DATA SHEET

DAS Interface Module

DAST-700-MODx

- A common connection point for Upper and Lower Band LTE Base stations to a single DAS system
- Levels and equalizes performance for all base stations with Integrated Level Controls
- No need to attenuate signals prior to connection to the DAS Tray
- Modules "A" and "B" are 2U (3.5") High. Any 2 modules can mount in CCI's 19" Rack Mount Universal DAS Tray
- Two additional Rx connections provided for Rx Only BTS ports, E911 or Uplink Monitoring

Overview

CCI's 700 MHz DAS Interface Modules provide an integrated, convenient, and single connection point when using single or multiple LTE base stations with a common DAS system. The unique architecture of the CCI DAS Interface Modules can accommodate both MIMO and SIMO configurations, including two operators providing MIMO coverage on a common MIMO DAS System. The internal triplexers utilized in the Interface Modules can simultaneously cover both 'Upper' and 'Lower' 700 MHz band such that the same Interface Module can be used for either band implementation.

Integrated leveling controls are provided in both the uplink and downlink path in order to achieve the proper link balance to the DAS system for each base station channel. The LTE E-Node B's are connected directly to the DAS Interface Module without the need to attenuate power as the DAS tray provides integrated high power attenuation for each channel with an adjustment range of 30 dB with 1 dB increments for the TX path, and 10 dB with 1 dB increments for the RX path. The DAS Tray is a completely passive assembly with no external power requirement thus providing the highest reliability and convenient installation. An optional duplexed connection To/From DAS is available on MODA (Module A).

Configuration Diagram

LTE MIMO and SIMO Configuration Diagrams

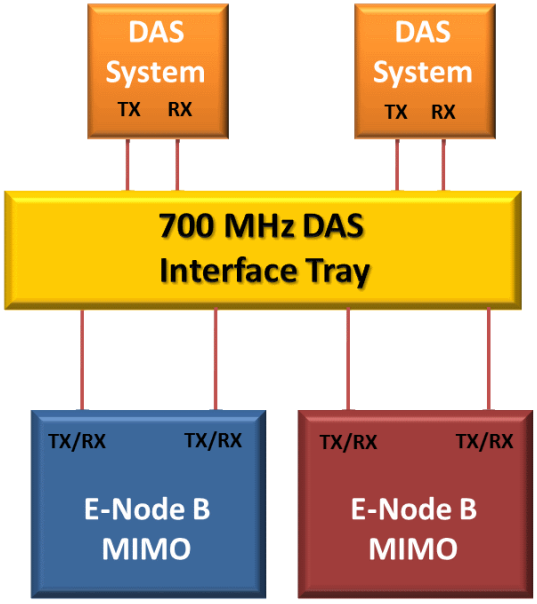


Figure I - Shared Dual MIMO E-Node B Configuration with MIMO Output to DAS System

