



**GSM Monitoring System:  
Falcon C+**  
Model 580

## GSM Monitoring System: FALCON C+

### Description

The Falcon Monitoring System is a mobile application monitoring system used for GSM networks and operates in the 900/1800MHz standard.

The Falcon allows the complete monitoring of the entire GSM data traffic, including the monitoring of voice, SMS and fax traffic. All data will be automatically stored and can be recalled selectively from the various data banks for further use.



*The Falcon system fulfils the following main functions:*

- Fully passive (non-detectable) off air interception of GSM communication in different modes:
  - Interception of communication in A5.1 protocols (Ki is necessary)
  - Interception of communication in A5.2 protocols (real time A5.2 decoder is integrated)
  - Interception of communication in A5.0 protocols in real time
- Control of the Downlink (base station to mobile phone channel) and of the Uplink (return channel from mobile phone to base station)
- Automatic coordination of the system, automatic channel search of the Base Station Control Channels (BCCH) and registration of their parameters.
- Automatic registration and decoding of telephone conversations based on pre defined adjustable filter criteria and respective storage of these conversations on the integrated 4 channel digital recorder.
- Automatic creation of an archive for recorded telephone conversations with sorting to the subscribers monitored.
- Automatic registration and storage of all available protocols in the GSM network of the monitored base station
- Control of 8 receivers (4 duplex receivers) for the automatic monitoring and recording of max. 4 telephone conversations
- Switching on and off for recording of conversations, text messages (SMS) as well as data transmission (fax messages). The fax messages are stored in a Hexadecimal protocol
- Display of Operating Mode of the 4 Duplex receivers and the activated filter function on the display of the computer

## Technical Data

	GSM 900	GSM 1800
Reception channels	8 (4 Duplex channels)	
Target numbers	up to 1000	
Identification	through IMSI, TMSI, IMEI, Class mark, Telephone number, Distance	
Frequency range of Downlink (BTS→MS)	935 ... 960 MHz	1805 ... 1880 MHz
Frequency range of Uplink (MS→BTS)	890 ... 915 MHz	1710 ... 1785 MHz
Channel spacing	200 kHz	
Number of channel	124	375
Frequency deviation	45 MHz	95 MHz
Frequency stability	± 0,03 ppm	
Receiver type	double-super heterodyne, asynchrony	
Receiver sensitivity	-105 dbm	
Antenna impedance	50 Ω	
Time of frequency change in Hopping mode	< 500 μs	
Dynamics range	> 75 dB	
Volume range	25 dB	
Demodulator	GMSK, asynchrony	
Speech codex	RPE/LTP: HR, FR, EFR, AMR	
Channel structure	TDMA/FDMA	
System software	Windows 98/2000/XP	
Audio format	standard Wave-format	
Power supply	220 VAC, 50 Hz; 110 VAC, 60 Hz or external battery 12 V DC	
Operating temperature range	+ 5 °C ... 40 °C -20 °C ... + 50 °C (without condensation)	

### Scope of delivery:

- FALCON C+
- Control unit (Notebook)
- 2 pcs. Dual-band antenna (magnetic mount)
- USB-connecting cable
- Power supply cable 230VAC
- Power supply cable 12 VDC
- User manual
- Suitcase

### Optional:

- Hardware:
- Mobile telephone with software "NETMON
  - Dual band Yagi-antenna
  - Dual band panel-antenna
  - Module for remote control via LAN, PSTN, ISDN



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