

Accessory Kit for X-Band Quad Transmit-Receive Module

For module evaluation and testing



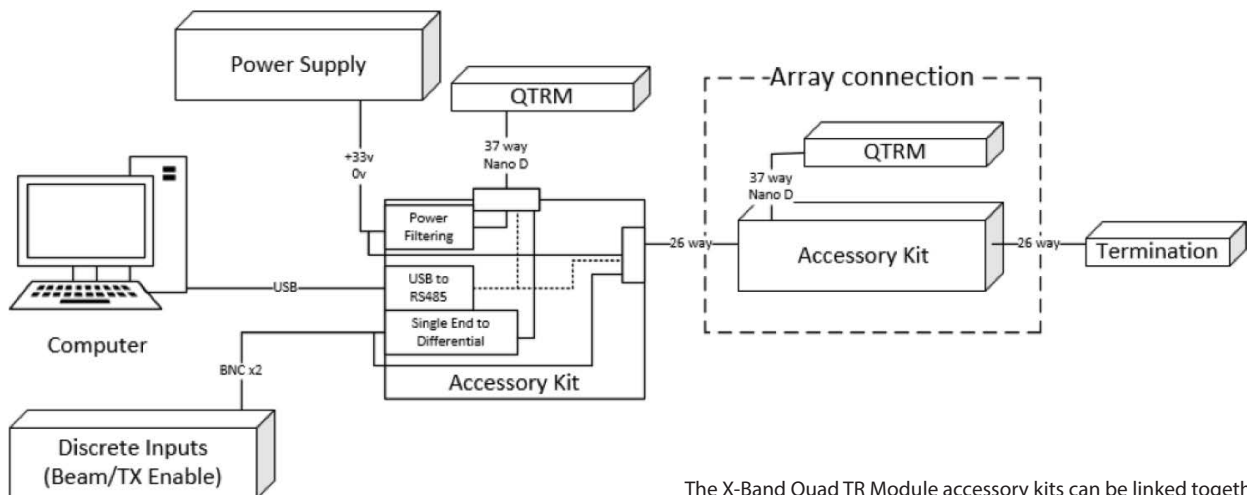
Testing and experimentation

API Technologies X-Band Quad Transmit-Receive Module accessory kit is an all-in-one evaluation, testing and experimentation kit designed to fully explore the capabilities of a single MAIA-100258 X-Band Quad TR Module. Operating from a single +33V supply, it allows configuration, and monitoring from a PC using the supplied application. The RF connections are made using the SMPM connectors, or via SMA connectors using the included adapters.

The interface circuitry supplied in this kit includes power filtering to protect against current spikes for pulsed RF operation, substantial heatsinking for PA heat dissipation, and USB adapter to simplify control via PC based applications.

Features

- Allows control and monitoring from a PC
- Supports the daisy-chaining of multiple modules
- Keyed connectors for easy setup
- Power Supply Filtering
- Integrated Heatsinking
- Power Indication LEDs
- Storage and transport case
- PC software to control module (Windows 10)



The X-Band Quad TR Module accessory kits can be linked together to create an Array. See Array Section



Figure 1

Array

Refer to datasheet MAIA-100258 for details of QTRM Module.

Accessory kits can be placed together to form a longer linear array (Figure 1) and still maintain the X-Band Grid spacing of 15mm between all elements

The design of the kit allows for a simple cable swap to link units together, common arrangements are 1, 2 and 4 which allows for 16 TR channels (1 x 16). For arrays greater than 4 QTRMS please enquire for more information.

This allows for, but not limited to, Multi-Unit control through a single USB for the analysis of forming beam patterns, addressing multiple modules and power supply characteristics .

A single kit includes

- 1x Control unit with Integrated Heatsink
- 6x SMPM to SMA adapters
- 1x Adapter Bracket Kit
- 1x Master Cable
- 1x Slave Cable
- 1x Termination Cap
- 1x Installation Media



Instructions

Instructions for use of the kit are included. Module application notes are available from API upon request.

For more information Contact our representative

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MAAN - 100261 X-Band QTRM Antenna Option

A 4-element Vivaldi antenna, to fit on the front of the accessory kit, is available as a separate option. This provides a matched antenna to demonstrate behaviour and features of the QTRM and X-Band AESA operation within a test chamber environment. It attaches to the heat-sink of the Accessory kit and includes necessary connectors to connect to the QTRM.

Parameter	Value
Frequency	9-10GHz
Directivity Typical	6.5 dBi
Efficiency Typical	70%
VSWR Typical	>2:1
3dB Beamwidth Typical	>90°

The Antenna is only intended for demonstration and experimentation purposes

