

## Axell 3009D

### 900 MHZ DIGITAL CHANNEL SELECTIVE REPEATER

- › Supports GSM and WCDMA technologies in one unit
- › 30dBm Output Power, 80dB Gain
- › Supports up to 4 sub-bands with optional non-contiguous channels - enabled by programmable innovative DSP filtering
- › Top level EVM, ACRR and emission performance support latest HSPA technologies
- › SmartALC™ technology
  - Prevents oscillations and balances coverage
  - Automatically sets optimum gain
  - Ensures transparent network operation



Axell 3009D is specifically designed for inbuilding GSM/WCDMA applications. It supports up to 4 sub-bands in the 900Mhz band (with optional for non-contiguous bands UMTS channels). Due to its state of the art DSP filtering it can support both GSM and WCDMA technologies in the same repeater.

Axell 3009D fully meets 3GPP UMTS standard requirements. Highly linear components and unparallel innovative DSP filtering provide top level performance that supports high throughput of the latest HSPA technology.

Axell 3009D utilizes Axell Wireless proprietary SmartALC power control algorithm. This algorithm provides

more than gain control: it automatically optimizes the gain setting by learning the actual range of RSSI levels over a user-specified period of time. In addition, SmartALC prevents oscillations, reduces the amount of isolation required by the system which in turn improves network performance.

The SmartALC, together with the low noise figure of the Repeater, minimize noise rise at the donor cell site. SmartALC allows the installer to quickly set up the unit yet achieve the design goals specified by the system engineer.

Axell 3009D features three panel LEDs. These provide ongoing status and alarm

indication and can also be used during setup as an RSSI level indicator to help align the donor antenna to the donor sector.

The efficient thermal characteristics of the Axell 3009D, careful component selection and robust design result in high system reliability.

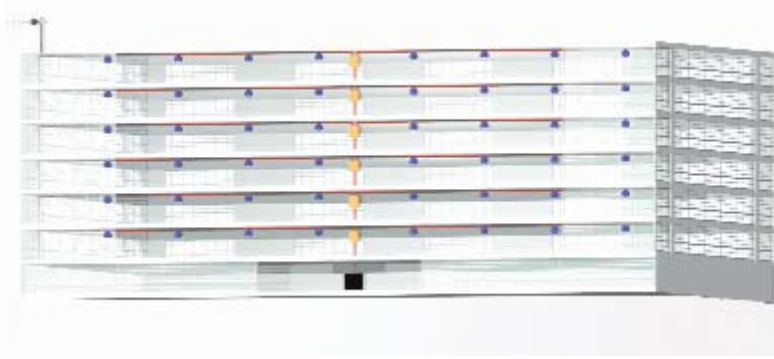
Axell 3009D supports Intuitive Web management GUI that can be accessed using any standard browser (no client installation required) through a local or remote (via external modem) connection.



#### AXELL WIRELESS CARRIER SOLUTIONS

*Axell Wireless offers a comprehensive portfolio of enhanced coverage solutions for the wireless carrier market. Based on IF-SAW filtering, patented DSP filtering™ and SmartALC™ technologies, Axell Wireless' proven, indoor and outdoor solutions solve a wide range of network issues including interference and oscillation problems, challenging coverage holes, inadequate in-building coverage and cell extension from the smallest structures to the largest venues .*

*Regardless of the technology or frequency, Axell Wireless can provide customized coverage solutions that address any combination of unique and complex network needs for the wireless carrier.*



The Axell 3021D digital repeater is powerful enough to drive a passive Distributed Antenna system (DAS) for coverage areas over 100,000 ft<sup>2</sup> (10,000m<sup>2</sup>) in buildings, parking lots, malls, warehouses and offices.

## SPECIFICATIONS

PARAMETERS	DOWNLINK	UPLINK
<b>ELECTRICAL</b>		
Frequency	935-960 MHz	890-915 MHz
Passband Gain	80dB	80dB
Passband Ripple	± 2.5dB	± 2.5dB
Gain Attenuation Range	0 - 30 dB (in 1 dB steps)	0 - 30 dB (in 1 dB steps)
Composite Output Power (*)	+ 30 dBm	+ 24 dBm
Noise Figure @ Maximum Gain (typical)	5 dB	4 dB
Propagation Delay	< 7 µsec	< 7 µsec
Number of filters (**)	1 to 4 Factory set 5-10 - 15-5 MHz	1 to 4 Factory set 5-10 - 15-5 MHz
Channel Allocation	Adjustable, Contiguous/Non Contiguous (optional)	
Conformance Standard	ETSI EN 300 609-4 , GSM11.26 ,3GPP TS 25.106	
<b>ENVIRONMENTAL</b>		
Power Supply	110 to 240 VAC, max 160 W	
Total RF Input Power	+ 10 dBm	
Impedance Level	50 Ohm	
RF Connector	N-type Female	
Diplexer Connector (optional)	SMA Female	
VSWR	1.5:1	
Operating Temperature	-10 to 50° C (-4 to 122° F)	
Storage Temperature	-30 to 80° C (-22 to 176° F)	
Dimensions W x H x D	305 x 375 x 205 mm	
Weight	22 kg	

(\*) 19dBm/carrier @ 2 carriers to meet IMD requirement (-36dBm)

(\*\*) It is possible to get other filter BW per customer frequency allocation

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

ORDERING INFORMATION		
IDENTIFICATION	DESCRIPTION PART	NUMBER
Axell 3009D	Digital Filtering channel selective repeater, 30dBm, 80dB for 900MHz band	MW-DFR-GSM-900-3080

### About Axell Wireless

Axell Wireless is a leading developer and supplier of high-quality RF coverage solutions designed to maximize wireless network coverage in difficult RF environments and complex settings. The company specializes in extending RF radio coverage to rural areas, office buildings, subways, tunnels and shadowed areas. Axell Wireless' coverage solutions support all major mobile technologies and standards. For more information, visit [www.axellwireless.com](http://www.axellwireless.com) or phone + 44 (0) 1494 777000