

MobileAccessGX Higher Power DAS Remotes 40 W

A Corning
MobileAccess
Solutions Product

features and benefits |

Multi-frequency/ multi-service RF transport platform	Accommodates CDMA, GSM, UMTS, HSPA, LTE, EDGE, EV-DO technologies and more. Three model-dependent bands per enclosure
Cost-effective higher power	Optimizes and reduces the number of antennas required to cover open outdoor areas by offering 46 dBm composite power per frequency band
Scalable	Expandable tri-band to up to six bands
MIMO support	2x2 MIMO available for LTE700 and AWS 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.



Radome Covered Pole Mounted GX Units
| Figure 1

MobileAccessGX Higher Power DAS Remotes 40 W

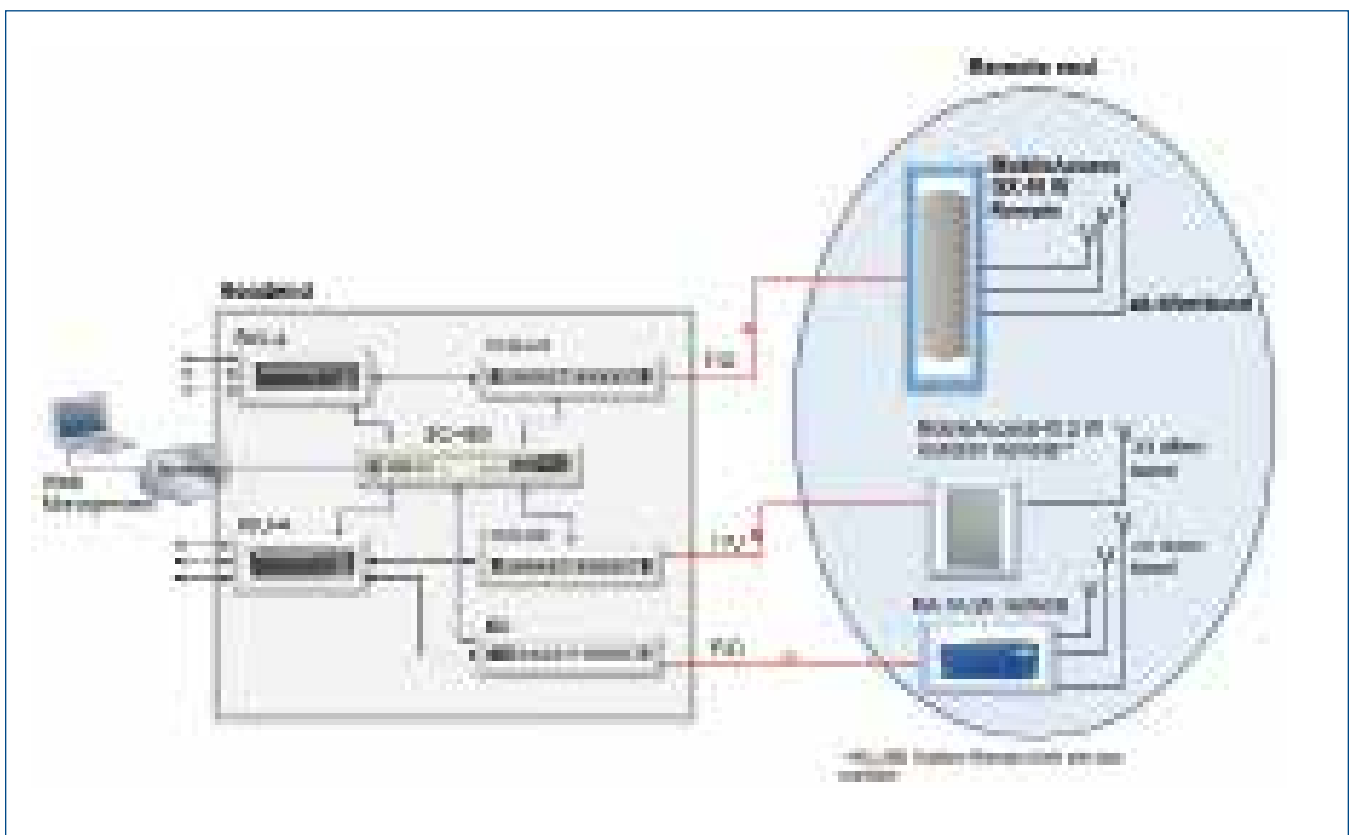
A Corning
MobileAccess
Solutions Product

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 FT-350 OCH unit to an optical signal for transport to/from multiple GX remotes, over low-loss fiber cabling.

