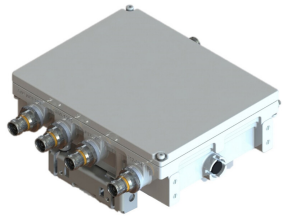
CQX681926-DS-43 | E14F15P20



Quadplexer, 600/800/PCS/AWS+WCS+BRS, DC Sense, 4.3-10

- BTS-to-feeder and feeder-to-antenna application
- Automatic dc switching with dc sense
- Convertible mounting brackets
- New 4.3-10 connectors for improved PIM performance and size reduction
- DC Load Sense in Feeder-to-Antenna applications

Product Classification

Product Type	Quadplexer

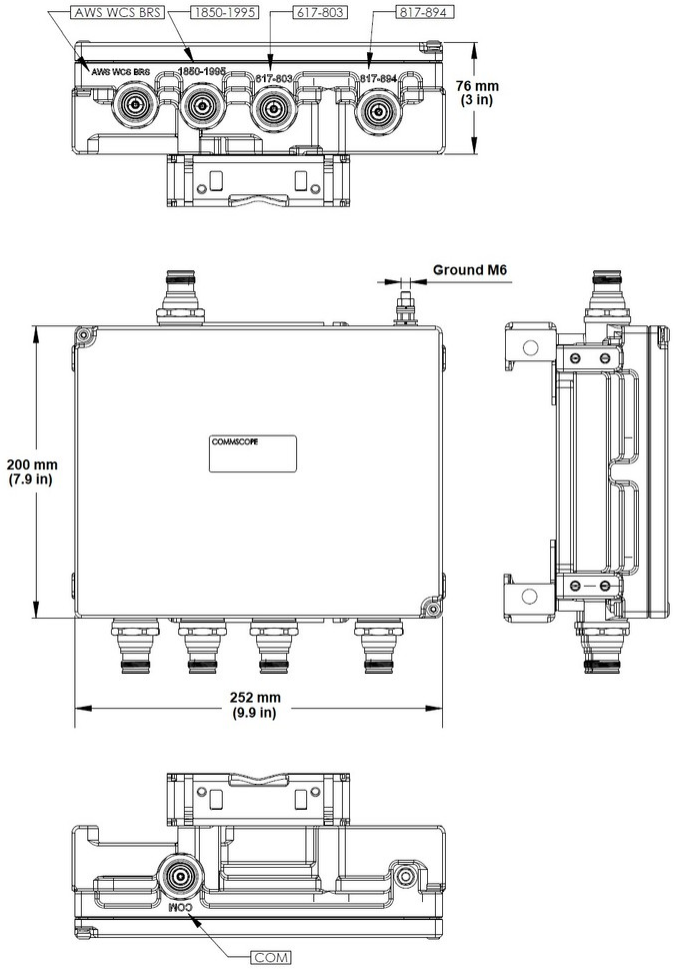
General Specifications

Color	Gray
Common Port Label	Common
Modularity	1-Single
Mounting	Pole | Wall
RF Connector Interface	4.3-10 Female
RF Connector Interface Body Style	Long neck

Dimensions

Height	200 mm | 7.874 in
Width	252 mm | 9.921 in
Depth	76 mm | 2.992 in
Ground Screw Diameter	6 mm | 0.236 in

Outline Drawing



Electrical Specifications

Impedance	50 ohm
License Band, Band Pass	AWS 1700 | AWS 2000 | CEL 850 | LMR 750 | LMR 800 | PCS 1900 | USA 600 | USA 700 | USA 750 | WCS 2300

Electrical Specifications, dc Power/Alarm

dc/AISG Pass-through Method	Auto sensing
dc/AISG Pass-through Path	See logic table
Lightning Surge Current	10 kA
Lightning Surge Current Waveform	8/20 waveform
Operating Current at Voltage	15 mA @ 12 V | 15 mA @ 24 V
Voltage	7–30 Vdc

Electrical Specifications, AISG

AISG Carrier	2176 KHz ± 100 ppm
Insertion Loss, maximum	1 dB
Return Loss, minimum	10 dB

