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Willtek 8181

GPR Down Converter

- Enables model tuning for UMTS using 8100 GPR series receivers
- Extends the receiver's frequency to 2.5 GHz
- Measures a channel at 100 km/h without jeopardising "Lee compliance"
- Delivers equal performance to the receivers as their native network types
- Ensures future Quality of Service (QoS) with accurate RF prediction model alignment
- Works in conjunction with Willtek's 8010 Hindsite™ software

Cover GSM 1800/1900 and UMTS!

With the cellular market rapidly shifting towards third generation mobile communications, many network operators are gearing themselves up for the key challenges of UMTS. Willtek understands that the first stage of building a successful network lies in the planning process.

To ensure that base station placement is accurate and effective, it is essential that the models used in the planning phase be precisely calibrated. This involves the collection of information about the wireless environment by means of drive testing.

Users of Willtek's 8100 General Purpose Receiver (GPR) series of receivers can now extend their frequency range to 2.5 GHz by using Willtek's 8181 GPR Down Converter instrument. This means that their systems can cover GSM1800/1900 applications and UMTS frequencies.

Delivers UMTS expansion

Willtek´s 8181 GPR Down Converter is an expansion instrument that fits easily onto the General Purpose Receiver to provide a powerful UMTS downlink test solution. The receiver helps operators maximize the performance of their infrastructure.

The 8181 GPR Down Converter enables the GPR series receivers' frequency to extend to 2.5 GHz and allows the measurement of up to five downlink channels at high speed.

Users only need to have the latest version of Willtek's Hindsite to use the GPR Down Converter.

Provides a highly compatible solution

Willtek's 8181 GPR Down Converters are compatible with all existing Willtek GPR software, including Hindsite RF propagation software. This enables positional data to be correlated with field and signal strengths for model tuning work on a range of network technologies.

All that is required in the GPR is the selection of the Down Converter.

The GPR Down Converter is powered from the existing GPR batteries and fit easily into an extended GPR leather case.

Supports full RF verification

The instrument covers the entire downlink range and more. It can measure a channel at 60 mph or 100 km/h without jeopardising 'Lee-compliance'. This enables operators and network infrastructure companies to verify RF performance within the new frequency.

Assures high performance

The instrument does not reduce the performance of the General Purpose Receiver, other than a slight increase of the noise floor. This enables equal performance to the receiver's native network types. Also its accurate RF prediction model alignment ensures quality of service (QoS).

Technical Specifications

Frequency range (extended range)	1700 to 2500 MHz
Frequency accuracy (25 C)	2.5 kHz (typically 1.1 kHz)
Frequency accuracy (0 to 40 C)	4 kHz
Level accuracy (0 to 40 C)	5 dB (typically 3 dB)
Level accuracy (25 C)	3.5 dB (typically 1.5 dB)
RF input connector	N-type
RF output connector	N-type
Nominal input impedance	50 Ω
Input VSWR	< 3:1
Image rejection	> 40 dB (typically 50 dB)
Adjacent channel rejection (25 kHz offset, 15 kHz bandwidth)	40 dB
Spurious response rejection	typically 40 dB
LO level at RF input	–30 dBm
Sensitivity 15 kHz bandwidth	–10 dBµV
Maximum RF input level (linear)	90 dBµV
Maximum RF input level (damage)	+10 dBm
Blocking level	(typically 80 dB)
Battery life	4 hours (typically 6 hours)
Weight (complete package: GPR, GPR Down Converter, case)	7 kg
Dimensions (including case but excluding interconnections)	315 x 230 x 150 mm

Ordering information

8181 GPR Down Converter 1700 MHz to 2500 MHz	M 248 618
8101 GPR General Purpose Receiver BW: 7.5, 15, 120 kHz	M 100 601
8102 GPR General Purpose Receiver BW: 7.5, 15, 20, 120 kHz	M 100 602
8103 GPR General Purpose Receiver BW: 7.5, 15, 25, 120 kHz	M 100 603
8010 Hindsite RF Propagation Test Software MS Windows 95, 98, NT 4.0, 2000, XP	M 897 825

Note: Specifications, terms and conditions are subject to change without prior notice.

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