

Overcoming barriers to communication

277x Narrowband Antenna Units

A narrowband in-building remote unit family for supporting specific cellular and wireless services. The 277x Narrowband Antenna Units (AUs) represent an alternative deployment option to wideband Zinwave AUs, with higher power transmission capabilities designed to fulfil service-specific DAS deployment needs.

Product Description

The Zinwave 277x family of products are narrowband versions of the Zinwave Antenna Unit deployed as part of the 2700 Distributed Antenna System (DAS). Unlike the standard Antenna Units (2760 & 2765), which are wideband devices with an operating bandwidth of 370MHz – 2.5GHz, the 277x family offers an alternative deployment option and is designed to support service-specific applications.

The 277x AUs are housed in small enclosures designed for un-obtrusive installation with separate antennas. The 277x units are higher power direct replacements for the 2760/2765 Antenna Units with a band specific dual-band duplexer added, housed within a common mechanical platform.

The same control and communication mechanisms are used as with the wideband AUs so that both narrowband and wideband devices can be mixed and matched with the existing Zinwave 2700 hub. The fibre-optic components are permanently installed and pigtailed to bulkhead optical connectors so that no SFP is required in the AU.



Features and specifications

277x Antenna Unit

Converts optical I/O to electrical I/O

Single N-type antenna connector

Powered via Power over Ethernet (remotely or using local PoE injector option)

Rack or wall mountable

Versions available to support North American, European and Asian requirements

Product Code	Use	UL band (MHz)	DL band (MHz)	Typical applications
2776	US cellular dual-band ¹	824-849 1850-1910	869-894 1930-1990	CDMA & GSM
2777	EU cellular (DCS & 3G) dual-band	1710 – 1785 1920 – 1980	1805 – 1880 2110 – 2170	GSM WCDMA
2778	EU cellular (GSM & 3G) dual-band	880 – 915 1920 – 1980	925 – 960 2110 – 2170	GSM WCDMA



RF Parameters

Power Output

Parameter	Min	Unit	Comment
Max CW output power	+18	dBm	Single tone power at 276x duplexer output
GSM/EDGE output power	+18	dBm	Composite power at duplexer output (Equivalent to +9dBm ppc for 4 carriers)
CDMA2000 output power	+13	dBm	Composite power at duplexer output (Equivalent to +4dBm ppc for 4 carriers)
WCDMA output power	+15	dBm	Composite power at duplexer output (Equivalent to +7dBm ppc for 4 carriers)

Fibre Optic Specifications

	2675 Antenna Unit
Number of Optical Ports	1 transceiver, duplex SC connector
Wavelength	1310nm
Fibre types supported	MM (both 50 and 62.5um) and SM cable 9/125um
Fibre Distance (MM cable)	At least 550m, dependent on fibre quality
Fibre Distance (SM cable)	At least 2km
Laser safety classification	Class 1

Power

	Antenna Unit
Supply:	100 – 240 Volts, 50/60 Hz or 40-76V DC (48V nominal) for PoE supply
Consumption:	15W

Supervisory

	277x Antenna Unit
Network Management options	Remote via Hub



Physical Specifications

Connectivity

Antenna Unit	
RF connectors	1 x N-type (female) connector
Optical connectors	1 x SC duplex connector
Power	Power over Ethernet via RJ45

Dimensions

Antenna Unit	
Width:	370mm (14.5 in)
Height:	120mm (4.75 in)
Depth:	260mm (10.25 in)
Weight:	5.3 kg

Environmental Specifications

Antenna Unit	
Operating Temperature (Ambient, non-condensing)	0 to +45 deg C
Storage	-25 to +55 degC

Standards & Approvals

EMC, Regulatory & Safety Requirements	EN 55022/CISPR22 FCC Part 15 Class A European EMC directive 89/336/EEC (Note: FCC for 2766, CE for 2767/8)
Electrical Safety	EN 60950 NEC (National Electrical Code – US) UL 1950
Laser Safety	BS EN 60825-1:2003 Safety of laser products



Ordering Information

Item code	Description	Notes
2776	Packaged 2765 + Dual band duplexer for 850/1900MHz cellular/PCS bands (US)	
2777	Packaged 2765 + Dual band duplexer for 900/2100MHz GSM/UMTS bands (Europe)	
2778	Packaged 2765 + Dual band duplexer for 1800/2100MHz DCS/UMTS bands (Europe)	
9322	PoE for AU (single), 2xRJ45, UK plug	
9323	PoE for AU (single), 2xRJ45, EU plug	
9324	PoE for AU (single), 2xRJ45, US plug	

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