

NEW



RADIO FREQUENCY SYSTEMS

Twin PCS Wideband Tower Mount Amplifier



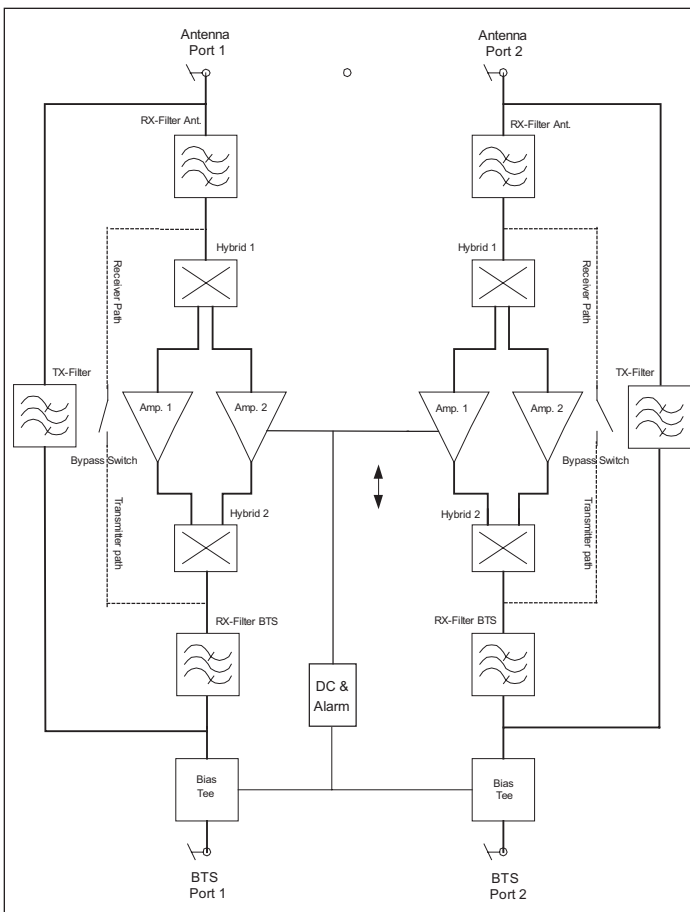
RFS's new twin tower mount amplifier is an extension of RFS's wideband TMA series. Twin TMA's were developed specifically to reduce installation time and lower the wind load on towers.

This unit improves base station receiver sensitivity and enhances coverage while they provide higher data rates to subscribers without reducing capacity.

Features and Benefits

- **Two TMA's in a single enclosure** - reduces tower load and installation time
- **Low noise figure** - overcomes feeder losses and enhances site coverage.
- **Sharp roll-off filters** - improves Tx-Rx isolation by reducing noise and interference.
- **Dual-duplex configuration** - enables use of a single feeder for both Tx and Rx.
- **By-pass switch** - increases the reliability of the system.
- **Low insertion loss of Tx filter** - provides increased downlink coverage.
- **Single bias-T to power both TMA's** - reduces hardware requirements and lowers installation cost.*
- **Extremely light weight** - Reduces tower loading and facilitates installation.
- **Tightly controlled filter roll-off** - reduces absolute delay variation in the uplink, enhancing the receive diversity feature.
- **Bias-T with surge protection** - no need for separate surge suppressors, reducing cost.
- **Equipped with breather valve** - guards against internal condensation.

Block Diagram



Ordering Information

ATM192012T-0 1900 MHz twin dual-duplex TMA for sites using 1900 MHz systems.

*A second bias-T may be required as a DC-block in the second feed line if the BTS antenna port has a resistive load or a DC short.



Specifications

	PCS (1900 MHz)
Tx Frequency Band, MHz	1930-1990
Rx Frequency Band, MHz	1850-1910
851/1912 MHz Attenuation, dB	>10
Roll Off, dB/MHz	5
Gain, dB	12 +/- 1 dB
Noise Figure, Mid-Band, dB (Room Temperature)	<1.6 (1.35)
Noise Figure, Full-Band, dB (Room Temperature)	<1.95 (1.6)
TMA Insertion Loss (Tx path), dB	< 0.5
Amplifier Bypass Loss, dB	< 2.8
Transmit/Receive Isolation Tx into Rx, dB	> 80
Transmit/Receive Isolation Rx into Tx, dB	> 50
Maximum RF Power Input, W Continuous	300
Peak Power w/MCPA, kW	>3
Input Return Loss (VSWR), Operation/Bypass, dB	18 / 17
Output Return Loss (VSWR) Operation/Bypass, dB	16 / 14
1 dB Compression Point, dBm	0
Third Order Intercept, Input, dBm	13
3rd Order Intermod (Antenna Connector) Into Rx Band, dBm	<-120
Differential Delay Across Full U/L Passband, ns	220
Absolute Delay (Ant in to BTS out) Mid-Band, ns	55
Variance, ns over temperature (unit to unit)	15
Maximum Input Level in Rx Band, dBm continuous	10
Lightning Protection, kV/kA	
BTS Port	20/10 (IEC 61000-4-5)
Antenna Port	Direct Ground
Operating Temperature, °C	-40 to +65
Weather Protection	Meets IP66
MTBF, hrs	>300,000
Connectors	Four 7-16 DIN long-neck female connectors
Warranty	5 Years
Weight, Configurations, lb (Kg)	19 (8.6)
Dimensions, in (max)	10 x 11.5 x 6
Color	Light Grey RAL 7035
Housing Material	Metal cast base and radome top
Mounting Hardware	Included

Supplementary Items

PDU1912 Series	Power distribution unit. A single unit can power up to six twin wideband dual duplexed TMA's.
716-UC90-07	Bias-T with surge arrestor (EMP), used to feed the power supply to the feeder cable. Includes 25 ft of cable to connect to PDU. (Only one required for one twin TMA.)
716-UC90-09	Same as 716-UC90-07 except the 7/16 DIN connectors reversed: 7/16 Male to BTS side and 7/16 Female to Antenna side.

PDU1912 Series

Input Voltage, V DC	+24 or -48
Output Voltage, V	+12 ±0.5 (6 outputs)
Input Power, W	<75
Mounting	19" rack or wall mount
Height	One rack unit
Ordering Information:	
PDU1912-0	For use with bias-T surge protection 716-UC90-07 or 716-UC90-09
PDU1912-1	For use with Nokia VSWR bias-T WBUB

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