

MobileAccessGX

Higher Power DAS Remotes 40 W

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features and benefits

Multi-frequency/multi-service RF transport platform	Accommodates CDMA, GSM, UMTS, HSPA, LTE, EDGE, EV-DO technologies and more. Four model-dependent bands per enclosure
Cost-effective high power	Optimizes and reduces the number of antennas required to cover open outdoor areas by offering 46 dBm composite power per frequency band
Scalable	Quad-band bands
Operator-grade operation	Advanced signal handling, RF filtering and management ensures operator grade performance
Unique, space-saving, non-obtrusive design	Blends into the environment and avoids costly tower builds outdoors when covering campus scenarios, parking lots, tunnels and indoor-adjacent outdoor spaces
Designed to withstand harsh environments	Fully sealed remote unit (RU) enclosure ensures superior performance in harsh environments and worry-free electronics maintenance. Compliant to IP65/NEMA standard
Management and control	Alarm forward to NOC or standard EMS via SNMP, software controlled output power and optical link auto gain control

MobileAccessGX products offer scalable, cost-effective 40 W (46 dBm) high-power remote outdoor coverage solutions for Corning MobileAccess Distributed Antenna Systems (DAS).

MobileAccessGX is a fiber-fed, multi-frequency, multi-operator remote designed to complement the MobileAccess1000 (MA1000) and MobileAccess2000 (MA2000) lower power, standard remotes. GX can also be installed as a dedicated solution for new sites, providing complete RF coverage in large open indoor, tunnel and adjacent outdoor spaces.

Using low-loss fiber optic cabling, GX remote units can distribute multiple BTS signal sources for CELL/PCS/700 LTE or AWS to multiple remote locations between 2 to 15 km from the headend to remotes. GX efficiently supports all operator modulations with linear MCPA (multi-operator power amplifier) up to 40 W.

MobileAccessGX remotes share a common equipment headend and Element Management System (EMS) with other remotes on the MA1000/MA2000 platform. GX remotes also offer high RF power coverage capabilities with compact design for added spaces savings and weather-resistant enclosures to fit various site needs.



GX Quad Band Unit

| Figure 1

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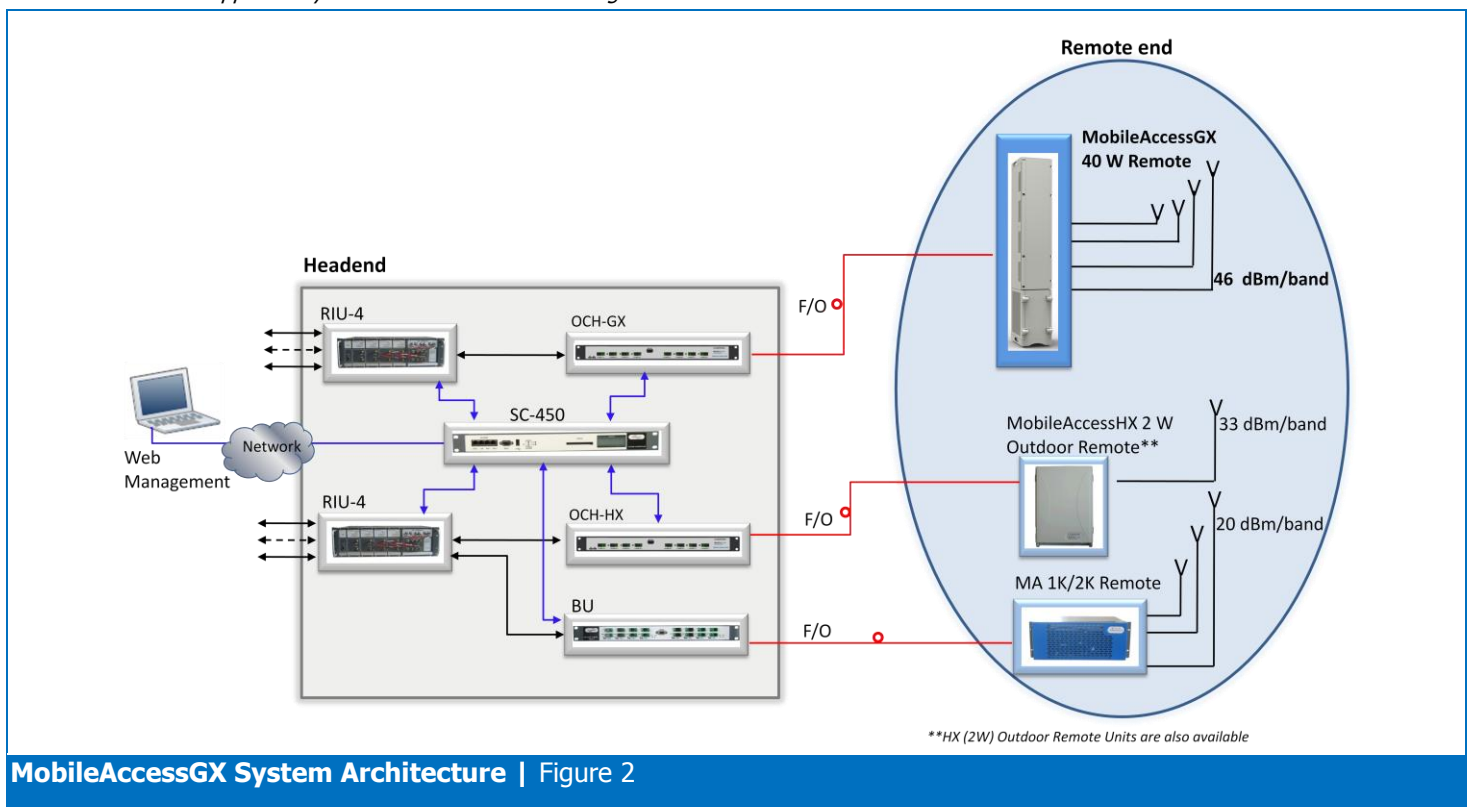
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System Architecture

