



## RFI MiniSystem Combiner Facilitates Critical Radio Coverage In A Large Corporate Campus

### QUICK FACTS

- Private reliable radio communication system for the staff and security
- RFI MiniSystem Combiner and Antennas were deployed
- Minimal rack space, great flexibility with frequency selection and minimum installation effort

### CAMPUS FACTS

- Tier 1 IT Company in Pune
- 30,000 Employees
- 3 Campuses – 125 Acres
- 2 DMR radio base station sites across the campus



*RFI worked with partner Sheetal Wireless to supply and deploy MiniSystem Combiners and antennas for a multi-site corporate campus in Pune, India.*



## The Challenge

A Tier 1 IT services and consulting company in Pune, India with more than 30,000 employees across three campuses needed a reliable and stable radio system for security and staff communications. They were using a third-party wide-area subscriber network, however, because of the higher operational cost & specific coverage requirements, they decided to deploy a private radio system across their campuses.

The project timelines were quite tight. The customer needed a fast rollout with minimal implementation costs. The limited available rack space and close frequency assignments meant a traditional cavity combiner solution wasn't suitable in this case. They required an innovative solution to combine the 2 base station repeaters with an expansion capability for up to 2 more base stations in future.

## The Solution

Our partner, Sheetal Wireless, took a consultative approach with this customer to offer the best solution for a secure and reliable radio system with minimal cost and operational impact.

After thorough consideration, RFI was selected as the supplier of the combining system and antennas for the new radio communications system. Three sites were selected for the new IP linked DMR radio repeaters to provide coverage across all campuses.

The customer's requirements for quick and easy roll out, minimal cost and minimal rack space made RFI's MiniSystem the ideal solution for RF Multicoupling at all those three sites. RFI's MS1415-0405-SP 4 Channel VHF MiniSystem with inbuilt Duplexer for Single Antenna operation was selected for this application.

MiniSystem Combiner provides a very cost-effective solution with complete transmit and receive combining for 2 to 4 radio repeaters in a compact 19" rack mountable enclosure. The inbuilt adjustable Rx gain controller was ideal for optimizing the coverage requirements in one of the sites.

This provided the customer with everything they needed for Multicoupling in a single box that was mounted in the same rack as the radio repeaters. Transmit and receive filtering, transmit combining as well as received signal amplification and distribution are all included in the MiniSystem Combiner compact enclosure.

## Our Partner

This project was successfully delivered by our partner Sheetal Wireless, an ISO 9001:2008 certified supplier of professional communications equipment and services in India with a proven track record of delivering complex communications solutions across the subcontinent.

### The Results

These MiniSystems required minimal time to install on site as they were delivered preconfigured by RFI and only required the technician to connect a few cables as per the user manual, the site was operational very quickly. This helped our partner to meet the strict project deadlines easily and finish the work under the budget.

With the MiniSystems, the customer was able to achieve good coverage and uplink gain. The overall voice quality was also improved.

The customer was totally satisfied with the support and documentation provided by RFI.



MiniSystem Combiner

### MiniSystem Combiner Features

- Available in 2 and 4 channel models
- 50W or 100W Tx input power per channel\*
- Available in VHF, UHF and 7/8/900MHz bands
- Combined or separate Tx / Rx antennas\*
- Compact 19in rack mounting

\*Depending on the model

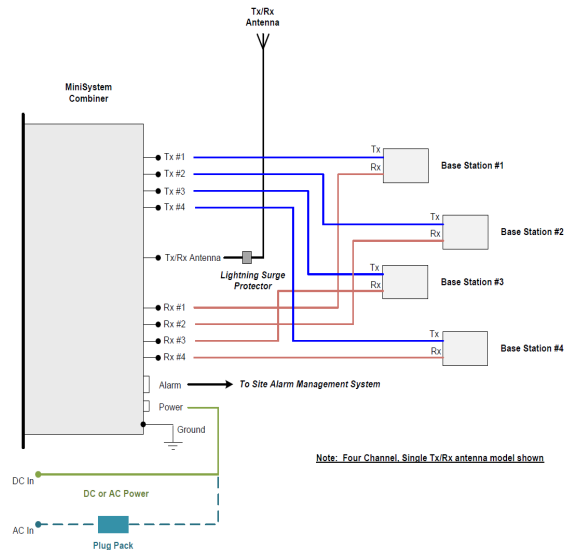
### More Information

More detailed specifications are available on RFI Wireless website:

<https://www.rfiwireless.com.au/multicoupling-monitoring/minisystem-combiners.html>

Application Note:

[https://www.rfiwireless.com.au/media/PDFs/minisystem\\_combiner\\_application\\_notes/files/assets/basic-html/index.html#1](https://www.rfiwireless.com.au/media/PDFs/minisystem_combiner_application_notes/files/assets/basic-html/index.html#1)



Functional Block Diagram  
Single Antenna Model

