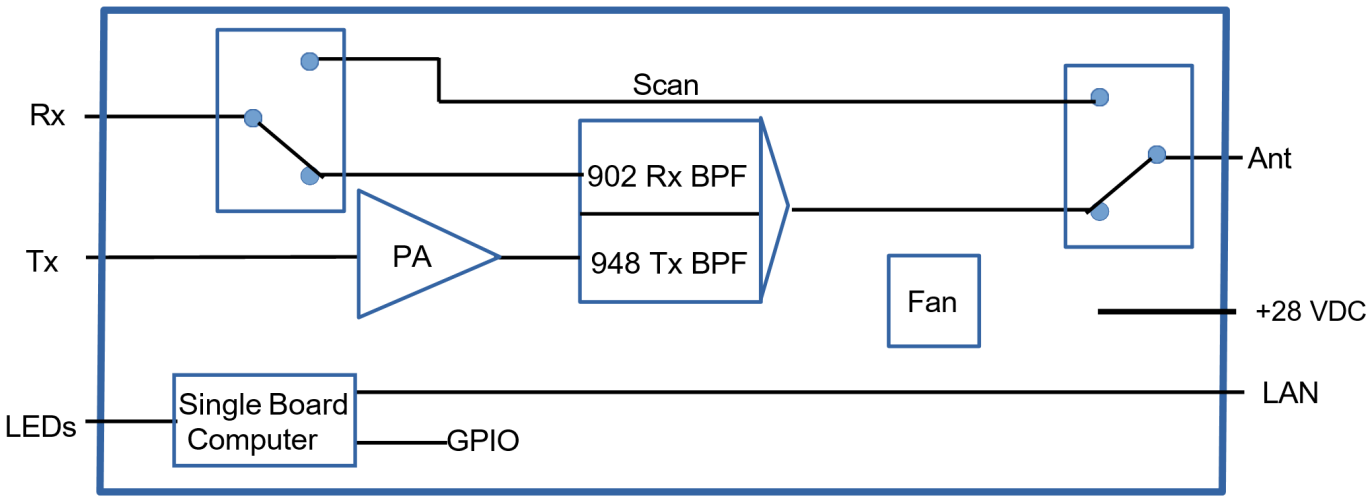
Quantic Corry
761 Commonwealth Dr # 201
Warrendale, PA 15086 USA
TEL 724.964.7011
URL quanticcorry.com

Product Specification

UMTSMOD-900M
900 MHz UMTS Filter And Amplifier Module

The UMTSMOD-900M is a filter and amplifier module for UMTS signals in the 900 MHz band that is designed to mount in a single slot of a four slot 3U, 19" chassis. It has separate low power level Receive and Transmit ports for interfacing to a Software Defined Radio and provides the necessary filtering to combine the Receive and Transmit signals onto a common output port for connection to an antenna. The module also features the ability to connect the Receive port directly to the antenna port, bypassing all amplifier and filtering functions, to allow a broadband measurement of ambient signals received at the antenna port. The module can be monitored and controlled over a LAN.

Module Block Diagram



Quantic Corry
761 Commonwealth Dr # 201
Warrendale, PA 15086 USA
TEL 724.964.7011
URL quanticcorry.com

Electrical Specifications	
Parameter	**Specification**
Frequency Range Tx	935-960 MHz
Frequency Range Rx	890-915 MHz
Signal Type	UMTS
Insertion Loss Rx to Antenna Port	2.5 dB
Nominal Gain- Tx to Antenna ports ALC On	42 dB
Nominal Gain- Tx to Antenna ports ALC Off	42 dB (+/- 1.8 dB over temp)
Nominal Output Power	25 W
ALC Control Range	16dB (+/- 8dB nominal)
ALC Set Range	16dB (44dBm-29dBm), tested with CW signal
ALC Control Accuracy	+/-1dB, tested with CW signal
EVM @ Nominal Ouput with ALC On	8% Max
ACLR	-45dBc min
Noise Figure @ Nominal Gain	10 dB Max
Isolation Tx to Rx	85 dB Min
Tx/ Rx Ports RF Connectors	SMA Female
Antenna Port Connector	Type N Female
Tx /Rx/ Antenna Ports Return Loss	15 dB
Supply Voltage	+28 VDC
Power Consumption at Nominal Output Power	200 W
Power Consumption when Muted	5 W max
Output Load Mismatch Protection	Amplifier output protected with circulator
LAN Port	10/100 BASE-T