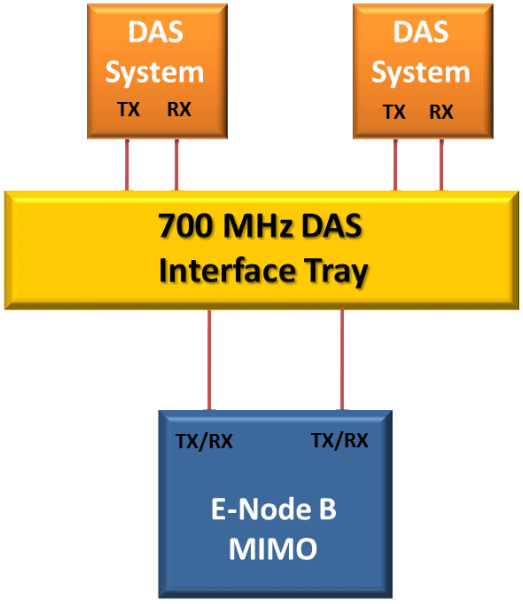


Figure II - Single MIMO E-Node B Configuration with MIMO Output to DAS System

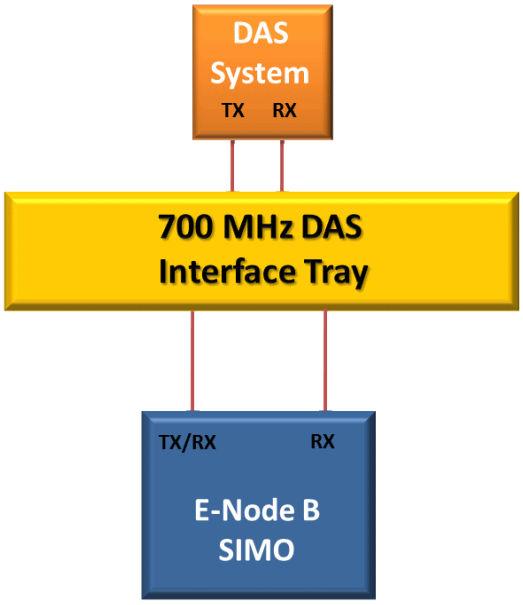


Figure III - Single SIMO E-Node B Configuration with SIMO Output to DAS System

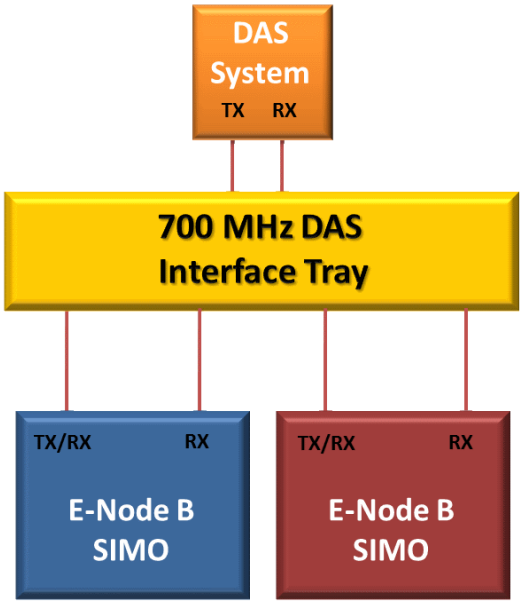


Figure IV - Shared Dual SIMO E-Node B Configuration with SIMO Output to DAS System

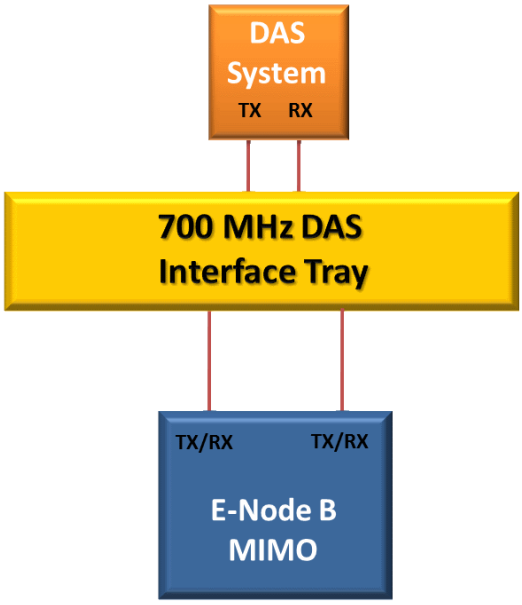


Figure V - Single MIMO E-Node B Configuration with SIMO Output to DAS System

SPECIFICATIONS

DAS Interface Module

DAST-700-MODx

Electrical Specification

RF Parameters	Ports	Frequency(MHz)	Specification	
			DAST-700-MODA	DAST-700-MODB
Return Loss	TX/RX	698 - 716	18 dB typ.	
		728 - 768	18 dB typ.	
		776 - 798	18 dB typ.	
	RX	698 - 716	18 dB typ.	
		776 - 798	18 dB typ.	
	RX IN	698 - 716	18 dB typ.	
		776 - 798	18 dB typ.	
	TX OUT	728 - 768	18 dB typ.	
	TX IN	728 - 768	18 dB typ.	
Insertion Loss	TX/RX to TX OUT	728 - 768	18.5 - 48.5 dB, adjustable in 1dB steps	14 dB avg.
	TX IN to TX OUT	728 - 768	4.5 - 34.5 dB, adjustable in 1dB steps	N/A
	RX IN to TX/RX	698 - 716	9 - 19 dB, adjustable in 1dB steps	1 dB avg.
		776 - 798	9 - 19 dB, adjustable in 1dB steps	1 dB avg.
	RX IN to RX	698 - 716	9 - 19 dB, adjustable in 1dB steps	N/A
		776 - 798	9 - 19 dB, adjustable in 1dB steps	N/A
Isolation	TX/RX to RX IN	728 - 768	65 dB plus variable attenuator setting	60 dB
	TX/RX to RX	728 - 768	80 dB	N/A

