

Radio Interface Unit (RIU-12)

A Corning
MobileAccess
Solutions Product

features and benefits |

Extended RF	400-2600 MHz
Flexible, multi-service platform	Single chassis supports combination of SISO and MIMO use cases: <ul style="list-style-type: none"> • up to 12 SISO services – (all in one sector) • Eight SISO and four SISO services – (into two independent sectors) • Four SISO and two MIMO Stream 1 services and four MIMO Stream 2 services – (into two independent sectors)
Multi-operator, multi-service platform	Supports CELL, PCS, AWS and LTE
RF source types supported	BTS and BDA; both duplex and simplex connections per conditioning module
Signal control	Automatic gain control (ACG) for the DL ensures a constant RF signal output level at an extended RF input range of 0-40 dBm; UL gain compensation
Modular, upgradable design	Modular, hot swappable, field upgradable conditioners and fan modules
Simplified setup	On-board calibration signal source for each RF conditioner eliminates the need for external RF signal generating source
Interface toward DAS	RIU-12 interfaces with two 8-port base units (BU) or optical headend units (OCH)
Reduced footprint	High service density while maintaining a small and compact form factor of 4U height rack
Management and commissioning	Web management via the SC-450 controller, capable of automated link calibration

The RIU-12 provides a scalable and flexible radio interface with automatic RF input signal control levels from the RF signal sources fed to the Corning MobileAccess DAS platform.

Supporting up to 12 signal sources in various combinations of SISO and MIMO configurations, the solution is designed for simple upgrade and ease of commissioning:

- Fast deployment upgrades and maintenance with hot swappable service conditioning modules
- Simplified commissioning procedure via a controller Web session uses on-board calibration source for each module – no external signal source required

In deployments utilizing high-power RF sources, the MA2000 Power Attenuation Tray (PAU-6) can be used to attenuate RIU-12 signal input to the required level.