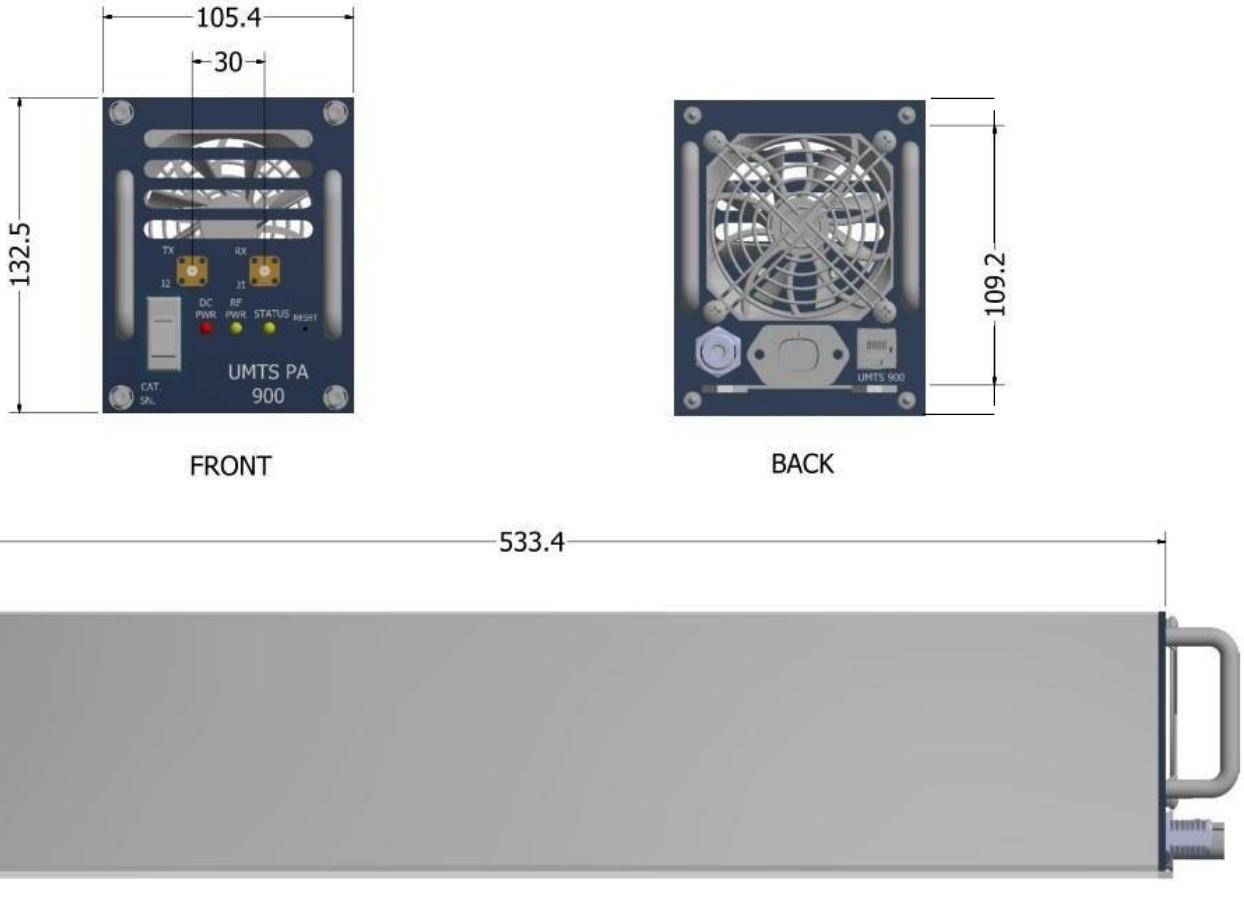
Mechanical / Environmental Specifications	
Parameter	**Specification**
Dimensions	See drawing
Weight	5 kg
Operating Temperature	0 – 50 degrees C

Control / Indicators	
Feature	**Description**
DC Power Connector	Rear Panel Mounted Locking Plug Molex P/N 0194290026 Mates to Molex P/N 19418-0007
DC Power Switch	Front Panel Mounted 10A Circuit Breaker
DC Power Indicator	Front Panel LED Illuminated= DC Voltage Connected and Switched On
RF Power Indicator	Front Panel LED Illuminated Green= RF Power Above Threshold Illuminated Red= RF Power Below Threshold
Status LED	Front Panel LED Indicating Module Status Booting: Blinking Green Healthy: Solid Green Alarm: Blinking Red Processor Fault: Solid Red
Reset / Default Settings	Recessed Switch Accessible Through Front Panel
Control and Communications Protocol	Secure Command over TCP/IP
Control and Communications Connector Type	Rear Panel Mounted RJ45
GPIO (future use)	5 Inputs, 5 Outputs Opto-Coupler Output, with Common Return Digital Current Loop Inputs, with Common Return
GPIO Connector Type, located internal to module	Micro Dsub15 Pin Female

TCP/IP Parameters					
Name	Type	Description	Range	Resolution	Accuracy
ALC	Control	Turns Amplifier ALC Function On and Off ALC Off Sets Amplifier to Nominal Gain	On / Off	N/A	N/A
ALC Setpoint	Control	Set Output Power Maintained by ALC Does Not Operate when ALC is Off	44dBm-29dBm	0.5dB	+/-1dB with CW signal
Mute	Control	Reduces Amplifier Output to a Low Level Safe for Output Switching	On/Off	N/A	N/A
Scan	Control	Connects Rx Port Directly to Antenna Port, Bypassing Filtering and Amplifier	On/Off	N/A	N/A
Forward Power	Status	RF Output Power from Amplifier	30dB, 47.5dBm-18.5dBm	0.1 dBm	+/-2dB
Reverse Power	Status	RF Power Reflecting into the Amplifier	30dB, 47.5dBm-18.5dBm	0.1 dBm	+/-2dB
Temperature	Status	Present Amplifier Temperature	-40C to +105C	1C	+/-3C
Return Loss	Status	Calculated Amplifier Load Return Loss	30dB, 0db- 30dB	.1dB	+/-4dB
DC Current	Status	Amplifier Current Draw	0-15 A	0.1A	+/-5%
Fan Alarm	Status	Fan Malfunction Alarm	On/Off	N/A	N/A
Over Temp Alarm	Status	Amplifier High Temperature Alarm	On/Off	N/A	N/A
Return Loss Alarm	Status	Alarm Indicating Return Loss is Below the Threshold	On/Off	N/A	N/A

