that operation at elevated temperatures for prolonged periods will result in a significant reduction in MTBF.

The Service Box encapsulation complies with IP65

2006 - TetraFlex® V2.10

End of INSTALLATION TetraFlex® SYSTEM

DAMM