The following figure illustrates a scenario in which MobileAccessGX is installed alongside MobileAccess2000 remotes and MobileAccessHX remotes. Note that all site elements are managed and controlled via a single SC-450 Controller* that enables local and remote management, and provides single-source, centralized 'common headend' controls of MA1000, MA2000, HX and GX elements.

For the MobileAccessGX path, at the headend, the BTS or BDA signal is conditioned by the RIU, ensuring a constant RF level. The conditioned RF electrical signal is then converted by the Optical Central Unit (OCH) to an optical signal for transport to/from multiple GX remotes, over low-loss fiber cabling.

**MobileAccessGX is supported by SC-450 Controller v4.3 and higher.*



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specifications

Supported Services

Services	Frequency Range (MHz)		
	Band	Uplink (UL)	Downlink (DL)
CDMA / WCDMA* / TDMA / GSM	CELL800	824-849	869-894
CDMA / WCDMA* / TDMA / GSM	PCS1900	1850-1915	1930-1995
WCDMA* / HSPA /LTE	AWS2100	1710-1755	2110-2155
LTE	700MHz	698-716 and 776-787	728-757

* WCDMA service is based on 3GPP standards, LTE service may be deployed in the future due to frequency re-farming planned by the operators.

RF Parameters per Service

LTE 700 MHz 40 W		
RF Parameter	DL	UL
Max Output Power (dBm)		
1 Carrier (Composite)	46	
2 Carriers	43	
4 Carriers	40	
8 Carriers		
12 Carriers		
24 Carriers		
Mean Gain (db)¹	68	50
Gain Range (db)	30	30
Pin (dBm)¹	-20	-54
Max Intermod Distortion (dBm)	-13**	
NF (dB) Typical		5
VSWR	1.5:1	
Gain Flatness/Ripple (dB)²	+/-2.0	

CELL TDMA/CDMA/WCDMA 850 MHz 40 W		
RF Parameter	DL	UL
Max Output Power (dBm)		
1 Carrier (Composite)	46	
2 Carriers	43	
4 Carriers	40	
8 Carriers	37	
12 Carriers	35	
24 Carriers	32	
Mean Gain (db)¹	68	50
Gain Range (db)	30	30
Pin (dBm)¹	-20	-54
Max Intermod Distortion (dBm)	-13**	
NF (dB) Typical		5
VSWR	1.5:1	
Gain Flatness/Ripple (dB)²	+/-2.0	

* WCDMA complies with 3GPP TS 25.106 V5.0.0 (2002-03) table 9.4 spectrum emission mask.