Mechanical Drawing

Dimensions in mm

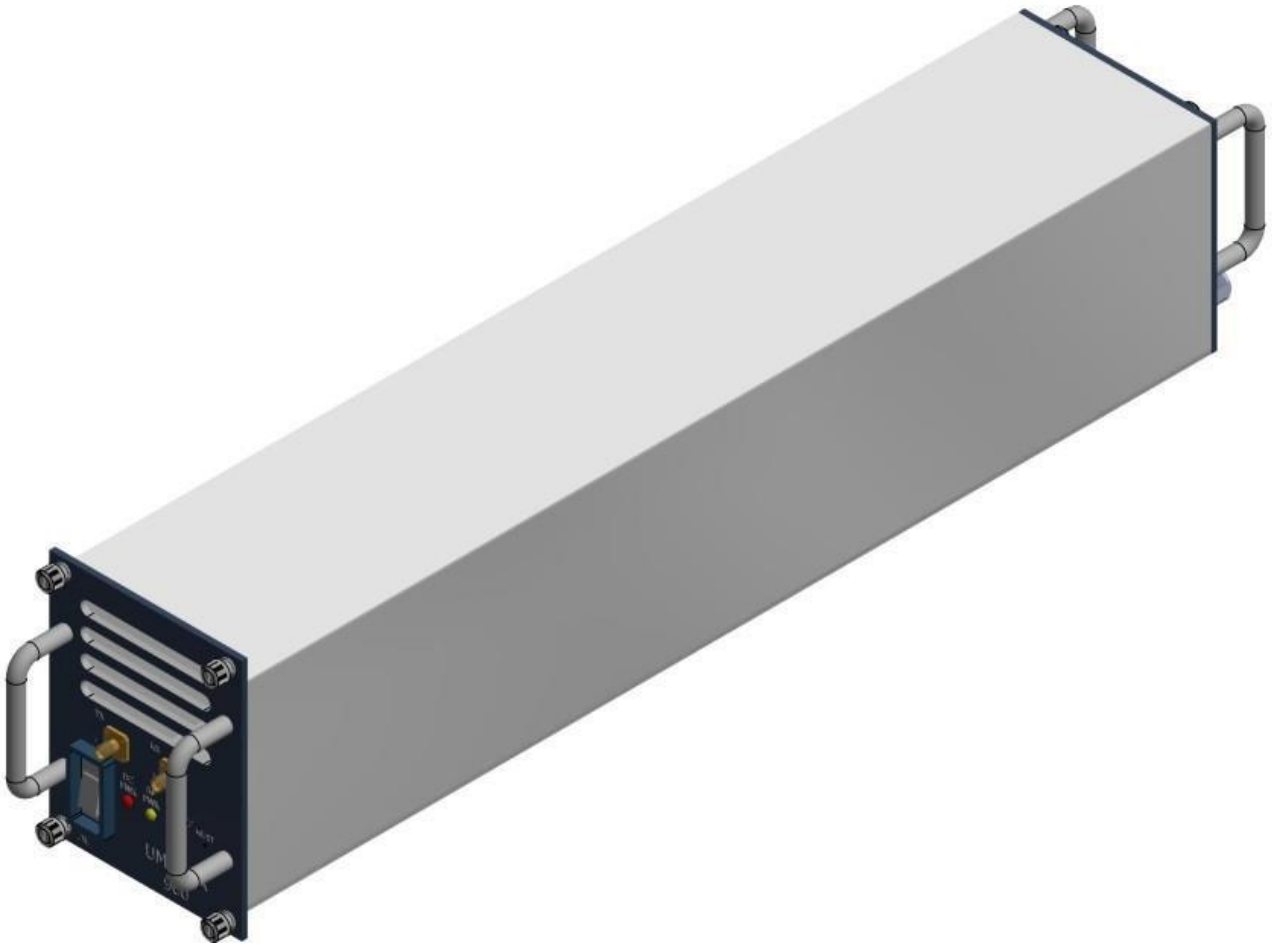


Quantic Corry

761 Commonwealth Dr # 201
Warrendale, PA 15086 USA

TEL 724.964.7011
URL quanticcorry.com

Mechanical Drawing



Quantic™ Corry

761 Commonwealth Dr # 201
Warrendale, PA 15086 USA

TEL 724.964.7011
URL quanticcorry.com