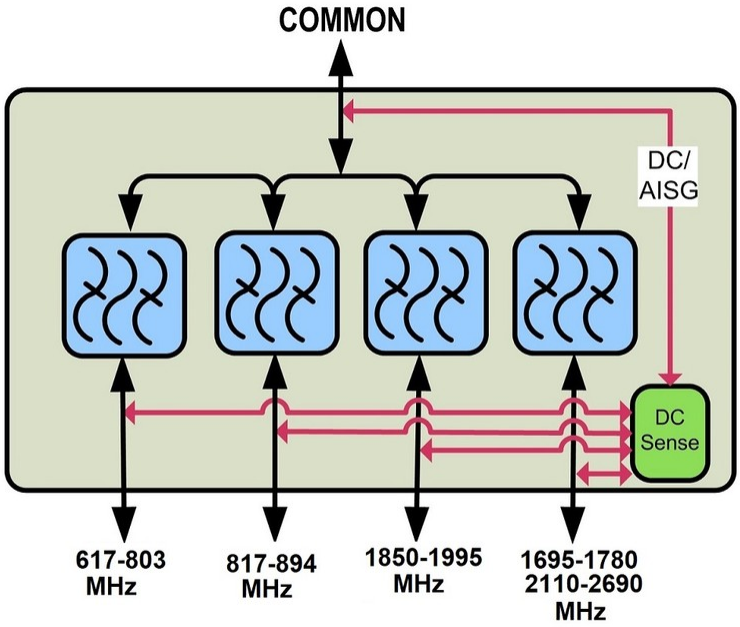
Electrical Specifications

Sub-module	**1**	**1**	**1**	**1**	**1**
Branch	1	2	3	4	4
Port Designation	617-803	817-894	PCS	AWS+WCS+BRS	AWS+WCS+BRS
License Band	USA 600, Band Pass USA 700, Band Pass USA 750, Band Pass LMR 750, Band Pass	CEL 850, Band Pass LMR 800, Band Pass	PCS 1900, Band Pass	AWS 1700, Band Pass AWS 2000, Band Pass WCS 2300, Band Pass	WCS 2300, Band Pass AWS 1700, Band Pass AWS 2000, Band Pass

Electrical Specifications, Band Pass

Frequency Range, MHz	**617–803**	**817–894**	**1850-1995**	**1695–1780**	**2110–2200 2300–2690**
Insertion Loss, typical, dB	0.2	0.2	0.3	0.3	0.15
Total Group Delay, maximum, ns	50	65	25	25	25
Return Loss, typical, dB	22	22	22	22	22
Isolation, minimum, dB	50	50	50	50	50
Input Power, RMS, maximum, W	120	120	120	120	120
Input Power, PEP, maximum, W	1200	1200	1200	1200	1200
3rd Order PIM, maximum, dBc	-161	-161	-161	-161	-161
3rd Order PIM Test Method	2 x 20 W CW tones	2 x 20 W CW tones	2 x 20 W CW tones	2 x 20 W CW tones	2 x 20 W CW tones

Block Diagram



Logic Table

Combining Mode Operation (Bottom)						
PORT 1 617-803	PORT 2 817-894	PORT 3 1850-1995	PORT 4 1695-1780/2110-2690	COMMON		
RF Ports Input Voltage					DC/AISG Path Selection	DC/AISG PORT Priority
Any*	Any*	Any*	7 ≤ V ≤ 30	<7	617-803 MHz "OFF" 817-894 MHz "OFF" 1850-1995 MHz to COMMON"OFF" **1695-1780/2110-2690 MHz "ON"**	PORT 4 [Highest] PORT 1 PORT 3 PORT 2 [Lowest]
7 ≤ V ≤ 30	Any*	Any*	<7	<7	**617-803 MHz to COMMON "ON"** 817-894 MHz "OFF" 1850-1995 MHz "OFF" 1695-1780/2110-2690 MHz "OFF"	
<7	Any*	7 ≤ V ≤ 30	<7	<7	617-803 MHz "OFF" 817-894MHz "OFF" **1850-1995 MHz "ON"** 1695-1780/2110-2690 MHz to COMMON "OFF"	
<7	7 ≤ V ≤ 30	<7	<7	<7	617-803 MHz "OFF" **817-894 MHz to COMMON "ON"** 1850-1995 MHz "OFF" 1695-1780/2110-2690 MHz "OFF"	
<7	<7	<7	<7	<7	ALL PORTS OFF	

* Any DC voltage applied in the ON (7-30V) or OFF (< 7V) ranges
Note: When two or more DC/AISG are available, port with higher priority is bypassed to common

Splitting Mode Operation (Tower Top)					
RF Ports Impedance DC (Load Sense)					
PORT 1 617-803	PORT 2 817-894	PORT 3 1850-1995	PORT 4 1695-1780/2110-2690	COMMON	DC/AISG Path Selection
Short	Short	Short	Short	7 ≤ V ≤ 30	ALL PORTS OFF
Open/ Load	**Open/ Load**	**Open/ Load**	**Open/ Load**	7 ≤ V ≤ 30	**ALL PORTS ON**
One or more port(s) are Open/ Load				7 ≤ V ≤ 30	DC/AISG will be be passed to ALL Open/Load port(s)

Note: In this mode DC/AISG will be passed to all detected ports and blocked at shortened ones

Environmental Specifications

Operating Temperature	-40 °C to +65 °C (-40 °F to +149 °F)
Corrosion Test Method	IEC 60068-2-11, 30 days
Ingress Protection Test Method	IEC 60529:2001, IP67

Packaging and Weights

Included	Mounting hardware
Volume	3.8 L
Weight, without mounting hardware	4.5 kg | 9.921 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ROHS	Compliant/Exempted
UK-ROHS	Compliant/Exempted