1 Functional Description

1.1 Schematic overview

Figure 1 shows a block-diagram of the LGP TMB system with an external Control Interface Unit. For module functionality descriptions.

The TMB system includes:

- a 2-carrier integrated Tower Mounted Booster unit (TMB)
- one Control Interface Unit (CIU)
- one software package

and various optional installation kits.

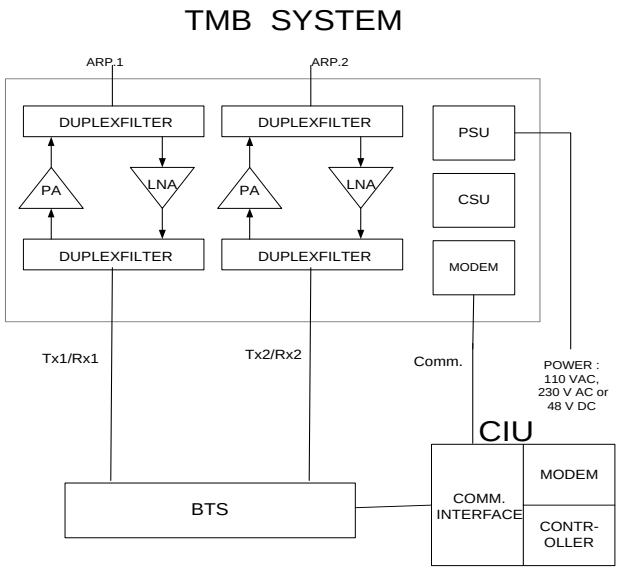

Figure 1a. Functional diagram of TMB with external CIU

The TMB contains one dual duplexer for each carrier; one duplexer at the antenna port and one duplexer at the BTS port. A high power amplifier (HPA) is in the Tx path (downlink), and a low noise amplifier (LNA) is in the Rx path (uplink).
The TMB contains a switch mode power supply unit (PSU). The power supply is available as either an AC or a DC version (115/230 VAC or +48 VDC).
The micro controller (CSU) handles all monitoring of the TMB as well as communication to the CIU. Communication to the CIU is achieved via the RF modem.
The CIU is the main interface to the BTS. The CIU contains the physical alarm interface to the BTS, which is relay contacts (3 pole), as well as the infrared PC interface and the serial RS232 interface.

1.2 TMB-1900

The TMB-1900 is available in two configurations: With and without in-build LNA.
The TMB-1900 with in-build LNAs is intended for Tower Top mounting close to the antenna and is equivalent to TMB-900 and TMB-1800 as described in figure 1a.
The TMB-1900 without LNAs is intended for base mounting close to the base station and includes support (power supply and alarm interface) for four external TMAs to be mounted close to the antennas. The functional diagram is shown in figure 1b.

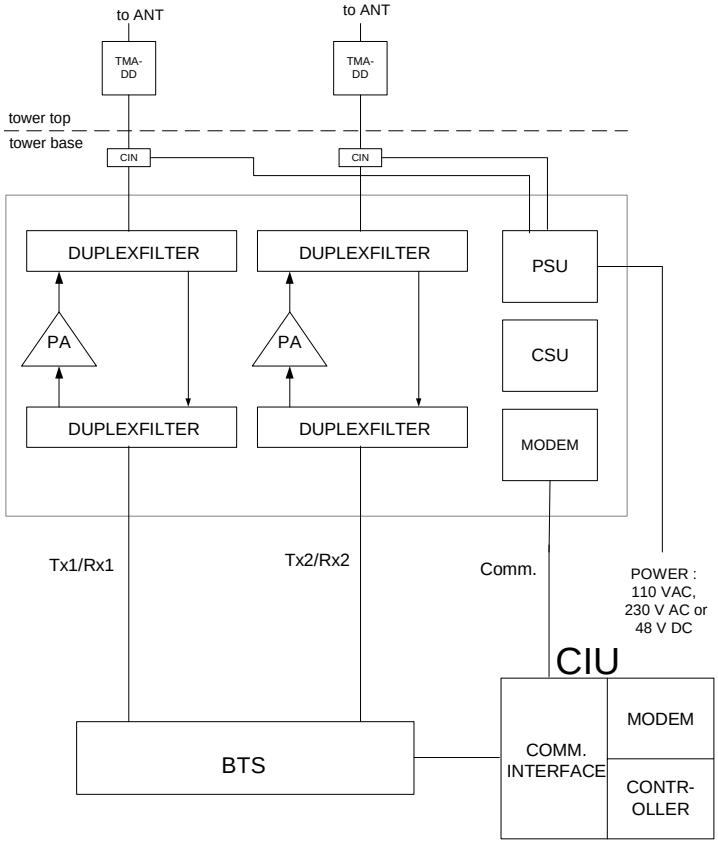

Figure 1b. TMB-1900 with external TMAs

1.3 Abbreviations

BTS	Base Transceiver Station
CIU	Control Interface Unit
CSU	Control Surveillance Unit
CW	Continuos Wave
HPA	High Power Amplifier
LNA	Low Noise Amplifier
MS	Mobile Station
PBU	Power Back-up Unit
PSU	Power Supply Unit
TMA	Tower Mounted Amplifier (Low Noise)
TMB	Tower Mounted Booster