General Characteristics	
Impedance	50 ohms
Continuous Average Power	100 W max. at TX/RX port
Peak Envelope Power	2 kW max.
Intermodulation Performance	<-118 dBm (-161 dBc) typical (2 × +43 dBm tones)

Environmental Specification

Operating Temperature	0˚C to +55˚C
MTBF	>500,000 hours

Mechanical Specification

Model	DAST-700-MODA	DAST-700-MODB
TX/RX IN Connectors	7-16 DIN female	7-16 DIN female
RX IN Connectors	2 × 7-16 DIN female; 1 × N-Female	1 × N-female
TX IN Connectors	1 × N-female	1 × N-female
TX OUT (to DAS), RX IN (from DAS) Connectors	1 × QMA female each	NA
Dimensions (H(2U)×W×D)	3.5 × 8.772× 16 in.<br/ >(88.9 × 222.8 × 406.4 mm)	3.5 × 8.772× 16 in.<br/ >(88.9 × 222.8 × 406.4 mm)
Weight (w/o Bracket)	18.9 lbs (8.6 kg)	17.1 lbs (7.75 kg)
Mounting	Mount in Universal DAS Tray (TRA-DAS-UNIV 19 in. Rack Mountable)	

Block Diagram

LTE MIMO and SIMO Configuration Detailed Diagrams

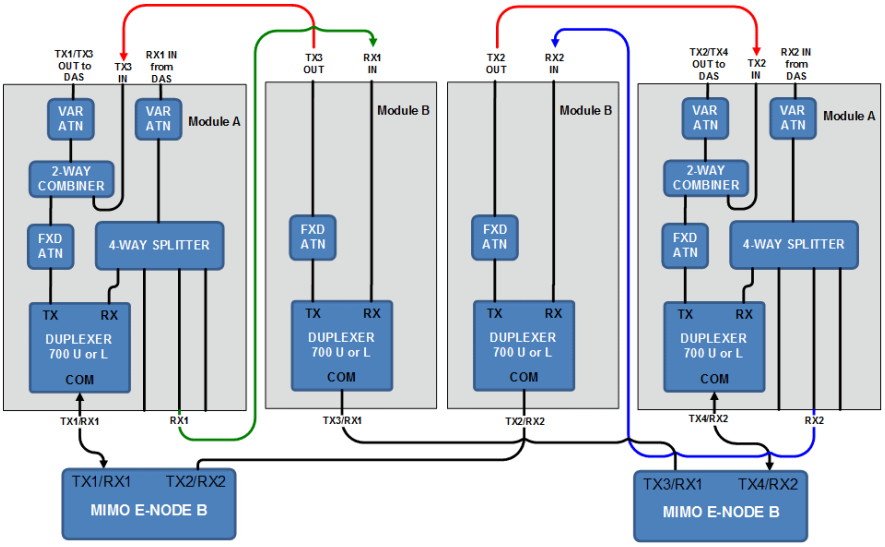


Figure I - Shared Dual MIMO E-Node B Configuration with MIMO Output to DAS System