**MobileAccessGX is supported by SC-450 Controller v5.3 and higher.*



MobileAccessGX System Architecture | Figure 2

MobileAccessGX Higher Power DAS Remotes 40 W

A Corning
MobileAccess
Solutions Product

specifications |

Supported Services

Services	Frequency Range (MHz)		
	Band	Uplink (UL)	Downlink (DL)
CDMA/WCDMA**/TDMA/GSM	CELL850	824-849	869-894
CDMA/WCDMA**/TDMA/GSM	PCS1900	1850-1915	1930-1995
WCDMA**/HSPA/LTE	AWS2100	1710-1755	2110-2155
LTE	700 MHz	698-716 and 776-787	728-757
CDMA/LTE	S-800	817-824	862-869

(*) WCDMA service is based on 3GPP standards. LTE service may be deployed in the future due to frequencies re-farming planned by the Operators.

(**) WCDMA service is based on 3GPP2 CDMA2000 standards.

RF Parameters per Service

LTE 700 MHz 40 W		
RF Parameter	DL	UL
Max Output Power		
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 1900 MHz 40 W		
RF Parameter	DL	UL
Max Output Power		
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.

MobileAccessGX Higher Power DAS Remotes 40 W

A Corning
MobileAccess
Solutions Product

specifications |

RF Parameters per Service

PCS CDMA/WCDMA 1900 MHz 40 W		
RF Parameter	DL	UL
Max Output Power		
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	

AWS CDMA/WCDMA 2100 MHz 40 W		
RF Parameter	DL	UL
Max Output Power		
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	

CDMA/LTE S-800 MHz 40 W		
RF Parameter	DL	UL
Max Output Power		
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)	-36*	
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.

MobileAccessGX Higher Power DAS Remotes 40 W

A Corning
MobileAccess
Solutions Product

specifications | (continued)

Optical - GX-40

Maximum Optical Budget	6.0 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 Specifications - MobileAccessHX Remote Units

Ports	SC APC fiber optic waterproof connectors DIN Female connectors
Power	Remote power VAC 100-240/47-63 Hz with Max. Power Consumption: 1400 W
Physical	GX-40: Mounting: Wall or Pole (H x W x D): in (mm) 50 x 8.7 x 8.7 (1270 x 220 x 220) Weight: lb (kg) 99.2 (45) GX-Radome Mounting: Wall or Pole (H x W x D): in (mm) 51.1 x 12.9 x 10.9 (1298 x 330 x 278) Weight: lb (kg) 7.5 (16.5)
Cooling Feature	Active heat dissipation (Fan)

Environmental Specifications

Operating Temperature	-40 to +55°C (-40 to +131°F)
Humidity	\leq 95%
Enclosure	IP65/NEMA Enclosure protected from elements and waterproofing

MobileAccessGX Higher Power DAS Remotes 40 W

ordering information |

A Corning
MobileAccess
Solutions Product

Accessories

Part Number	Description
AK-GX-FILT-COMB	MobileAccessGX Accessoried 4 to 1 external multiplexer
AK-GX-ELEC-ADAPT-AC	AC Electrical Junction Adapter IP67 rated
AK-3COUPLER-DINM-DINF	7/16 DIN Female to 7/16 DIN Male with QMA coupling port

MobileAccessGX Remote Units

Part Number	Service Supported	Description
GX-C85L70A17-40	CELL/700LTE/AWS 40 W	MobileAccessGX Tri-service CELL, AWS, and 700 MHz LTE solution supporting 40 W output power
GX-P19L70A17-40	PCS/700LTE/AWS 40 W	MobileAccessGX Tri-service PCS, AWS, and 700 MHz LTE solution supporting 40 W output power

MobileAccessGX OCH Units

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

MobileAccessGX Higher Power DAS Remotes 40 W notes |

A Corning
MobileAccess
Solutions Product

MobileAccessGX Higher Power DAS Remotes 40 W

notes |

A Corning
MobileAccess
Solutions Product

Corning MobileAccess, Inc. • 13221 Woodland Park Rd, Suite 400 • Herndon, VA 20171 USA
866-436-9266 • FAX: 703-848-0280 • Tech Support Hotline: 410-553-2086 or 800-787-1266 • www.corning.com/mobileaccess

Corning MobileAccess reserves the right to improve, enhance and modify the features and specifications of Corning MobileAccess products without prior notification. All other trademarks are the properties of their respective owners. Corning MobileAccess is ISO 9001 certified. © 2013 Corning MobileAccess. All rights reserved. Published in the USA.
CMA-226-AEN / February 2013