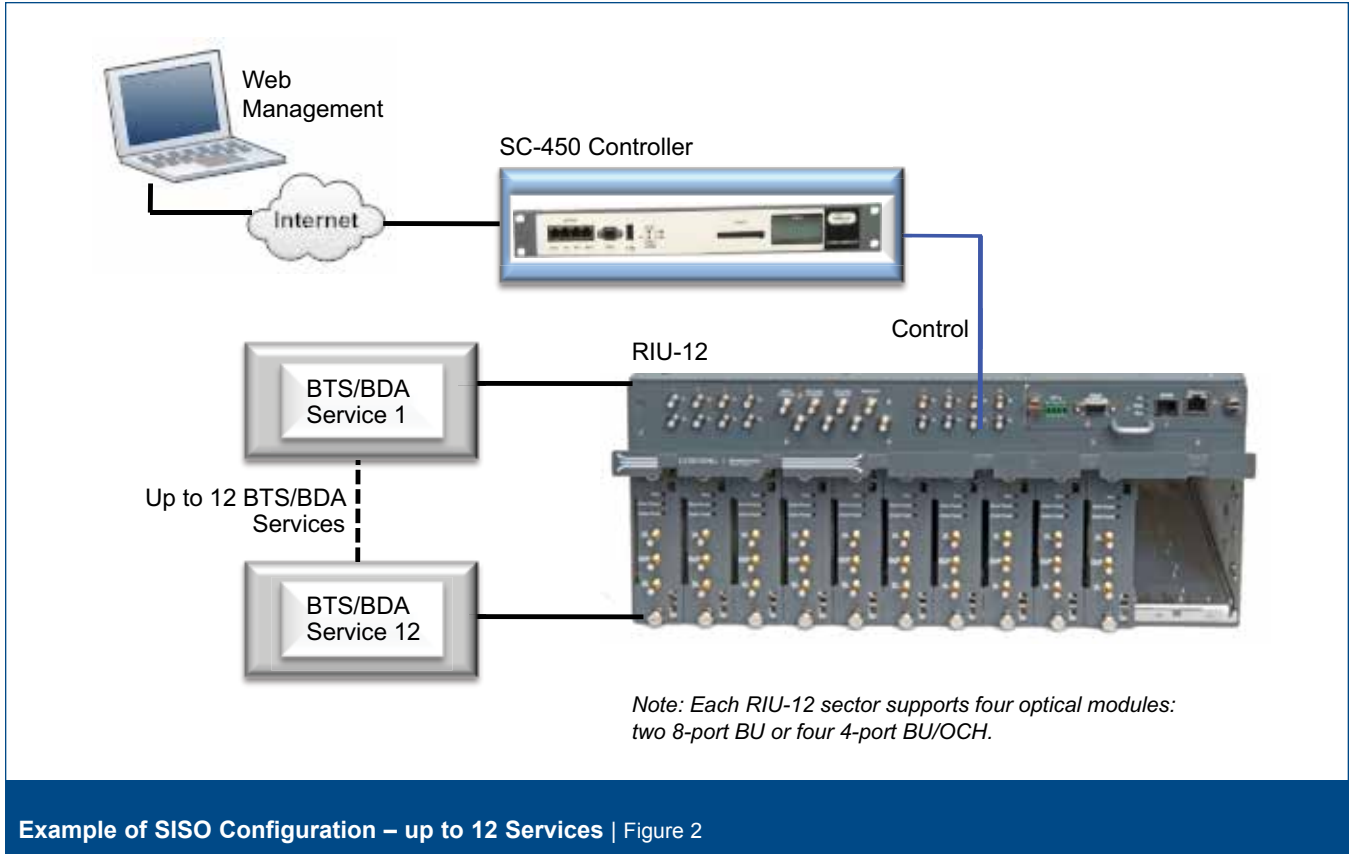


RIU-12 | Figure 1

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Figure 2 illustrates a SISO-only scenario in which the RIU-12 supports up to 12 SISO services, where all services are routed to the 8-port BU or OCH.

