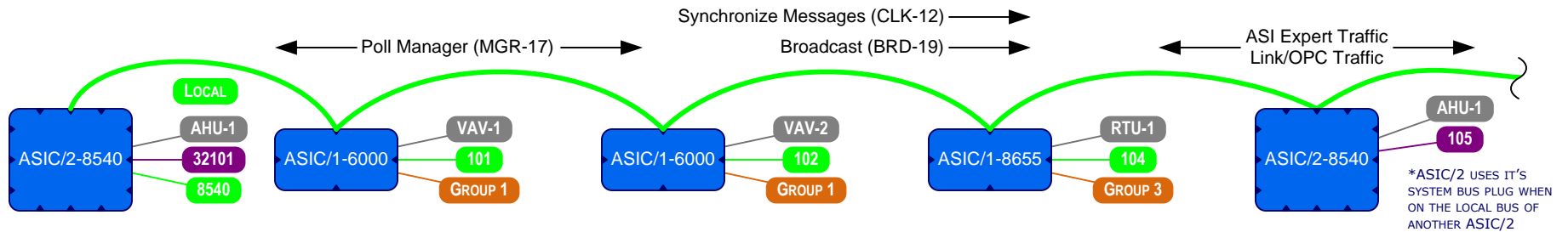


THE ASI CONTROLS LOCAL BUS USES THE RS-485 STANDARD TO EXCLUSIVELY TRANSFER ONE OF TWO AVAILABLE PROTOCOLS. USING THE ASI PROTOCOL, BOTH ASIC/1 AND ASIC/2 CONTROLLERS CAN BE MIXED ON THE LOCAL BUS, ALTHOUGH IT IS CUSTOMARY TO ONLY USE ASIC/1'S. USING THE MODBUS RTU PROTOCOL, ANY COMBINATION OF COMPATIBLE MODBUS RTU SLAVE DEVICES CAN BE MIXED ON THE LOCAL BUS.

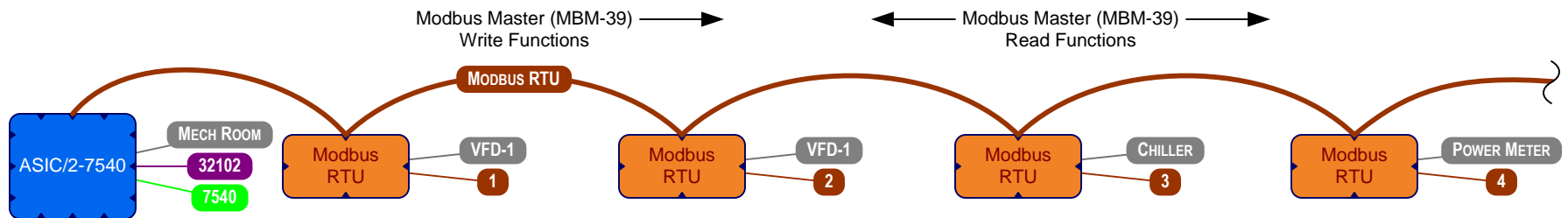
THE RS-485 STANDARD DEFINES A METHOD FOR HALF-DUPLEX SERIAL COMMUNICATION, USING A TWISTED PAIR COMMUNICATION WIRE. HALF-DUPLEX MEANS COMMUNICATION IS LIMITED TO ONE DIRECTION AT A TIME. YOU CAN CONNECT UP TO 32 CONTROLLERS WITHOUT A REPEATER. WITH A REPEATER, THE RS-485 STANDARD DEFINES A MAXIMUM OF 64 CONTROLLERS ON ONE BUS. THIS APPLIES TO BOTH THE ASI PROTOCOL AND THE MODBUS RTU PROTOCOL.



THE ASIC/2 CONTROLLER ACTS AS A SUPERVISOR TO THE CONTROLLERS ON THE LOCAL BUS WHEN USING THE ASI PROTOCOL. IT CAN GET INFORMATION FROM THE LOCAL BUS CONTROLLERS, AND THEN WORK WITH THAT INFORMATION. THE ASIC/2 CAN ALSO SEND INFORMATION TO THE LOCAL BUS CONTROLLERS. THE ASIC/2 ALLOWS PASS-THROUGH COMMUNICATION FROM THE SYSTEM BUS TO THE LOCAL BUS FROM SOFTWARE APPLICATIONS SUCH AS ASI VISUAL EXPERT AND THE LINK/OPC SERVER.

THE ASIC/2 POLL MANAGER (MGR-17) OBJECT HAS TWO DISTINCT CAPABILITIES. FIRST, IT CAN BE CONFIGURED TO RETRIEVE INFORMATION FROM THE LOCAL BUS CONTROLLERS AND STORE IT IN THE ASIC/2 POLL LIST (POL-13) OBJECT. THIS MAKES THE INFORMATION AVAILABLE TO BE USED IN THE ASIC/2 AS PART OF A SEQUENCE OF OPERATION, AND IT CAN BE PASSED TO SOFTWARE APPLICATIONS, SUCH AS ASI WEblink VIA THE LINK/OPC SERVER. SECONDLY, THE POLL MANAGER CAN WORK WITH THE INFORMATION IN THE POLL LIST. TYPICAL OPERATIONS WOULD BE COUNTING, AVERAGING, MIN/MAX, RESET VALUES, ETC. THE POLL MANAGER OBJECT CAN WORK WITH BOTH ASIC/1 AND ASIC/2 CONTROLLERS ON THE LOCAL BUS.

THE ASIC/2 BROADCAST (BRD-19) OBJECT IS USED TO SEND INFORMATION TO THE LOCAL BUS CONTROLLERS. TYPICAL FUNCTIONS INCLUDE TIME SYNCHRONIZATION, OVERRIDES FOR STATE, OVERRIDES FOR CHANGEOVER STATUS, ETC. THE BROADCAST OBJECT CAN WORK WITH BOTH ASIC/1 AND ASIC/2 CONTROLLERS ON THE LOCAL BUS.



THE ASIC/2 CONTROLLER CAN ALSO ACT AS A MASTER TO MULTIPLE MODBUS RTU SLAVES ON THE LOCAL BUS WHEN USING THE MODBUS RTU PROTOCOL. THESE SLAVE DEVICES CAN BE OF DIFFERING TYPES AND MANUFACTURERS, PROVIDED YOU CAN ESTABLISH A COMMONALITY FOR ALL OF THE INDIVIDUAL COMMUNICATION PARAMETERS, SUCH AS BAUD RATE, STOP BITS AND PARITY.

THE ASIC/2 MODBUS MASTER (MBM-39) OBJECT CAN USE THE STANDARD MODBUS FUNCTIONS TO WRITE AND READ COILS, INPUTS AND REGISTERS. THE MODBUS MASTER OBJECT SUPPORTS SINGLE READ AND WRITE FUNCTIONS, AND MULTIPLE READ AND WRITES FUNCTIONS. THESE FUNCTIONS CAN OCCUR AT A FIXED TIMED INTERVAL, OR CAN BE GATED.

ONCE THE MODBUS RTU SLAVE INFORMATION IS IN THE ASIC/2 CONTROLLER, IT CAN BE USED BY THE ASIC/2 FOR ANY OF ITS OWN INTERNAL OPERATIONS.

TITLE	ASI CONTROLS LOCAL BUS OVERVIEW		
DATE	2008-DEC-06	REV	None
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NUMBER	ASI-5		



# ASI Controls

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