** Out of band and spurious emissions compliant to FCC.

1) Factory set mean gain OCH-GX without RIU. May be field adjusted using controller system.

2) Gain Flatness/Ripple is specified for the non-duplexed port of the system.

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specifications | (continued)

RF Parameters per Service

PCS CDMA/WCDMA 1900 MHz 40 W			AWS CDMA/WCDMA 2100 MHz 40 W		
RF Parameter	DL	UL	RF Parameter	DL	UL
Max Output Power (dBm)			Max Output Power (dBm)		
1 Carrier (Composite)	46		1 Carrier (Composite)	46	
2 Carriers	43		2 Carriers	43	
4 Carriers	40		4 Carriers	40	
8 Carriers	37		8 Carriers	37	
12 Carriers	35		12 Carriers	35	
24 Carriers	32		24 Carriers	32	
Mean Gain (db)¹	68	50	Mean Gain (db)¹	68	50
Gain Range (db)	30	30	Gain Range (db)	30	30
Pin (dBm)¹	-20	-54	Pin (dBm)¹	-20	-54
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VSWR	1.5:1		VSWR	1.5:1	
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specifications | (continued)

Optical - GX - 40

Maximum Optical Budget	8 dBo
Optical Return Loss	> 50 dB
Optical Loss per Mated-pair Connectors	0.5 dB (max)
Optical Connector	SC APC
Optical Automatic Gain Control Range	-2~-10 dBm
Fiber Type	Single-mode: 9/125 μ m
Wavelength	1310 nm, 1550 nm + WDM

Physical - GX - 40

Ports	Corning Optitap Fiber-optic waterproof connectors RF DIN Female connectors	
Power	Remote Power VAC 100-240/47-63 Hz with Max Power Consumption: 1600 W	
Physical Dimensions	GX-40	Mounting: Wall or Pole Dimensions (H x W x D): in (mm) 53 x 12.4 x 8.9 (1350 x 315 x 225) Weight: kg (lbs) 70 (154.3)
Cooling Feature	Active heat dissipation (Fan)	

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Environmental Specifications

Operating Temperature	-40 to +70°C (-40 to +158°F)
Humidity	≤ 95%
Enclosure	NEBS OSP Class 4 rated (Enclosure protected from elements and waterproofing)

Ordering information

MobileAccessGX Remote Units

Service Supported	Part Number	Description
CELL/PCS/700LTE/AWS 40 W	GX-C85P19L70A17-40	MobileAccessGX Quad-Hardware with service CELL, PCS, AWS and 700 MHz LTE solution supporting 40W output power.
CELL/PCS/700LTE 40W	GX-LIC-C85P19L70-40	MobileAccessGX Quad-Hardware with licensed service CELL, PCS and 700 MHz LTE solution supporting 40W output power.
AWS 40W	GX-LIC-AO-A17-40	MobileAccessGX licensed service Add on for AWS solution supporting 40W output power.

Optical Central Hub (OCH) - GX International products

Part Number	Description
OCH-GX-4-XR	Optical Central Hub for SISO services, extended range up to 20Km, supporting (4) SISO GX units, SMF (WDM)
OCH-GX-8-XR	Optical Central Hub for SISO or MIMO services, extended range up to 20Km, supporting (8) SISO or (4) MIMO GX units, SMF (WDM)

Accessories

Part Number	Description
AK-GX-FILT-COMB	MobileAccessGX Accessorized 4 to 1 external multiplexer
AK-GX-ELEC-ADAPT-AC	AC Electrical junction adapter IP67 rated
AK-3COUPLER-DINM-DINF	Male DIN-Type to Female DIN-Type Coupler with QMA port, Qty of 3
AK-RIU4-OCH-CABLES	Accessory Kit Cables for RIU4 to OCH, 4 QMA to QMA R/A cables 1 Meter

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notes

**All Information relating to this product in this documentation are subject to change without any notification.*

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