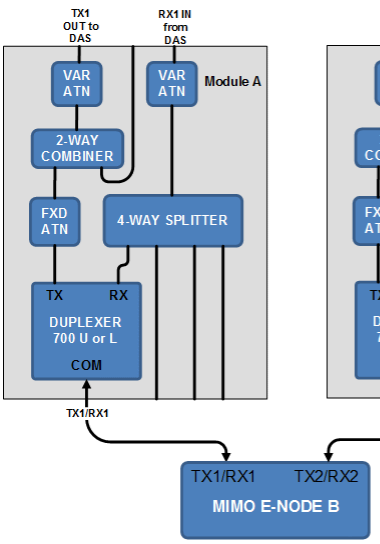


Figure II - Single MIMO E-Node B Configuration with MIMO Output to DAS System

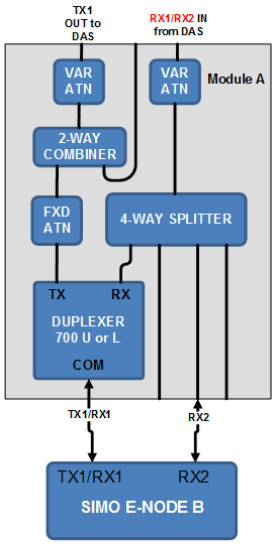


Figure III - Single SIMO E-Node B Configuration with SIMO Output to DAS System

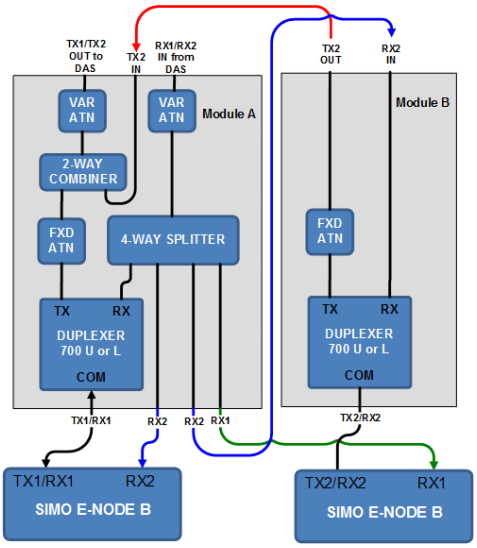


Figure IV - Shared Dual SIMO E-Node B Configuration with SIMO Output to DAS System

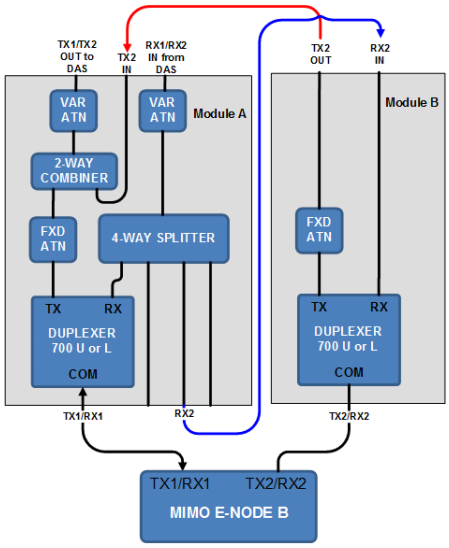
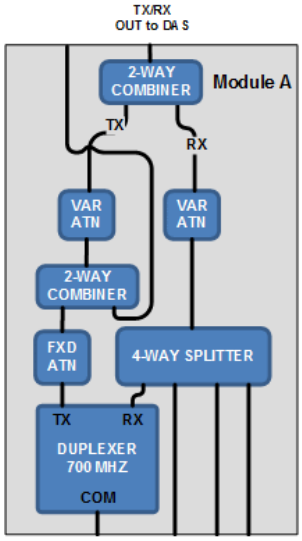


Figure V - Single MIMO E-Node B Configuration with SIMO Output to DAS System

Options



-DPX "Single Duplexed connection To/From DAS" (on MODA only) Note: adds 3 dB to Transmit and Receive Insertion Loss

ORDERING

DAS Interface Module

DAST-700-MODx

Parts & Accessories

Configuration	Configuration Description	Quantity: DAST-700-MODA "700 MHz DAS Module A" required	Quantity: DAST-700-MODA "700 MHz DAS Module B" required	Quantity: TRA-DAS-UNIV "Universal Tray for DAS Interface Modules" required
I	Shared Dual MIMO E-Node B Configuration with MIMO Output to DAS System	2	2	2
II	Single MIMO E-Node B Configuration with MIMO Output to DAS System	2	-	1
III	Single SIMO E-Node B Configuration with SIMO Output to DAS System	1	-	1
IV	Shared Dual SIMO E-Node B Configuration with SIMO Output to DAS System	1	1	1
V	Single MIMO E-Node B Configuration with SIMO Output to DAS System	1	1	1

STANDARDS & CERTIFICATIONS

Certifications

Federal Communication Commission (FCC) Part 15 Class B, CE, CSA US