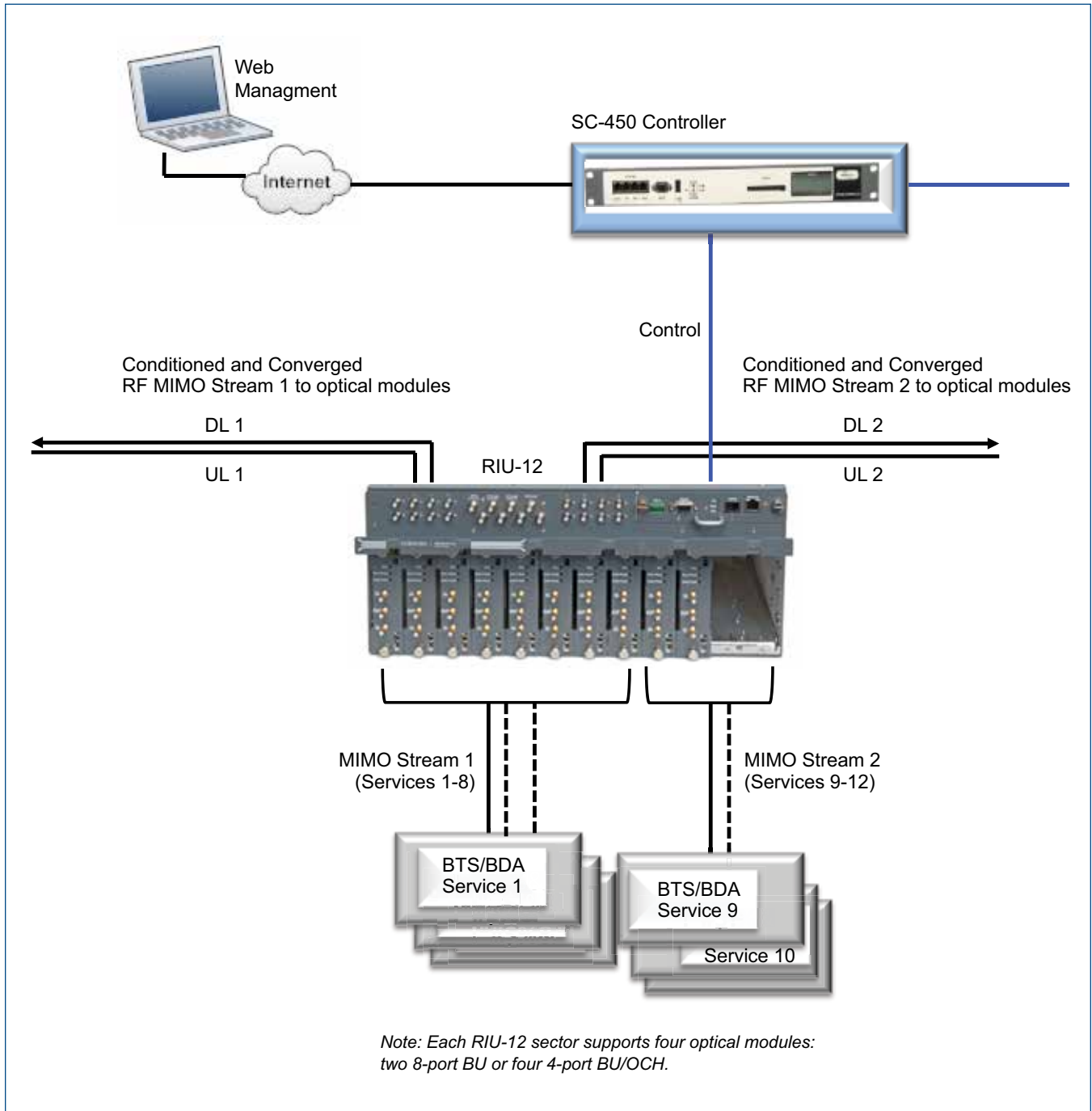


Example of SISO Configuration – up to 12 Services | Figure 2

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Figure 3 illustrates a SISO and MIMO combination scenario where the RIU-12 supports eight SISO services (1-8) and four MIMO services (9-12). MIMO 1 and MIMO 2 services are transmitted through separate optical modules of the BU/OCH unit.



Example of MIMO Configuration – eight SISO and four MIMO Services | Figure 3

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specifications |

RF In	0 to 40 dBm		
Power	DC Input:	20-48 V DC	
	Consumption:	Per BTSC:	6 W
		Chassis:	12 W
Full Chassis:		84 W	
LEDs	Per RF Conditioner Module:	Run:	Operation status
		DL Overload:	High DL RF output power
		DL Low Signal:	Low DL RF output power
	CMU Module:	Power:	Power input indication
		Fan:	Fan status
		Run:	CMU operation status
RF Connectors	Chassis:	Interface to base units/ OCH 16 QMA connectors	
	RF Conditioners:	Interface to BTS/BDA/UDIT (per conditioner) Two simplex QMA connectors One duplex QMA connector	

Physical

Mounting	19-in rack (preassembled brackets) or wall		
Dimensions (H x W x D): in (mm)	7.16 x 19 x 11.8 (43.7 x 482.6 x 299.72)		
Weight: lb (kg)	With conditioners:	53.8 (24.4)	
	Without conditioners:	~22 (~10)	

Environmental

Temperature	• Operating: -5° to +55°C (23° to 131°F)		
	• Storage: -20° to +85°C (-4° to 185°F)		
Humidity	• Environmental: 10 to 95 percent		
	• Storage: 95 percent (non-condensing)		
ECO-friendly Requirement	RoHS		

Radio Interface Unit (RIU-12)

specifications | (continued)

Standards and Approvals

Radio and EMC	U.S.:	<ul style="list-style-type: none">• FCC Title 47 CFR Part 2 Subpart J• FCC Title 47 CFR Part 15 Subpart B• FCC Title 47 CFR Part 22 Subpart C• FCC Title 47 CFR Part 22 Subpart H• FCC Title 47 CFR Part 24 Subpart E• FCC Title 47 CFR Part 90 Subpart 1
	Canada:	<ul style="list-style-type: none">• ICES-003 EMC• RSS-210
	Europe:	<ul style="list-style-type: none">• EN 55011• EN 55022:1994• EN 50082-1:1992• EN 61000• EN 55022• EN 300 328 (802.11b/g intentional radiation)• EN 60950• EN 301 893 (802.11a intentional radiation)• EN 301 489 17 (EMC for 802.11a/b/g)
Safety	General	IEC 60950-1 (EN 60950-1, UL 60950-1/
	Safety:	CSA 60950-1-03, AS/NZS 60950.1)
	Power Safety:	NEC Article 725 Class 2

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ordering information |

Part Number	Service Supported	Description
RIU-12		Radio Interface Unit, support for 1-12 RF conditioners (without conditioners)
RIU-12-CNDTR-700LTE	700 MHz	BTS/BDA Conditioner for LTE 700 MHz Service, 0 to +40 dBm input levels for RIU chassis
RIU-12-CNDTR-AWS	AWS	AWS Conditioner for RIU Chassis, +10 to +36 dBm input range
RIU-12-CNDTR-CELL	CELL	CELL Conditioner for RIU Chassis, +10 to +36 dBm input range
RIU-12-CNDTR-G-PCS	PCS	PCS with G Block Support Conditioner for RIU Chassis, +10 to +36 dBm input range
RIU-12-TM		Termination Modules to terminate open ports (slots)

Accessory Kits

Part Number	Description
AK-RIU12-BU-CABLES-FB	RIU-12 Cables Kit, including QMA/N-type cables for BU connections
AK-RIU12-COMBINE	RIU-12 Combining Cables Kit
AK-RIU12-EXP-BU	RIU-12 Expansion Kit for up to four B4Us or two B8Us including two QMA/QMA 1x4 splitters, cables and 19-in bracket

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notes |

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