BETA²

GSM A5.1/A5.2 DECIPHERING UNIT

The BETA² unit is a high performance FPGA based GSM Deciphering Unit (A5/1 and A5/2), it can be used for any off the air interception front end units, for passive and active solutions.

The connection to those front ends is through a simple Ethernet connection, the unit needs a few bursts for each communication from the front end equipment, allowing the use of low data rate connection if necessary. Then the BETA² GSM will send back the Kc to the front end for real time decryption.

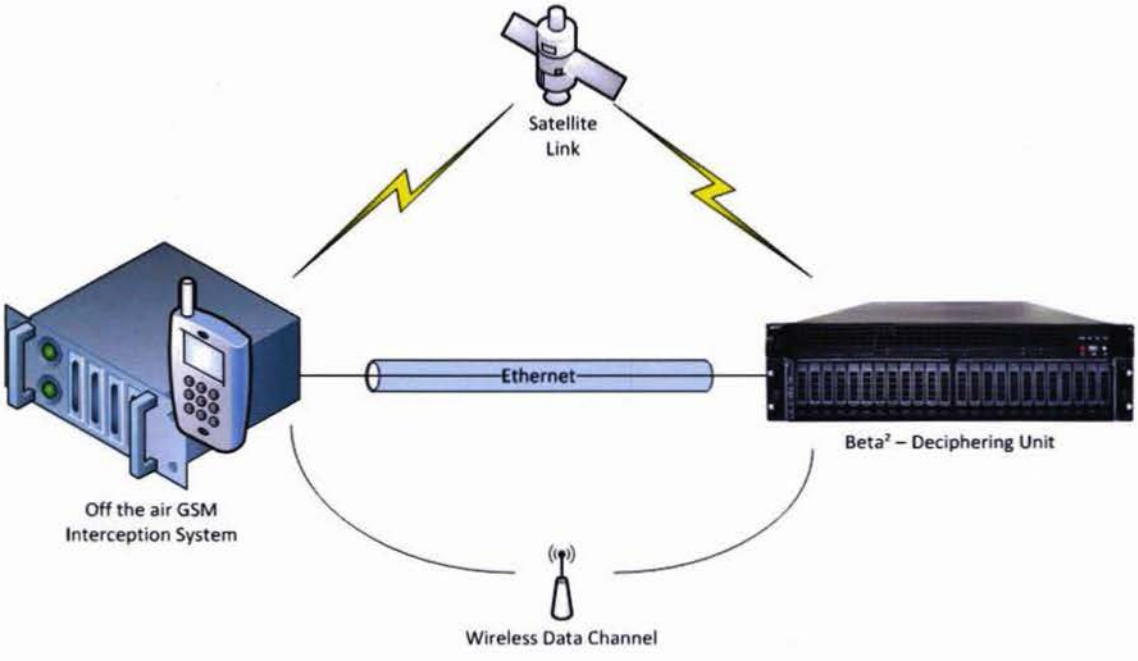
The small size and the low consumption of the equipment allow the BETA² GSM to be mounted in a car or armored vehicle for example.

APPLICATION FIELDS

- GSM Interception
- Active and passive application

MAIN FEATURES

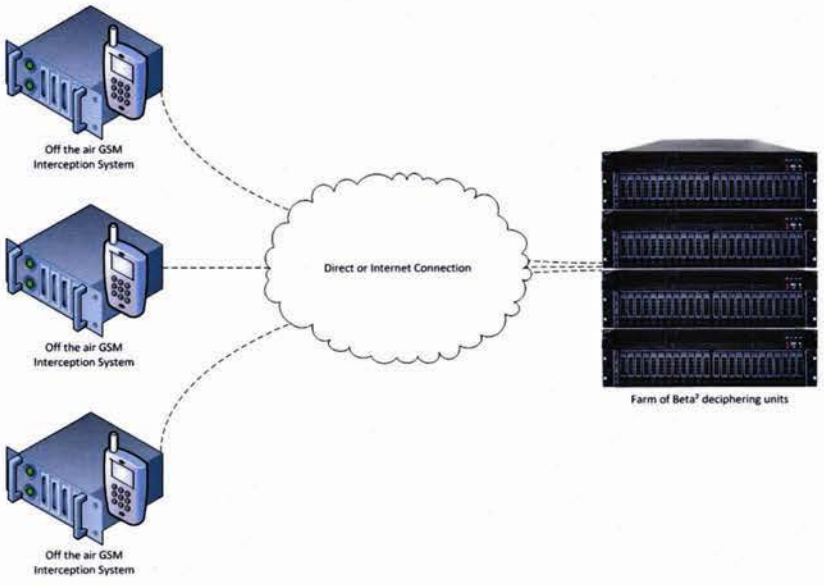
- 3U 19" rack device
- 6 Kc/s upgradable to 20 Kc/s for A5.1
- Real time for A5.2
- Simple Ethernet interconnection to the Frontend
- Can be used as a tactical equipment in vehicles



Drawing 1: Multiple possible connectivities between frontend and Beta²

ADVANCED
MIDDLE EAST
SYSTEMS

Several front end can use the BETA² GSM as it is accessible through any ethernet network, the performance of the equipment is 6Kc/s for the first solution up to 20Kc/s for the high end one.
This deciphering unit can also be cascadable (modulo 20Kc/s) in order to achieve a high number of Kc/s for a centralized solution for example.
The equipment is composed of a 1U chassis for the FPGA part of the solution and a 2U chassis for the storage part.



Drawing 2: Possible to cascade several Beta² units to connect multiple frontends

CHARACTERISTICS

A5/1 and A5/2 deciphering unit for off the air GSM interception front end

- Performance: up to 20Kc/s for A5.1 and almost real time for A5.2
- Probability of success: more than 95% with normal BER on the communication

Expansibility

- Cascadable up to 5 units to achieve 100Kc/s
- First version at 6Kc/s can be up graded to a 20Kc/s in the same chassis, (factory return)

Control and Test

- Local and remote control available
- Self BIT embedded in the solution

PHYSICAL/ELECTRICAL SPECIFICATIONS

Connection	: Ethernet (RJ45)
AC Power	: 115/230 Vac ± 15 % 47-63 Hz
Consumption	: < 900W @20°C
Size (H x L x P)	: 135 (3U) x 485 (19") x 550 mm
Weight	: < 12Kg
Operating temperature	: 0°C to +50°C
Storage temperature	: -40°C to +70°C
Cooling	: Forced air from front to rear panel
International compliance	: CE compliant

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